

# **Allegheny County Sanitary Authority**

Financial Statements and  
Required Supplementary and  
Supplementary Information

Years Ended December 31, 2018 and 2017  
with Independent Auditor's Report

**MaherDuessel**

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# ALLEGHENY COUNTY SANITARY AUTHORITY

YEARS ENDED DECEMBER 31, 2018 AND 2017

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## Independent Auditor's Report

**Board of Directors  
Allegheny County  
Sanitary Authority**

We have audited the accompanying financial statements of Allegheny County Sanitary Authority (Authority), as of and for the years ended December 31, 2018 and 2017, and the related notes to the financial statements, as listed in the table of contents.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of December 31, 2018 and 2017, and the respective changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Change in Accounting Principle

As described in Note 2 to the financial statements, the Authority adopted Governmental Accounts Standards Board (GASB) Statement No. 75, "*Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*" which requires the Authority to record its net OPEB liability and related items on the financial statements. Our opinion is not modified with respect to that matter.

## Other Matters

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the pension plans' schedules, and other post-employment benefits schedules on pages i through xiii, pages 34 through 36, and page 37, respectively, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Other Information*

Our audits were conducted for the purpose of forming an opinion on the basic financial statements as a whole. The schedules of investments and other assets are presented for purposes of additional analysis and are not a required part of the financial statements.

The schedules of investments and other assets are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

*Maher Duessel*

Pittsburgh, Pennsylvania  
March 25, 2019

## **MANAGEMENT'S DISCUSSION AND ANALYSIS**

### **AUDIT ASSURANCE**

The unmodified (i.e., clean) opinion of our independent auditors, Maher Duessel, Certified Public Accountants, is included in this report. You will note that the Allegheny County Sanitary Authority (Authority) has included for 2018 this Management's Discussion and Analysis section, which is in compliance with Statement No. 34 of the Governmental Accounting Standards Board.

### **FINANCIAL HIGHLIGHTS**

Allegheny County (County) is located in Southwestern Pennsylvania and encompasses approximately 730 square miles of land. Founded in 1788, the County is the second most populated county in Pennsylvania with over 1.2 million residents. Roughly 25% of the County's residents live within the City of Pittsburgh. The Allegheny and Monongahela Rivers flow through the County to form the Ohio River in downtown Pittsburgh.

#### **Economy**

The County is the location of seven Fortune 500 corporate headquarters. The County's 2018 Fortune 500 companies include: U.S. Steel (246), PNC Financial Services Group (165), PPG Industries (191), Kraft Heinz (114), Alcoa (262), Wesco International, Inc. (370), and Dick's Sporting Goods (340). The County has experienced substantial growth in areas such as technology, tourism, and health care. The County is also a strong supporter of its manufacturing industries and has traditionally been one of the major industrial centers of the world with its access to major fields of coal and shipping access to 8,000 miles of navigable rivers. The Port of Pittsburgh is the second largest inland port in the nation. There is annual benefit to the region of over \$800 million for the shipping and receiving of 32 million tons of cargo.

The County has undergone an economic transformation spanning more than three decades with a shift from the manufacturing industry to the service and trade industries. Specifically, the new focus industries have been healthcare and life sciences, advanced manufacturing, energy, information and communication technology, and financial and business services. This shift is attributed to the continuing diversification of the employment base.

The region's health services sector employs over 132,000 people and is a robust network that is cultivating lifesaving technologies, regenerative medicine, and pharmaceuticals. The University of Pittsburgh Medical Center is a multi-billion-dollar global healthcare enterprise and is the region's top employer, with more than 46,500 employees. Bayer HealthCare, Highmark Inc., Allegheny Health Network, and Mylan, Inc. are also part of this sector.

Top manufacturers such as ATI, Alcoa, Boeing Company, Covestro, General Electric, Kraft Heinz, U.S. Steel, GE, Wabtec, and Westinghouse are either headquartered or have a presence in the greater County region. Smaller precision tooling and machining companies meet global demands for custom components.

The County and surrounding region has become a national leader in energy technology, innovation, and supply chain related to production, distribution, and efficient usage. The area is home to more than 1,050 companies in the global energy market, including Chevron, Eaton, Mitsubishi Electric Power Products, Inc., PPG Industries, Inc., Shell Chemicals, and Westinghouse Electric Company.

Nearly 1,500 technology firms, including Google, Ansys, Apple, IBM, Uber, and Ariba, have a presence within the County and employ some 28,000 people. A tech-savvy talent pipeline flowing from many area colleges and universities, and a robust network of organizations supporting financial innovation, are helping the region's knowledge-based economy to thrive.

Global financial institutions with headquarters or major business units within the County include PNC Financial Services Group, The Bank of New York Mellon, Citizens Bank, Dollar Bank, Federated Investors, First Commonwealth Bank, Huntington National Bank, S&T Bank, TriState Capital, and KeyBank.

Two global law firms, K&L Gates and Reed Smith, are based in the City of Pittsburgh, as is Buchanan, Ingersoll & Rooney, and Jones Day – Pittsburgh as well as major insurance companies, including Highmark, UnitedHealthcare, and Cigna.

Adding to the County's diverse labor and business climate, some of the most prestigious health, educational, and cultural institutions in the country are located here. The County's colleges and universities include Carnegie Mellon University, Carlow University, Chatham University, Community College of Allegheny County, Duquesne University, La Roche College, Point Park University, Robert Morris University, the Art Institute of Pittsburgh, and the University of Pittsburgh. The County is also home to various junior and technical colleges.

Uber has a tech center in Pittsburgh and a testing facility on 42 acres within the City of Pittsburgh. Also located in Pittsburgh is the recently formed American Robotics Manufacturing Institute. Amazon has expanded its footprint in the Pittsburgh region. Shell is building a \$6 billion Shell Appalachia ethane cracker complex in Beaver County, where 1,000 workers are on the job and an estimated 5,000 expected. A new natural gas-fired power plant is under construction in Westmoreland County. Last year UPMC, the region's largest healthcare provider, announced its plan to spend \$2 billion to build three new specialty hospitals, with the first set to open in 2020. Highmark Health also announced \$700 million in new construction.

The Port Authority of Allegheny County (Port Authority) serves the metropolitan area by operating over 700 buses, over 80 light rail vehicles, and the Monongahela incline. The Port Authority also owns the Duquesne Incline, which it leases to the nonprofit Society for the Preservation of the Duquesne Heights Incline. The Port Authority is the largest operator of mass transit services in Western Pennsylvania and is among the nation's top 30 largest public transportation systems. The Port Authority's 2,600 employees serve approximately 200,000 riders, with a total of nearly 64 million passengers annually.

Pittsburgh International Airport (PIA), which offers more than 190 peak season weekday departures on 17 airlines, is recognized for its state-of-the-art terminals and an Airmall for the approximately 8 million travelers that pass through PIA each year.

In 2018, non-manufacturing industries accounted for over 90% of the Pittsburgh MSA employment base. The loss of once-dominant, heavy water-use manufacturing such as steel and food processing has had a negative impact on the Authority's residential users. Decline in regional manufacturing over the past two decades has shifted a significant portion of the Authority's cost burden to residential users who have declined as well over the past decade. This decline in consumption base, combined with outside regulatory emphasis on reducing overflows, will have a dramatic impact on rates for years to come.

- Billed flow for 2018 of 19,993,027 tgal (thousands of gallons), decreased by 1,220,834 tgal. Of this decrease, 826,500 tgals or 68 percent of the decrease is attributed to City of Pittsburgh accounts billed by the Pittsburgh Water and Sewer Authority (PWSA). PWSA continues to have issues with its billing system as it works toward a resolution. In addition, 2018 was one of the highest years on record for precipitation in our service area. Record precipitation of 58.1 inches also resulted in lower use of recreational water.
- In 2018, the Authority treated 78,877,900 tgal, of which 19,993,027 tgal was billed. Stated differently, the Authority billed for 25.35% of the water it treated. During 2017, the Authority treated 73,509,000 tgal, for which it billed 21,213,863 tgal, or 28.86% of what was treated was actually billed to customers. The difference between what is treated vs. that which is billed is attributed to direct inflow of storm water from combined sewer communities served and groundwater infiltration into the system from old and deteriorating sewer lines throughout the service area.
- The Authority maintained compliance with all debt covenants required by the governing Trust Indentures.
- Debt Service Coverage, when allowing for available revenue funds on hand at the beginning of the year was 3.60, which greatly exceeded the 1.10 Trust Requirements. In addition, stand-alone coverage without consideration to beginning balances was 1.75, which exceeded the required 1.00 Trust Requirement.
- On November 16, 2017, the Board of Directors (Board) adopted multi-year rate structure increasing customer service charges 7.5 percent for in 2018, 7 percent in 2019, 7 percent in 2020, and 7 percent in 2021.

### **REQUIRED FINANCIAL STATEMENTS**

The financial statements of the Authority report information about the Authority's use of accounting methods that are similar to those used by private sector companies. These statements offer short-term and long-term financial information about its activities.

The balance sheet includes all of the Authority's assets, deferred outflows of resources, liabilities, and deferred inflows of resources and provides information about the nature and amounts of investments in resources (assets) and obligations to Authority creditors (liabilities). The statement of net position also provides the basis for computing rate of return, evaluating the capital structure of the Authority, and assessing the liquidity and financial flexibility of the Authority.

All of the current year's revenue and expenses are accounted for in the statement of revenues, expenses, and changes in net position. This statement measures the success of the Authority's operations over the past year and can be used to determine whether the Authority has successfully recovered all its costs through its sewage disposal rates and other fees. As required under the Authority's Trust Indenture, the Consulting Engineer, Hatch, has reviewed the rate structure and agrees that a 7 percent rate increase in 2019 is necessary to meet requirements of the Trust Indenture and financial obligations imposed under the federal consent decree rate model structure.

The final required financial statement is its statement of cash flows. The primary purpose of this statement is to provide information about the Authority's cash receipts and cash payments during the reporting period. The statement reports cash receipts, cash payments, and net changes in cash resulting from operations, investing, and financing activities, and the change in cash during the reporting period.

The notes to the financial statements provide required disclosures and other information that are essential to a full understanding of material data provided in the statements. The notes present information about the Authority's accounting policies, significant account balances and activities, material risks, obligations, commitments, contingencies, and subsequent events, if any.

#### **SUMMARY OF ORGANIZATION AND BUSINESS**

The Allegheny County Sanitary Authority was incorporated in May 1945 under the Commonwealth of Pennsylvania Municipality Authorities Act of 1945. Plant operations began on April 30, 1959. The Authority serves as the exclusive agency for the collection, transportation, and treatment of wastewater for the city of Pittsburgh and 82 neighboring municipalities. The Authority charges users for processing of wastewater at a flat rate per thousand gallons. Additional charges are levied for septage (solid waste removed from septic tanks) and industrial waste discharges into the system.

In addition to the main treatment site located on the City of Pittsburgh's Northside, the Authority operates and maintains over 85 miles of interceptor sewers, and seven pumping or ejector stations throughout the service area. The Authority's service area covers over 310 square miles and includes portions of Washington and Westmoreland Counties in addition to the County.

The Authority's Articles of Incorporation (Articles), as amended, provide that the Authority's Board shall consist of seven members serving staggered five-year terms. Pursuant to the Articles, three members of the Board are appointed by the County, three are appointed by the City of Pittsburgh, and one is jointly appointed by the County and the City of Pittsburgh. The day-to-day operation of the Authority is the responsibility of the Executive Director, who is appointed by the Board to carry out its policies.

## FINANCIAL ANALYSIS

The following comparative condensed financial statements and other selected information provides key financial data and indicators for management, monitoring and planning.

### **Condensed Statements of Net Position (Balance Sheet) (In Millions of Dollars)**

	<b>2018</b>	<b>2017</b>	<b>\$ Change</b>	<b>% Change</b>
Current assets	\$206.99	\$183.10	\$23.89	13.05%
Restricted/designated assets	251.85	100.30	151.55	151.10%
Prepaid bond costs	7.19	6.47	0.72	11.13%
Plant and equipment, net	622.34	608.60	13.74	2.26%
Capital fees receivable	0.00	0.00	0.00	0.00%
Net pension asset	2.71	0.00	2.71	0.00%
<b>Total Assets</b>	<b>1091.08</b>	<b>898.47</b>	<b>192.61</b>	<b>21.44%</b>
<b>Deferred Outflows of Resources</b>	<b>25.64</b>	<b>29.32</b>	<b>-3.68</b>	<b>-12.55%</b>
Current liabilities	45.02	43.40	1.62	3.73%
Long-term liabilities	753.21	618.90	134.31	21.70%
<b>Total Liabilities</b>	<b>798.23</b>	<b>662.30</b>	<b>135.93</b>	<b>20.52%</b>
<b>Deferred Inflow of Resources</b>	<b>12.39</b>	<b>2.94</b>	<b>9.45</b>	<b>321.43%</b>
<b>Net Position</b>	<b>\$306.10</b>	<b>\$262.55</b>	<b>\$43.55</b>	<b>16.59%</b>

**Condensed Statements of Net Position (Balance Sheet)**  
**(In Millions of Dollars)**

	<b>2017</b>	<b>2016</b>	<b>\$ Change</b>	<b>% Change</b>
Current assets	\$183.10	\$147.84	\$35.26	23.85%
Restricted/designated assets	100.30	123.87	-23.57	-19.03%
Prepaid bond costs	6.47	7.17	-0.70	-9.76%
Plant and equipment, net	608.60	595.37	13.23	2.22%
Capital fees receivable	0.00	0.04	(0.04)	-100.00%
Net pension asset	0.00	0.00	0.00	0.00%
<b>Total Assets</b>	<b>898.47</b>	<b>874.29</b>	<b>24.18</b>	<b>2.77%</b>
<b>Deferred Outflows of Resources</b>	<b>29.32</b>	<b>28.71</b>	<b>0.61</b>	<b>2.12%</b>
Current liabilities	43.40	42.69	0.71	1.66%
Long-term liabilities	618.90	642.68	-23.78	-3.70%
<b>Total Liabilities</b>	<b>662.30</b>	<b>685.37</b>	<b>-23.07</b>	<b>-3.37%</b>
<b>Deferred Inflow of Resources</b>	<b>2.94</b>	<b>4.10</b>	<b>-1.16</b>	<b>-28.29%</b>
<b>Net Position</b>	<b>\$262.55</b>	<b>\$213.53 *</b>	<b>\$49.02</b>	<b>22.96%</b>

\* 2016 Net Position, End of Year does not reflect adjustment for implementation of GASB 75.

**Condensed Statements of Revenues, Expenses  
And Changes in Net Position  
(In Millions of Dollars)**

	2018	2017	\$ Change	% Change
Operating revenues	\$169.72	\$170.18	-\$0.46	-0.27%
Non-operating revenue	3.13	1.10	2.03	184.55%
<b>Total revenues</b>	<b>172.85</b>	<b>171.28</b>	<b>1.57</b>	<b>0.92%</b>
Operating expenses	78.63	74.40	4.23	5.69%
Non-operating expenses	22.22	30.81	-8.59	-27.88%
Depreciation	23.07	22.43	0.64	2.85%
<b>Total expenses</b>	<b>123.92</b>	<b>127.64</b>	<b>-3.72</b>	<b>-2.91%</b>
<b>Net income (loss)</b>	<b>48.93</b>	<b>43.64</b>	<b>5.29</b>	<b>-12.12%</b>
<b>Net Position, Beginning of Year</b>	<b>257.17</b>	<b>213.53</b>	<b>43.64</b>	<b>20.44%</b>
<b>Net Position, End of Year</b>	<b>\$306.10</b>	<b>\$257.17</b>	<b>\$48.93</b>	<b>19.03%</b>

**Condensed Statements of Revenues, Expenses  
And Changes in Net Position  
(In Millions of Dollars)**

	2017	2016	\$ Change	% Change
Operating revenues	\$170.18	\$151.39	\$18.79	12.41%
Non-operating revenue	1.10	0.06	1.04	1733.33%
<b>Total revenues</b>	<b>171.28</b>	<b>151.45</b>	<b>19.83</b>	<b>13.09%</b>
Operating expenses	74.40	70.59	3.81	5.40%
Non-operating expenses	30.81	24.36	6.45	26.48%
Depreciation	22.43	21.27	1.16	5.45%
<b>Total expenses</b>	<b>127.64</b>	<b>116.22</b>	<b>11.42</b>	<b>9.83%</b>
<b>Net income (loss)</b>	<b>43.64</b>	<b>35.23</b>	<b>8.41</b>	<b>-23.87%</b>
<b>Net Position, Beginning of Year</b>	<b>213.53</b>	<b>178.30</b>	<b>35.23</b>	<b>19.76%</b>
<b>Net Position, End of Year</b>	<b>\$257.17</b>	<b>\$213.53 *</b>	<b>\$43.64</b>	<b>20.44%</b>

\* 2016 Net Position, End of Year does not reflect adjustment for implementation of GASB 75.

## **OTHER SELECTED INFORMATION**

<b>Selected Data:</b>	<b>2018</b>	<b>2017</b>	<b>Difference</b>	<b>%Change</b>
Authorized employees	504	483	21	4.35%
Actual employees at year-end	413	407	6	1.47%
Wastewater treated (billions of gallons)	78,877	73,509	5,368	7.30%
Wastewater billed (billions of gallons)	19,993	21,214	-1,221	-5.76%
Percentage of billed/treated wastewater	25.35%	28.86%	-3.51%	-12.17%
Rates:				
Charge per 1,000 gallons of water consumption	\$7.42	\$6.91	\$0.51	7.38%
Account service charge per bill rendered	\$15.60	\$14.51	\$1.09	7.51%
Average customer bill:				
Per year	\$418.56	\$389.72	* 28.84	7.40%
Per quarter	104.64	97.43	* 7.21	7.40%
Per month	34.88	32.48	* 2.40	7.40%

\* Based on 12,000 Gallons per quarter

## **GENERAL TRENDS AND SIGNIFICANT EVENTS**

The Authority entered into a Consent Decree with the United States Environmental Protection Agency (U.S. EPA), Pennsylvania Department of Environmental Protection (DEP), and the Allegheny County Health Department on January 23, 2008. The Consent Decree requires reduction of Combined Sewer Overflows and elimination of Sanitary Sewer Overflows by September 30, 2026. The Final Wet Weather Control Plan (WWCP) was submitted for regulatory review and approval on January 23, 2013. The overall cost of the WWCP of \$3.6 billion resulted in end user rates exceeding a regional residential indicator of 2%. The Authority therefore also submitted an affordable Interim Wet Weather Plan (IWWP), which has been the focus of negotiations with the agencies over the past five years.

Appendix Z to the Consent Decree summarizes those negotiations which the Authority believes will be acceptable to agencies. Below is a summary of Appendix Z.

## **Summary of Appendix Z**

The Authority will complete an IWWP by December 31, 2036. Because many uncertainties remain regarding the most optimal mix of the Authority and municipal green and grey infrastructure control measures, an adaptive management framework is necessary to provide for expeditious and affordable program implementation. This framework will provide opportunities to evaluate and integrate green infrastructure and other flow management practices, while prioritizing the regionalization of inter-municipal trunk sewers and key grey infrastructure projects where most cost-effective.

Because the identification of specific flow management project commitments requires on-going coordination with customer municipalities, the IWWP is premised on a phased implementation framework that supports early implementation of green projects, demonstration of effectiveness, and the substitution or reduction of grey infrastructure where flow management measures can be shown to provide equivalent system-wide overflow reduction performance. Accordingly, the framework includes adaptive management milestones where new information can be used to propose modifications to the projects and implementation schedules identified herein.

The IWWP is divided into three phases designed to support the adaptive management framework.

**Phase 1 projects** include highly effective treatment plant expansion projects, preliminary planning projects that will inform adaptive Phase 2 and 3 projects, and existing infrastructure inspection and rehabilitation. Additional detail is as follows:

- **Regional Flow Optimization Strategy and Preliminary Planning.**

The Authority will work jointly with its customer municipalities to assess the effectiveness of green infrastructure, stream inflow removal, inflow/infiltration reduction, and existing system asset management through preliminary planning and demonstration projects. The resulting regional flow optimization strategy will identify flow management measures to be adaptively incorporated into Phases 2 and 3 and establish the basis of design for Phase 2 and Phase 3 tunnel projects, including any appropriate downsizing. The preliminary basis of design report will include refined tunnel and consolidation sewer construction schedules.

- **Woods Run Wastewater Treatment Plant Expansion.**

The Authority will expand wet weather treatment capacity of the plant from 250 mgd to 48 mgd and wet weather headworks and disinfection capacity to 600 mgd. It is anticipated that these facilities will be complete and in operation between January 1, 2024 through December 30, 2025.

- **Existing Infrastructure Inspection/Rehabilitation.**

The Authority will continue its operation and maintenance practices for existing infrastructure, including establishing re-inspection and priority rehabilitation schedules.

**Phase 2 projects** include high priority conveyance and treatment system improvements that are dependent on Phase 1 preliminary planning to proceed. Depending on the findings of Phase I, these projects include:

- A wet weather pumping station,
- Expanded primary treatment,
- The Ohio River tunnel segment, including crossings to the existing Chartiers Creek and Saw Mill Run interceptor systems, and
- Cost-effective optimization of the Authority's existing tunnel network.

**Phase 3 projects** represent adaptive projects that may be influenced and modified based on the outcome of Phase 1 and Phase 2 evaluations and demonstration projects.

The IWWP currently includes an estimated \$1.8 billion (in 2010 dollars) in identified Authority projects. It is expected that the Regional Flow Optimization Strategy, the regionalization of Intermunicipal Trunk Sewers and Associated Facilities, Municipal Source Reduction Studies, and Municipal Source Reduction Agreements will identify additional Authority and municipal projects. The established adaptive management framework includes provisions for revising the IWWP to incorporate these enhancements. However, the Authority will remain committed to close coordination with its customer municipalities in updating regional financial capability analyses so that proposed IWWP revisions do not result in a regional residential indicator greater than 2%.

### **Regionalization**

The Authority has committed to make a good faith effort to take responsibility of at least 200 miles of existing Intermunicipal Trunk Sewers and Associated Facilities by January 31, 2020, including responsibility for controlling associated overflows transferred to the Authority.

### **Green Infrastructure**

The Authority has committed \$200 million towards this strategy, including support for municipal flow reduction partnerships. The Authority's Green Revitalization of Our Waterways Program (GROW) has awarded over \$30 million so far in grants to our member municipalities dedicated to green infrastructure.

### **Clean Water Assistance Program**

Recognizing that increasing rates will have a negative impact on our service areas most vulnerable ratepayers, the Authority implemented a customer assistance program in 2017. Qualified homeowners who meet family income limits set by the federal government will receive approximately the first 4,000 gallons of quarterly consumption free. In 2018, this resulted in approximately 1500 Authority customers receiving an annual credit of \$120.

For 2019, the quarterly assistance payment was increased to \$32 per quarter, or an annual credit of \$128. The program is being administered by the nationally recognized Dollar Energy Fund. The Authority expects participation in the program to grow as rates continue to increase in order to fund compliance with the consent decree.

## **FINANCIAL CONDITION**

As noted below, operating revenue was flat despite a 7.5 percent rate increase effective January 1, 2018. Overall consumption was down 1.2 million tgals of which 67 percent was attributed to consumption records received from the Pittsburgh Water and Sewer Authority ( PWSA). PWSA has been experiencing customer billing and meter reading system problems for more than a year now. In 2018 they retained an engineering consultant to assist them in correcting these issues.

Despite the decline in consumption, ALCOSAN achieved a debt service coverage ratio of 360 percent with consideration of amounts in the Revenue Fund at the beginning of the year in excess of one-fourth of the Current Operating Expenses. Debt service coverage without consideration of beginning Revenue Balances was 175 percent. In 2018, S&P Global Ratings raised its long-term rating on ALCOSAN debt to A+ from A reflecting the agencies opinion of the authority's very strong enterprise and financial risk profiles. Moody's also affirmed its A1 rating and assigned a stable outlook to the existing debt.

## **RESULTS OF OPERATIONS**

### Operating Revenue:

Operating Revenue remained flat despite a 7.5 percent rate increase effective January 1, 2018. Overall consumption was down 1.2 million tgals, of which 67 percent was attributed to consumption records received from PWSA. PWSA has been experiencing customer billing and meter reading system problems for more than a year now. In 2018, they retained an engineering consultant to assist them in correcting these issues. We will continue to work with PWSA as they make corrective improvements to their system.

Overall consumption declined 394,300 tgals or 3.36 percent when factoring out billing for all City of Pittsburgh Wards. As noted previously, 2018 was a record-breaking wet year with total precipitation exceeding 58 inches. Historically, wet years result in consumption declines as customers use less recreational water.

All of the Authority's operating revenue was derived from customer billing for sewage treatment service, the Authority receives no subsidies. The Authority, the City of Pittsburgh, and 82 other municipalities in and around Allegheny County have entered into agreements (Standard Municipal Agreements) under which the Authority is designated (within its service area) the exclusive agent of the respective municipality to furnish sewage treatment and disposal service. Each municipality contracting with the Authority is given two options with respect to billing, "Direct" or "Lump-sum." With the Direct method of billing, accounts not paid within 60 days become the responsibility of the community; thus, the Authority insures no bad debt. Under the Direct method, Authority bills and collects for its services directly from the individual customer. Under the Lump-sum method, consumption for the entire community is compiled and billed to the municipality, which in turn bills its own residents. All but three municipalities utilize this method of billing in order to attach fees for local sewer infrastructure maintenance. Under both scenarios, the Authority is guaranteed full payment for services.

### Operating Expenses:

Operating expenses in 2018 of \$78.6 million were \$4.2 million higher than 2017 operating expenses of \$74.4 million. Increases in operating costs included extensive plant maintenance in Rack and Grit and

Primary Sedimentation. Outside Interceptor cleaning contracts also added over \$1 million to the cost of maintaining the collection system. Also contributing to administrative cost increases were support provided to the 3 Rivers Wet Weather Program and increases associated with the implementation of the federal Consent Decree.

Depreciation and Non-operating Expenses:

Over the past decade, the Authority has placed into service over \$1.42 billion in capital projects. Depreciation expense increased by \$644,900 as plant expansion projects and improvements replace facilities that have been in service for almost 60 years.

Non-operating expenses also reflect changes to pension funding calculated under GASB Statement No. 68 and the 2018 implementation of GASB Statement No. 75 related to Other Post-Employment Benefits. Calculations with regard to both GASB Statement Nos. 68 and 75 are prepared by the Authority's Actuary.

Non-operating Revenues:

Interest earnings on the Authority's revenue and non-restricted capital facilities funds increased by over \$2 million as interest rates improved on money market and treasury holdings.

Litigation Contingency:

As noted above, the Authority has finalized an agreement with U.S. EPA, Pennsylvania DEP, and the Allegheny County Health Department (Agencies) regarding wet weather overloads in the sanitary sewer system. The agreement called for the payment of civil penalties in the amount of \$400,000 to each of the three noted agencies. As of January 8, 2009, all of the above-noted agencies have been paid.

Additional penalties may be incurred if the Authority fails to meet specific project deadlines as detailed in the agreement.

Debt:

At year-end the Authority had \$760.42 million in long- and short-term debt.

During 2018, the Authority issued \$157,230,000 in Sewer Revenue Bonds to fund the Capital Improvement Program over the next two years.

More detailed information about the Authority's long-term debt is presented in the notes to the financial statements.

**FINAL COMMENTS**

The Authority has completed negotiations and finalized language to be included in the Consent Decree with the U.S. EPA, Pennsylvania DEP, and the Allegheny County Health Department during 2018. Final filing of the Consent Decree with the Court and issuing for public comment have been delayed as a result of the partial federal government shutdown ongoing at the time of this writing. That said, much has been accomplished in discussion with the Agencies over the past three years, including recognition

that Sewer Regionalization, implementation of a Flow Reduction Program, and the use of adaptive management to analyze the benefits of substituting grey for green infrastructure projects would have a positive impact not only on the cost, but quality of life in the region as well. Economies of scale resulting from the transfer of over 200 miles of intermunicipal trunk lines and implementation of a flow control program, which assists our municipal members in implementing green solutions in order to keep extraneous water out of the system, has the potential to save millions of rate payer dollars while creating sustainable green jobs.

Recognizing that increasing rates to fund the Consent Decree will have a negative financial impact on many households in our service area, the Authority implemented a customer assistance program in 2017 providing, in effect, the first 4000 gallons of consumption per quarter free. In 2018, the Authority increased the quarterly assistance payment from \$30 to \$32.

You have the opportunity to become an informed participant in this program. Become familiar with the Consent Decree by reviewing it on-line at [www.alcosan.org](http://www.alcosan.org) or by contacting our Public Relations Department for a copy.

#### **CONTACTING THE AUTHORITY'S FINANCIAL MANAGER**

This financial report is designed to provide our citizens, customers, and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the money it receives. If you have any questions about this report or need additional financial information, contact the Allegheny County Sanitary Authority's Director of Finance and Administration at 3300 Preble Avenue, Pittsburgh, PA 15233.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF NET POSITION

DECEMBER 31, 2018 AND 2017

Assets and Deferred Outflows of Resources	2018	2017	Liabilities, Deferred Inflows of Resources, and Net Position	2018	2017
<b>Assets:</b>			<b>Liabilities:</b>		
Current assets:			Current liabilities:		
Cash and cash equivalents	\$ 142,482,220	\$ 119,248,255	Accounts payable	\$ 7,180,579	\$ 7,167,120
Accounts receivable:			Accrued liabilities:		
Billed sewer revenue	16,544,587	17,185,654	Compensated absences	4,539,483	4,689,828
Unbilled sewer revenue	41,408,016	40,232,780	Salaries and wages	1,529,529	1,441,024
Other	4,469	4,635	Accrued interest on bonds	2,745,875	2,260,535
Other current assets	6,556,274	6,432,263	Reserve for litigation	2,371,900	2,371,900
Total current assets	206,995,566	183,103,587	Pretreatment advance payments	24,375	71,600
			Current maturities of sewer revenue bonds	26,630,000	25,395,000
Restricted/designated assets:			Total current liabilities	45,021,741	43,397,007
Cash and cash equivalents	83,445,720	100,289,509	Long-term liabilities:		
Investments	167,782,528	-	Other post-employment benefits	13,297,158	6,199,726
Accrued interest receivable	622,842	-	Net pension liability	6,121,872	16,421,705
Total restricted/designated assets	251,851,090	100,289,509	Sewer revenue bonds - less current maturities	677,935,000	547,335,000
Prepaid bond costs	7,187,959	6,472,479	Unamortized bond premium	55,857,500	48,952,220
Nondepreciable capital assets:			Net long-term debt	733,792,500	596,287,220
Land	5,344,896	5,344,896	Total long-term liabilities	753,211,530	618,908,651
Construction in progress	59,836,813	38,371,565	Total Liabilities	798,233,271	662,305,658
Total nondepreciable capital assets	65,181,709	43,716,461	Deferred Inflows of Resources:		
Depreciable capital assets -			Related to pensions	12,389,471	2,935,957
at cost, net of accumulated depreciation	557,161,609	564,883,734			
Total	622,343,318	608,600,195	Net Position:		
Net pension asset	2,705,577	-	Net investment in capital assets	120,849,236	95,281,689
Total Assets	1,091,083,510	898,465,770	Unrestricted	185,255,671	167,264,184
Deferred Outflows of Resources:			Total Net Position	306,104,907	262,545,873
Related to pensions	17,633,917	21,247,515	Total Liabilities, Deferred Inflows of		
Other post-retirement benefits	932,894	-	Resources, and Net Position	\$ 1,116,727,649	\$ 927,787,488
Refunding adjustment	7,077,328	8,074,203			
Total Deferred Outflows of Resources	25,644,139	29,321,718			
Total Assets and Deferred Outflows of Resources	\$ 1,116,727,649	\$ 927,787,488			

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017
<b>Operating Revenues</b>	\$ 169,724,327	\$ 170,182,173
<b>Operating Expenses:</b>		
Treatment	47,633,280	44,821,531
Intercepting sewer systems	8,490,808	7,100,846
Upper Allegheny system	563,244	487,512
Administrative and engineering	14,736,160	13,772,696
Billing and collecting	3,482,212	4,439,250
Management information systems	3,723,344	3,778,272
Total operating expenses before depreciation	78,629,048	74,400,107
<b>Operating Income Before Depreciation</b>	91,095,279	95,782,066
Depreciation	23,071,589	22,426,718
<b>Operating Income</b>	68,023,690	73,355,348
<b>Non-operating Revenues (Expenses):</b>		
Interest income, net of amounts capitalized	3,127,451	1,096,517
Interest expense on bonds, net of amounts capitalized	(20,735,872)	(21,544,440)
Amortization of prepaid bond costs	(629,995)	(693,501)
Change in value of pension related items	(61,702)	(3,196,667)
Change in value of OPEB related items	(789,172)	-
Total non-operating revenues (expenses)	(19,089,290)	(24,338,091)
<b>Change in Net Position</b>	48,934,400	49,017,257
<b>Net Position:</b>		
Beginning of year, as restated for 2018	257,170,507	213,528,616
End of year	\$ 306,104,907	\$ 262,545,873

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF CASH FLOWS

YEARS ENDED DECEMBER 31, 2018 AND 2017

	2018	2017
<b>Cash Flows From Operating Activities:</b>		
Cash received from customers	\$ 169,143,099	\$ 162,805,260
Cash paid to suppliers	(24,819,277)	(23,067,826)
Cash paid to employees	(53,827,573)	(50,090,950)
Net cash provided by (used in) operating activities	90,496,249	89,646,484
<b>Cash Flows From Capital and Related Financing Activities:</b>		
Interest paid on bonds	(28,517,266)	(28,035,295)
Principal paid on bonds	(25,395,000)	(24,205,000)
Proceeds from debt issues	157,230,000	-
Bond premium	12,092,896	-
Prepaid bond costs	(1,345,475)	-
Acquisition and construction of capital assets	(34,750,183)	(34,984,453)
Net cash provided by (used in) capital and related financing activities	79,314,972	(87,224,748)
<b>Cash Flows From Investing Activities:</b>		
Purchase of investment securities	(167,022,443)	-
Proceeds from sale and maturities of investment securities	-	31,618,410
Interest earnings	3,601,398	1,537,555
Net cash provided by (used in) investing activities	(163,421,045)	33,155,965
<b>Increase (Decrease) in Cash and Cash Equivalents</b>	6,390,176	35,577,701
<b>Cash and Cash Equivalents:</b>		
Beginning of year, including \$100,289,509 and \$92,275,291, respectively, in restricted/designated accounts	219,537,764	183,960,063
End of year, including \$83,445,720 and \$100,289,509, respectively, in restricted/designated accounts	\$ 225,927,940	\$ 219,537,764
<b>Noncash Capital and Related Financing Activities:</b>		
Property, plant, and equipment additions reflected in accounts payable	\$ 2,444,214	\$2,598,805
<b>Reconciliation of Operating Income to Net Cash Provided by (Used in) Operating Activities:</b>		
Operating income	\$ 68,023,690	\$ 73,355,348
Adjustments to reconcile operating income to net cash provided by (used in) operating activities:		
Depreciation	23,071,589	22,426,718
Change in operating assets and liabilities:		
Accounts receivable	(534,004)	(7,395,213)
Other current assets	(124,011)	(302,540)
Accounts payable	168,050	245,236
Accrued liabilities	(61,840)	272,790
Other post-employment benefits	-	1,025,845
Pretreatment advance payments	(47,225)	18,300
Net adjustments	22,472,559	16,291,136
Net cash provided by (used in) operating activities	\$ 90,496,249	\$ 89,646,484

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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### 1. Organization

The Allegheny County Sanitary Authority (Authority) was incorporated in May 1945 under the Commonwealth of Pennsylvania Municipality Authorities Act of 1945. The Authority serves as the exclusive agency for the collection, transportation, and treatment of wastewater for the City of Pittsburgh and 82 neighboring municipalities. The Authority charges users for processing of wastewater at applicable rates. Additional charges are levied for septage (solid waste removed from septic tanks) and industrial waste discharges into the system.

In evaluating the Authority as a primary government in accordance with Governmental Accounting Standards Board (GASB) guidance, management has addressed all potential component units. The criteria used by the Authority to evaluate possible inclusion of related entities within its reporting entity are financial accountability and the nature and significance of the relationship.

Upon review of the criteria above, the Authority determined that there were no potential component units that met the criteria for inclusion in the reporting entity.

The Authority operates as a stand-alone entity governed by a Board of Directors appointed by the City of Pittsburgh and County of Allegheny. Neither the City of Pittsburgh nor the County of Allegheny appoints a voting majority of the Authority's Board of Directors. The Authority's pension plans, the Management Employees Plan and Union Employees Plan (Plans), are excluded from the Authority's financial statements because the Plans are governed by independent boards composed primarily of participants in the Plans, the Authority does not directly participate in the management of the Plans, and there are no current requirements to included fiduciary funds on standalone business type financials.

### 2. Summary of Significant Accounting Policies

#### Measurement Focus

The Authority uses "income determination" as its measurement focus. Accordingly, all assets and liabilities are included on the balance sheet and net position reflects the economic net worth of the Authority. The operating statement reflects the change in total economic net worth for the period, presented through revenues and expenses of the Authority.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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### Basis of Accounting

The financial statements of the Authority for the years ended December 31, 2018 and 2017 have been prepared on the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned and expenses are recognized when incurred.

### Cash and Cash Equivalents

For purposes of the statements of cash flows, the Authority considers all highly liquid investments with a maturity of three months or less when purchased to be cash and cash equivalents.

### Investments

Investments are recorded at fair value at December 31, 2018 and 2017.

The Government categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

### Accounts Receivable

Accounts receivable consist of amounts due from customers, lump-sum billings to municipalities (which in turn bill customers individually), and estimated unbilled services since the previous billing.

Under the terms of the respective servicing agreements, each local municipality is responsible for the payment to the Authority and subsequent collection of individual customer billings outstanding over 60 days. Accordingly, an allowance for doubtful accounts is currently not considered necessary by management.

### Prepaid Bond Costs

Certain prepaid bond issue and surety bond costs are deferred and amortized over the life of the related outstanding bonds. The original amortization periods are as follows:

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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<u>Description</u>	<u>Amortization Period</u>
2010 Bonds	30 years
2011 Bonds	9 years
2013 Bonds	31 years
2015 Bonds	30 years
2016 Bonds	21 years
2018 Bonds	30 years

### Refunding Adjustment

In accordance with GASB pronouncements, the excess of the reacquisition price over the net carrying amount of debt refunded with proceeds from Series 2016, Series 2015, Series 2011, and Series 2010 Bonds were recorded as refunding adjustments. The refunding adjustments are being amortized using the effective interest method over the originally scheduled life of the defeased issues, which extend to 2037, 2045, 2019, and 2040, respectively. The unamortized balances are reflected as deferred outflows of resources.

### Capital Assets

Capital assets are recorded at cost which includes, when appropriate, interest cost incurred on qualifying assets during the construction period.

Depreciation of capital assets is provided for on the straight-line method based on the estimated useful lives of the various classes of assets. Maintenance and repairs are charged to expense as incurred. Estimated useful lives of major classes of assets are as follows:

Land improvements	40 years
Buildings and improvements	50 years
Utility plant in service	60 years
Machinery and equipment	3-20 years

The cost of the study for a potential capital project is capitalized in construction in progress. Upon commencement of the related capital project, the cost of the study is allocated to the project. Upon the Authority's final determination that a project is not viable, the cost of the study is expensed.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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### Deferred Outflows and Inflows of Resources

In addition to assets and liabilities, the statement of net position will sometimes report separate sections for deferred outflows and deferred inflows of resources. Deferred outflows of resources represent a consumption of net position that applies to a future period while deferred inflows of resources represents an acquisition of net position that applies to future periods.

### Compensated Absences

Vested or accumulated vacation and sickness leave are recorded as a liability and expensed as the benefits accrue to employees.

### Pension Plans

Substantially all full-time employees of the Authority are enrolled in one of two single-employer defined benefit pension plans. For purposes of measuring the net pension liability, deferred outflows of resources related to pensions, and pension expense, information about the fiduciary net position of the pension plans, as well as additions to and deductions from the pension plan fiduciary net position have been determined using the economic resources measurement focus and accrual basis of accounting. Employer contributions are recognized when due and the employer has a legal requirement to provide the contributions. Investments are reported at fair value.

### Post-retirement Benefits

The Authority provides certain health insurance benefits to retirees. The costs of these benefits are recognized in accordance with accounting principles generally accepted in the United States of America and are funded when paid.

### Deferred Compensation Plan

The Authority offers its employees a deferred compensation plan (plan) created in accordance with Internal Revenue Code Section 457. The plan, available to all employees, permits them to defer a portion of their salaries until future years. Participation in the plan is optional. The deferred compensation is not available to the employee until termination, retirement, death, or unforeseeable emergency. At December 31, 2018 and 2017, all amounts of compensation deferred under the plan, all property and rights purchased with those amounts, and all income attributable to those amounts, are held in trust solely for the

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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benefit of the participants. Investments are managed by the plan's trustee under several investment options selected by the participant. Under applicable GASB pronouncements, the plan is not required to be included in the Authority's financial statements.

### Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Management makes significant estimates regarding the amount of unbilled accounts receivable, estimated useful lives of assets, depreciation, reserves for accrued litigation, actuarial valuations of the pension plans and other post employment benefits liabilities, and environmental contingencies.

### Adopted Pronouncements

The requirements of the following GASB Statements were adopted for the financial statements:

The Authority has adopted GASB Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions," Statement No. 85, "Omnibus 2017," These statements revise and establish reporting requirements for most governments that provide pension and post-employment benefits to their employees. As a result of the implementation of GASB Statement No. 75, the net position was restated as follows:

Net position at January 1, 2018 - as originally stated	\$ 262,545,873
OPEB liability at January 1, 2018	(11,575,092)
OPEB liability at January 1, 2018 (prior to restatement)	<u>6,199,726</u>
Net position at January 1, 2018 - restated	<u><u>\$ 257,170,507</u></u>

Information to restate balances for the year ended December 31, 2017 was unavailable.

The OPEB obligation and its related components are described more fully in Note 8.

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# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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GASB Statement No. 85, "Omnibus 2017," addresses practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurements and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). The provisions of this statement have been adopted and incorporated into these financial statements.

### Pending Pronouncements

GASB has issued statements that will become effective in future years, including Statement Nos. 83 (Asset Retirement Obligations), 84 (Fiduciary Activities), 87 (Leases), 88 (Disclosures Related to Debt), 89 (Accounting for Interest Cost Incurred before the End of a Construction Period), and 90 (Majority Equity Interests). Management has not yet determined the impact of these statements on the financial statements.

### **3. Revenue Bonds**

On October 1, 2010, the Authority issued \$121,660,000 of Sewer Revenue Bonds Series of 2010, called the 2010 Bonds. The proceeds of the 2010 Bonds were used to provide funds for the financing of a portion of the Authority's capital budget for 2011 through 2013, current refunding of the 1997 bonds, current refunding of the 2000 bonds, payment of a PennVest loan, and funding capitalized interest.

The 2010 Bonds were issued at a bond premium of \$5,113,802, which is being amortized as an adjustment to interest expense over the life of the bonds, using the effective interest method.

The 2010 Bonds bear interest at rates ranging from 1.50% to 5.00%. Interest is payable in semiannual installments on June 1 and December 1 until maturity. Stated maturities for the 2005 Bonds are at various face amounts on December 1 of each year beginning December 1, 2010 through 2012 and June 1, 2013 through 2040. The 2010 Bonds, which have a final maturity date of June 1, 2040, are subject to redemption prior to maturity. At December 31, 2018 and 2017, the 2010 Bonds payable consisted of \$105,415,000 and \$105,630,000, respectively.

On October 1, 2011, the Authority issued \$92,250,000 of Sewer Revenue Bonds Refunding Series of 2011, called the 2011 Bonds. The proceeds of the bonds were used to currently refund all of the Authority's outstanding Sewer Revenue Bonds Refunding Series of 2001.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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The 2011 Bonds were issued at a premium of \$12,066,763, which is being amortized as an adjustment to interest expense over the life of the bonds, using the effective interest method.

The 2011 Bonds bear interest at rates ranging from 1.50% to 5.00%. Interest is payable in semiannual installments on June 1 and December 1 until maturity. The 2011 Bonds, which have a final maturity date of December 1, 2019, are subject to redemption prior to maturity. At December 31, 2018 and 2017, the 2011 Bonds payable consisted of \$23,010,000 and \$44,910,000, respectively.

On December 19, 2013, the Authority issued \$64,755,000 of Sewer Revenue Bonds Series of 2013, called the 2013 Bonds. The proceeds of the 2013 Bonds were used to provide additional funding for the Authority's capital projects in 2014 and 2015.

The 2013 Bonds were issued at a bond premium of \$2,711,736, which is being amortized as an adjustment to interest expense over the life of the bonds, using the effective interest method.

The 2013 Bonds bear interest at rates ranging from 3.50% to 5.00%. Interest is payable in semiannual installments on June 1 and December 1 until maturity. The 2013 Bonds, which have a final maturity date of December 1, 2044, are subject to redemption prior to maturity. At December 31, 2018 and 2017, the 2013 Bonds payable was \$64,755,000.

On September 3, 2015, the Authority issued \$265,270,000 of Sewer Revenue Bonds Series of 2015, called the 2015 Bonds. The proceeds of the bonds were used to currently refund all of the Authority's outstanding Sewer Revenue Bonds Refunding Series of 2005 and to provide additional funding for the Authority's capital projects.

The 2015 Bonds were issued at a premium of \$36,708,408, which is being amortized as an adjustment to interest expense over the life of the bonds, using the effective interest method.

The 2015 Bonds bear interest at rates ranging from 2.00% to 5.00%. Interest is payable in semiannual installments on June 1 and December 1 until maturity. The 2015 Bonds, which have a final maturity date of December 1, 2045, are subject to redemption prior to maturity. At December 31, 2018 and 2017, the 2015 Bonds payable consisted of \$249,450,000 and \$252,480,000, respectively.

On September 8, 2016, the Authority issued \$106,205,000 of Sewer Revenue Bonds Refunding Series of 2016, called the 2016 Bonds. The proceeds of the bonds were used to advance refund all of the Authority's outstanding Sewer Revenue Bonds Refunding Series of

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# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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2007 and to provide additional funding for the Authority's capital projects. The defeased bonds were repaid in full during 2017.

The 2016 Bonds were issued at a premium of \$13,012,378, which is being amortized as an adjustment to interest expense over the life of the bonds, using the effective interest method.

The 2016 Bonds bear interest at rates ranging from 0.90% to 5.00%. Interest is payable in semiannual installments on June 1 and December 1 until maturity. The 2016 Bonds, which have a final maturity date of December 1, 2037, are subject to redemption prior to maturity. At December 31, 2018 and 2017, the 2016 Bonds payable consisted of \$104,705,000 and \$104,955,000, respectively.

On September 6, 2018, the Authority issued \$157,230,000 of Sewer Revenue Bonds Series of 2018, called the 2018 Bonds. The proceeds of the bonds were to finance a portion of the Authority's capital budget for the years 2018 to 2020.

The 2018 Bonds were issued at a premium of \$12,092,896, which is being amortized as an adjustment to interest expense over the life of the bonds, using the effective interest method.

The 2018 Bonds bear interest at rates ranging from 3.25% to 5.00%. Interest is payable in semiannual installments on June 1 and December 1 until maturity. The 2018 Bonds, which have a final maturity date of June 1, 2048, are subject to redemption prior to maturity. At December 31, 2018, the 2018 Bonds payable consisted of \$157,230,000.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

A summary of long-term debt is as follows for the years ended December 31, 2018 and 2017, respectively:

	Balance 1/1/2018	Accretions/ New Issue	Retired	Balance 12/31/2018	Unamortized Premium	Bonds Payable, net	Current Portion
2010 Series	\$ 105,630,000	\$ -	\$ (215,000)	\$ 105,415,000	\$ 3,321,093	\$ 108,736,093	\$ 220,000
2011 Series	44,910,000	-	(21,900,000)	23,010,000	395,995	23,405,995	23,010,000
2013 Series	64,755,000	-	-	64,755,000	2,064,437	66,819,437	-
2015 Series	252,480,000	-	(3,030,000)	249,450,000	26,880,475	276,330,475	3,150,000
2016 Series	104,955,000	-	(250,000)	104,705,000	11,239,654	115,944,654	250,000
2018 Series	-	157,230,000	-	157,230,000	11,955,846	169,185,846	-
<b>Total</b>	<b>\$ 572,730,000</b>	<b>\$ 157,230,000</b>	<b>\$ (25,395,000)</b>	<b>\$ 704,565,000</b>	<b>\$ 55,857,500</b>	<b>\$ 760,422,500</b>	<b>\$ 26,630,000</b>

  

	Balance 1/1/2017	Accretions/ New Issue	Retired	Balance 12/31/2017	Unamortized Premium	Bonds Payable, net	Current Portion
2010 Series	\$ 105,830,000	\$ -	\$ (200,000)	\$ 105,630,000	\$ 3,538,227	\$ 109,168,227	\$ 215,000
2011 Series	65,755,000	-	(20,845,000)	44,910,000	1,298,769	46,208,769	21,900,000
2013 Series	64,755,000	-	-	64,755,000	2,195,204	66,950,204	-
2015 Series	255,390,000	-	(2,910,000)	252,480,000	29,886,337	282,366,337	3,030,000
2016 Series	105,205,000	-	(250,000)	104,955,000	12,033,683	116,988,683	250,000
2018 Series	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 596,935,000</b>	<b>\$ -</b>	<b>\$ (24,205,000)</b>	<b>\$ 572,730,000</b>	<b>\$ 48,952,220</b>	<b>\$ 621,682,220</b>	<b>\$ 25,395,000</b>

The 2010, 2011, 2013, 2015, 2016 and 2018 Bonds are collateralized by the net revenues of the Authority, by Surety Bonds, in lieu of cash, as required by the trustee and all amounts held in the Revenue Fund and all amounts held by the trustees.

### Schedule of Required Debt Service

In accordance with the provisions of the Trust Indentures for the bonds payable, the Authority has established categories of accounts (current, special, and debt service) with certain assets, principally short-term investments, restricted for specific purposes. Each account category is further segregated into specific accounts referred to as funds. All revenues are required by the Trust Indentures to be deposited in a Revenue Fund. These Trust Indentures also require that rates be sufficient to pay current expenses of the Authority, 110% of the debt service requirements for the current fiscal year, and all amounts owed to the Bond Issuer under the terms of the Financial Guaranty Agreement. Current expenses are defined, generally, as the costs of operating and maintaining the sewer system as determined under accounting

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principles generally accepted in the United States of America, except for depreciation and interest expense.

Funds created as a result of the governing Trust Indentures and by Board of Directors' resolutions are summarized as follows:

	2018	2017
Current account:		
Revenue Fund	\$ 142,482,220	\$ 119,248,255
Special accounts:		
Capital Facilities Fund	\$ 69,547,819	\$ 56,241,232
Construction Fund - 2013	-	710
Construction Fund - 2015	12,919,589	44,040,820
Construction Fund - 2018	169,360,348	-
	\$ 251,827,756	\$ 100,282,762
Debt service accounts:		
Debt Service Fund	\$ 23,334	\$ 6,747

Maturities of all outstanding bonds of the Authority, in the aggregate, are as follows:

	Principal	Interest	Total Debt Service
2019	\$ 26,630,000	\$ 32,663,044	\$ 59,293,044
2020	27,635,000	31,662,193	59,297,193
2021	28,975,000	30,328,168	59,303,168
2022	30,415,000	28,884,643	59,299,643
2023	31,945,000	27,369,893	59,314,893
2024-2028	139,055,000	113,894,338	252,949,338
2029-2033	110,865,000	84,228,757	195,093,757
2034-2038	126,220,000	59,423,529	185,643,529
2039-2043	112,660,000	30,085,313	142,745,313
2044-2048	70,165,000	6,967,363	77,132,363
Total	\$ 704,565,000	\$ 445,507,241	\$ 1,150,072,241

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The total debt service schedule in Note 13 represents the total debt service requirements (principal, interest, and sinking fund requirements) of the Authority's bond issuances, by issue and in the aggregate.

### 4. Interest Cost

Interest cost, including amortization of refunding adjustments, bond discounts/premiums, and prepaid bond costs, for the years ended December 31, 2018 and 2017 were as follows:

	<u>2018</u>	<u>2017</u>
2010 Bonds	\$ 5,141,683	\$ 5,147,415
2011 Bonds	1,468,143	2,305,676
2013 Bonds	3,149,935	3,149,935
2015 Bonds	9,907,256	10,001,838
2016 Bonds	3,644,893	3,999,355
2018 Bonds	<u>2,129,949</u>	<u>-</u>
	<u>\$ 25,441,859</u>	<u>\$ 24,604,219</u>

Interest earned on funds restricted for the purpose of construction of assets or payments of debt service and the interest cost of the related tax-exempt borrowings are deferred and allocated to the cost of capital assets. The Authority used tax-exempt interest earnings to offset capitalized interest costs of \$4.1 million and \$2.4 million for the years ended December 31, 2018 and 2017, respectively.

### 5. Deposits and Investments with Financial Institutions

The investment and deposit policy of the Authority funds is governed by the Trust Indentures and the Municipal Authority Act. In accordance with these regulations, the Authority is authorized to invest in obligations of the U.S. Treasury, agencies and instrumentalities; certificates of deposits, time deposits or deposits in savings accounts, fully insured or collateralized; commercial paper of the highest rating; bonds or notes issued by the Commonwealth of Pennsylvania, political subdivision, or related school district; repurchase agreements; money market mutual funds; and investment agreements with any bank or insurance company. Throughout the years ended December 31, 2018 and 2017, the Authority invested in authorized investments that consisted of U.S. government obligations,

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short-term commercial paper, money market mutual funds, an external investment pool, and guaranteed investment contracts. There were no deposit or investment transactions during 2018 and 2017 that were in violation of either state statutes or the policies of the Authority. The Authority does not have a formal investment policy which addresses custodial credit risk, interest rate risk, credit risk, or concentration of credit risk. The Authority can withdraw funds from the external investment pools without limitations or fees.

GASB requires disclosures related to the following deposit and investment risks: credit risk (including custodial credit risk and concentrations of credit risk), interest rate risk, and foreign currency risk. The following is a description of the Authority's deposit and investment risks:

Custodial Credit Risk - Custodial credit risk is the risk that in the event of a bank failure, the Authority's deposits may not be returned to it. As of December 31, 2018, \$8,540,824 of the Authority's bank balance of \$8,953,506 was exposed to custodial credit risk, which is collateralized in accordance with Act 72 of the Pennsylvania state legislature which requires the institution to pool collateral for all governmental deposits and have the collateral held by an approved custodian in the institution's name. These deposits have carrying amounts of \$8,830,417 as of December 31, 2018. As of December 31, 2017, \$27,291,816 of the Authority's bank balance of \$27,686,261 was exposed to custodial credit risk, which is collateralized in accordance with Act 72 of the Pennsylvania state legislature which requires the institution to pool collateral for all governmental deposits and have the collateral held by an approved custodian in the institution's name. These deposits have carrying amounts of \$27,474,658 as of December 31, 2017.

Included in cash and cash equivalents on the statements of net position are short-term investments in money markets and PA INVEST.

At December 31, 2018, the Authority held the following investment balances:

	Carrying Value	Maturity in Years Less Than 1 Year	1-5 Years
U.S. Government Agencies	\$ 167,782,990	\$ 83,716,193	\$ 84,066,797
Money Market Funds	214,959,068	214,959,068	-
PA INVEST	2,137,993	2,137,993	-
Total	<u>\$ 384,880,051</u>	<u>\$ 300,813,254</u>	<u>\$ 84,066,797</u>

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At December 31, 2017, the Authority held the following investment balances:

	Carrying Value	Maturity in Years Less Than 1 Year
	<u>                    </u>	<u>                    </u>
Money Market Funds	\$ 189,965,317	\$ 189,965,317
PA INVEST	2,097,789	2,097,789
Total	<u>\$ 192,063,106</u>	<u>\$ 192,063,106</u>

The carrying value of the Authority's investments is the same as their fair value amount. Money markets are valued using quoted market prices (Level 1 inputs). The fair values of U.S. government agency securities are priced using the spread above the risk-free yield curve. As the yields for the risk-free yield curve and the spreads for these securities are observable market inputs, the fair values of U.S. government agency securities are included in the Level 2 fair value hierarchy.

The Authority's investments in the external investment pool (INVEST) is the same as the value of the pool shares and is reported at amortized cost which approximates market. All investments in an external investment pool that is not SEC registered are subject to oversight by the Commonwealth. The Authority can withdraw funds from INVEST without limitations or fees.

Interest Rate Risk – Interest rate risk is the risk that changes in interest rates will adversely affect the fair market value of the Authority's investments.

Credit Risk – Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation. As of December 31, 2018, the Authority's investment in the state investment pool (INVEST) was rated AAA by Standard & Poor's. 100% of the Authority's investments in money market funds are rated AAA by Standard & Poor's, and AAA by Moody's.

Concentration of Credit Risk – Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investments in a single issuer. As of December 31, 2018 and 2017, the Authority did not have a high concentration of investments in any one issuer.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

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### 6. Capital Assets

A summary of capital assets is as follows:

	2018	2017
Nondepreciable assets:		
Land	\$ 5,344,896	\$ 5,344,896
Construction in progress	59,836,813	38,371,565
Total nondepreciable assets	<u>65,181,709</u>	<u>43,716,461</u>
Depreciable assets:		
Land improvements	4,805,250	4,805,250
Buildings and improvements	467,090,622	467,806,579
Utility plant in service	253,080,113	241,318,539
Machinery and equipment	336,330,360	334,048,304
GROW Program	903,173	-
Total depreciable assets	<u>1,062,209,518</u>	<u>1,047,978,672</u>
Less accumulated depreciation	<u>505,047,909</u>	<u>483,094,938</u>
Net depreciable assets	<u>557,161,609</u>	<u>564,883,734</u>
Total capital assets	<u>\$ 622,343,318</u>	<u>\$ 608,600,195</u>

The Authority has spent \$59,836,813 and \$38,371,565 for construction in progress as of December 31, 2018 and 2017, respectively, with estimated remaining total expansion costs of approximately \$645,541,246, which are anticipated to occur over the next five years. These expansion costs are primarily attributable to activities required by the Consent Decree further discussed in Note 10.

### 7. Pension Plans

*General Information About the Pension Plans.* The Authority has two single-employer defined benefit pension plans covering substantially all full-time employees: the Management Employees Plan (Management Plan) and the Union Employees Plan (Union Plan). The Union Plan is a contributory plan including all members of the utility workers' collective bargaining unit and the Management Plan is a contributory plan available to all Authority employees not participating in the Union Plan.

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Under each of the plans, employees' eligibility for normal benefits begins at age 65, at which time the individual is entitled to an annual retirement benefit, payable monthly for life. For the Management Plan, this benefit is equal to 2.5% of the first \$4,200 of average compensation for each year of Credited Service, plus 2.5% of 3-year compensation in excess of \$4,200 for each year of Contributory Service (for participant contributing at the rate of 3% of compensation) and 2.0% of 5-year average compensation in excess of \$4,200 for each year of Contributory Service (for participant contributing at the rate of 1.25% of compensation in excess of \$4,200). If a participant transfers from the Union Plan, the normal retirement benefit is based on all years of employment with the Authority and is offset by the Union Plan benefit. In addition, the portion of the benefit for those contributing 1.25% of compensation in excess of \$4,200 will be determined using 2.50% of 3-year average compensation in excess of \$4,200 for any Union years of Contributory Service. For the Union Plan, this benefit is equal to 2.5% of the first \$4,200 of average compensation for each year of credited service plus 2.5% of average compensation in excess of \$4,200 for each year of Contributory Service. The benefit above is limited to 100% of average compensation. For both plans, in no event will a participant's benefit exceed the limits set forth in Section 415(b) of the Internal Revenue Code.

Early retirement is available to all participants who have reached the age of 55 and have at least 10 years of service. For the Management Plan, a participant who is contributing 3% of compensation may retire at age 60 with 10 years of service with no early retirement reduction. If such participant elects to retire prior to age 60, benefits will be reduced by one-half of 1% for each month prior to age 60 in which retirement occurs. For a participant who elected to contribute 1.25% of compensation in excess of \$4,200, the monthly benefit will be reduced by one-half of 1% for each month prior to Normal Retirement Date (that is, prior to age 65). For the Union Plan, if the participant has attained age 60 with 25 years of Credited Service and is actively employed immediately prior to retirement, the benefit is unreduced. Otherwise, the benefit is reduced actuarially if it commences prior to age 62 or by 5% per year if it commences between age 62 and Normal Retirement Date.

In both plans, for those retiring after age 65, the benefit is the greater of (1) the actuarial equivalent of the benefit that would have been payable at the Normal Retirement Date and (2) the benefit based on service and earnings as of the actual retirement date.

*Employees Covered by Benefit Terms.* As of the most recent actuarial valuations, the following employees were covered by the benefit terms:

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	<u>Management</u>	<u>Union</u>	<u>Total</u>
Inactive plan members or beneficiaries currently receiving benefits	73	185	258
Inactive plan members entitled to but not yet receiving benefits	21	32	53
Active plan members	<u>132</u>	<u>280</u>	<u>412</u>
Total plan members	<u>226</u>	<u>497</u>	<u>723</u>

*Contributions.* Participants in the Management Plan contribute 3.0% and participants in the Union Plan contribute 1.25% of earnings to their respective plans. The Authority's contributions to the plans are based on actuarially determined rates.

*Net Pension Liability (Asset).* The Authority's net pension liability (asset) for 2017 and 2018 was measured as of December 31, 2016 and 2017, respectively. The total pension liability used to calculate the net pension liability (asset) was determined by actuarial valuations as of those respective measurement dates.

*Actuarial Assumptions.* The total pension liability in the December 31, 2017 and 2016 actuarial valuations were determined using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial cost method	Entry age normal
Actuarial assumptions:	
Investment rate of return	7.20%
Underlying inflation rate	2.50%
Salary projection	4.50%

Management Plan - For healthy lives, mortality is in accordance with the RP-2000 Combined Mortality Table adjusted for white-collar employees with using separate rates for employees and annuitants, and with fully generational projected mortality improvement under Scale BB2D. For disabled lives, mortality is in accordance with the disabled mortality table specified in IRS Revenue Ruling 96-7 for disabilities occurring prior to 1995.

Union Plan - For healthy lives, mortality is in accordance with the RP-2000 Combined Mortality Table adjusted for blue-collar employees with using separate rates for employees and annuitants, and with fully generational projected mortality improvement under Scale BB2D. For disabled lives, mortality is in accordance with the disabled mortality table specified in IRS Revenue Ruling 96-7 for disabilities occurring prior to 1995.

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Actuarial assumptions used in the respective valuations were based on actuarial experience studies for the period January 1, 2016 to December 31, 2016 and January 1, 2017 to December 31, 2017.

*Long-Term Expected Rate of Return.* The long-term expected rate of return on plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The following were the asset allocation policy and best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation:

Asset Class	Management Plan		Union Plan	
	Target Allocation	Long-Term Expected Real Rate of Return	Target Allocation	Long-Term Expected Real Rate of Return
US equity	70.0%	5.87%	70.0%	5.87%
Fixed income	30.0%	1.00%	30.0%	1.00%
	<u>100.0%</u>		<u>100.0%</u>	

*Discount Rate.* The discount rate used to measure the total pension liability was 7.20%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that the Authority's contributions will be made based on the actuarially determined contribution. Based on those assumptions, the fiduciary net position of each plan was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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## NOTES TO FINANCIAL STATEMENTS

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*Changes in Net Pension Liability (Asset).* Changes in the Authority's net pension liability (asset) are as follows:

	Management Plan		
	Total Pension Liability	Plan Net Position	Net Pension Liability (Asset)
Balances at 12/31/17	\$ 46,810,630	\$ 38,156,297	\$ 8,654,333
Changes for the year:			
Service cost	1,668,851	-	1,668,851
Interest	3,420,033	-	3,420,033
Differences between expected and actual experience	(70,800)	-	(70,800)
Changes of benefit terms	-	-	-
Changes of assumptions	-	-	-
Employer contributions	-	1,916,633	(1,916,633)
Member contributions	-	266,378	(266,378)
Net investment income	-	5,367,534	(5,367,534)
Benefit payments, including refunds of employee contributions	(1,807,432)	(1,807,432)	-
Balances at 12/31/18	<u>\$ 50,021,282</u>	<u>\$ 43,899,410</u>	<u>\$ 6,121,872</u>
Plan fiduciary net position as a percentage of total pension liability			<u>87.76%</u>

Net investment income includes \$162,181 of trustee and other investment related expenses.

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	Management Plan		
	Total Pension Liability	Plan Net Position	Net Pension Liability (Asset)
Balances at 12/31/16	\$ 41,623,963	\$ 35,448,846	\$ 6,175,117
Changes for the year:			
Service cost	1,420,751	-	1,420,751
Interest	3,135,922	-	3,135,922
Differences between expected and actual experience	816,498	-	816,498
Changes of benefit terms	228,011	-	228,011
Changes of assumptions	1,342,644	-	1,342,644
Employer contributions	-	1,795,051	(1,795,051)
Member contributions	-	242,438	(242,438)
Net investment income	-	2,427,121	(2,427,121)
Benefit payments, including refunds of employee contributions	(1,757,159)	(1,757,159)	-
Balances at 12/31/17	<u>\$ 46,810,630</u>	<u>\$ 38,156,297</u>	<u>\$ 8,654,333</u>
Plan fiduciary net position as a percentage of total pension liability			<u>81.51%</u>

Net investment income includes \$147,005 of trustee and other investment related expenses.

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	Union Plan		
	Total Pension Liability	Plan Net Position	Net Pension Liability (Asset)
Balances at 12/31/17	\$ 118,198,928	\$ 110,431,556	\$ 7,767,372
Changes for the year:			
Service cost	2,944,731	-	2,944,731
Interest	8,525,299	-	8,525,299
Differences between expected and actual experience	(238,155)	-	(238,155)
Changes of benefit terms	-	-	-
Changes of assumptions	-	-	-
Employer contributions	-	3,059,402	(3,059,402)
Member contributions	-	219,633	(219,633)
Net investment income	-	18,425,789	(18,425,789)
Benefit payments, including refunds of employee contributions	(5,052,414)	(5,052,414)	-
Balances at 12/31/18	\$ 124,378,389	\$ 127,083,966	\$ (2,705,577)
Plan fiduciary net position as a percentage of the total pension liability			102.18%

Net investment income includes \$334,371 of trustee and other investment related expenses.

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	Union Plan		
	Total Pension Liability	Plan Net Position	Net Pension Liability (Asset)
Balances at 12/31/16	\$ 108,429,625	\$ 104,339,458	\$ 4,090,167
Changes for the year:			
Service cost	2,616,615	-	2,616,615
Interest	8,080,735	-	8,080,735
Differences between expected and actual experience	(179,689)	-	(179,689)
Changes of benefit terms	603,344	-	603,344
Changes of assumptions	3,411,383	-	3,411,383
Employer contributions	-	3,307,866	(3,307,866)
Member contributions	-	205,330	(205,330)
Net investment income	-	7,341,987	(7,341,987)
Benefit payments, including refunds of employee contributions	(4,763,085)	(4,763,085)	-
Balances at 12/31/17	\$ 118,198,928	\$ 110,431,556	\$ 7,767,372
Plan fiduciary net position as a percentage of the total pension liability			93.43%

Net investment income includes \$308,968 of trustee and other investment related expenses.

Pennsylvania Act 205 (Act 205) is the authority by which benefit provisions are established and may be amended. Stand-alone financial reports were not issued for either of the Plans, as they are not required under the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974.

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*Sensitivity of the Net Pension Liability to Changes in Discount Rate.* The following presents the net pension liability (asset) of the Authority, calculated using the discount rate of 7.20%, as well as what the Authority's net pension liability (asset) would be if it were calculated using a discount rate that is 1% lower (6.20%) or 1% higher (8.20%) than the current rate:

	1% Decrease (6.20%)	Current Discount Rate (7.20%)	1% Increase (8.20%)
Management	\$ 12,477,438	\$ 6,121,872	\$ 782,465
Union	13,123,121	(2,705,577)	(16,014,406)
	<u>\$ 25,600,559</u>	<u>\$ 3,416,295</u>	<u>\$ (15,231,941)</u>

*Pension Expense and Deferred Inflows/Outflows of Resources Related to Pensions.* For the years ended December 31, 2018 and 2017, the Authority recognized pension expense of \$5,663,272 and \$8,172,702, respectively. At December 31, 2018 and 2017, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	2018	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 1,402,227	\$ 590,418
Changes of assumptions	5,367,589	-
Net difference between projected and actual earnings on pension plan investments	5,262,531	11,799,053
Contributions made subsequent to the measurement date	5,601,570	-
	<u>\$ 17,633,917</u>	<u>\$ 12,389,471</u>

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	2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 1,771,600	\$ 403,289
Changes of assumptions	6,664,959	-
Net difference between projected and actual earnings on pension plan investments	7,834,921	2,532,668
Contributions made subsequent to the measurement date	4,976,035	-
	<u>\$ 21,247,515</u>	<u>\$ 2,935,957</u>

Deferred outflows of resources related to Authority pension contributions subsequent to the measurement date of \$5,601,570 and \$4,976,035 will be recognized as a reduction of the net pension liability in the years ending December 31, 2019 and 2018, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

<u>Year Ending December 31,</u>	<u>Deferred Outflows</u>	<u>Deferred Inflows</u>
2019	\$ 4,239,133	\$ 4,021,339
2020	4,239,130	2,755,005
2021	1,560,698	2,755,005
2022	1,057,839	2,721,296
2023	666,226	65,635
2024	269,321	49,539
2025	-	21,652
	<u>\$ 12,032,347</u>	<u>\$ 12,389,471</u>

### 8. Postemployment Benefits Other Than Pensions

*General Information About the OPEB Plans.* In addition to the pension benefits described in Note 7, the Authority provides certain post-retirement healthcare benefits to management and union retirees until age 65, which is a defined benefit, single-employer plan administered by the Authority. No assets are accumulated in a trust that meets the criteria of paragraph 4 of GASB Statement 75. This plan does not issue stand-alone Financial Statements.

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In accordance with the Authority's Policy and Procedures Manual for Management Employees, certain healthcare benefits are provided to all management employees, and their dependents, who retire on or after attaining age 55 with at least ten years of credited service. These benefits cease when the retiree turns 65.

Additionally, in accordance with the current labor agreement between the Authority and the Utility Workers Union of America AFL-CIO Local 433, certain healthcare benefits are provided to all union employees and their dependents who retire at age 60 through age 65 with 25 years of credited service. In addition to the healthcare benefits, the Authority provides full hospitalization for retirees and their dependents between the ages of 62 and 65 with 15 to 24 years of credited service and 25% of the life insurance coverage that was provided while employed with the Authority will be carried into retirement.

In addition to these post-retirement healthcare benefits, the Authority also provides to both management and union retirees, the Vision Program, the Prescription Drug Program, and the Dental Program. For these programs, however, the retiree shall be responsible to pay the entire prevailing premium being paid by the Authority for its employees. Usually, these premiums are taken directly out of the retirees' pension payments.

*Employees Covered by Benefit Terms.* As of the most recent actuarial valuations, the following employees were covered by the benefit terms:

Active employees	394
Retired employees with health coverage	17
Retired employees with life insurance only	<u>128</u>
Total active and inactive employees	<u><u>539</u></u>

*Actuarial Assumptions.* The methods and assumptions are as follows:

- Discount rate, using Fidelity Fixed Income Market Data for Municipal GO AA Yield Curve at 20 years: 3.31%
  - Provisions of the Affordable Care Act (ACA) related to the "Cadillac Tax" to be assessed on high-cost plans were changed by legislation during the measurement period. In December 2017, the calculation for indexing the tax threshold was changed to use chained CPI-U.
  - Actuarial cost method: Individual Entry Age Normal Level Percent of Pay
  - Salary increase: 4.5% annually
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- Mortality rate – For healthy lives, mortality is in accordance with the RP-2000 Mortality Table, adjusted for blue-collar (Bargaining) or white-collar (Management) employees, using separate tables for employees and retirees, and with fully generational mortality improvement projected under Scale BB2D. For past and future disabled lives, mortality is in accordance with the disabled mortality table specified in IRS Revenue Ruling 96-7 for disabilities occurring prior to 1995. No improvement projection is applied to this table.
- Measurement date - ACA changes enacted after the December 31, 2017 measurement date, including a delay to the effective date for the tax enacted in January 2018, will not be reflected until the next measurement date. No other assumptions and inputs were made between December 31, 2016 and December 31, 2017 measurement dates.
- Historical trend rates, which are needed for normal cost allocation under Entry Age method

<u>Year</u>	<u>Medical Trend</u>	<u>Drug Trend</u>
2016	7.10%	8.10%
2015	6.80%	11.10%
2010	7.60%	6.40%
2005	10.40%	10.50%
2000	10.90%	10.90%
1995	5.30%	5.30%
1990	8.80%	8.80%
1985	8.70%	8.70%
1980	10.80%	10.80%
1975	15.80%	15.80%
1970	13.40%	13.40%
1965	11.10%	11.10%

The Retirement assumption was selected based upon a study of plan experience for the period 2003 to 2013. The Turnover assumption was selected based upon a study of plan experience for the period 2007 to 2013.

*Changes in Actuarial Assumptions.* The assumed discount rate of 3.81% as of the beginning of the measurement period was changed to 3.31% as of the end of the measurement period.

*Changes in the Total OPEB Liability.* The changes in the total OPEB liability of the Authority for the year ended December 31, 2018 were as follows:

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

	OPEB Liability
Balance at December 31, 2017	\$ 12,136,312
Changes for the year:	
Service cost	798,043
Interest	482,108
Changes of assumptions	441,915
Benefits paid	(561,220)
Balances at December 31, 2018	\$ 13,297,158

*Sensitivity of the Total OPEB Liability to Changes in the Discount Rate.* The following represents the total OPEB liability calculated using the stated discount rate, as well as what the total OPEB liability would be if it was calculated using a discount rate that is one-percentage-point lower or one-percentage-point higher than the current rate:

1% Decrease (2.31%)	Current Discount Rate (3.31%)	1% Increase (4.31%)
\$ 14,191,606	\$ 13,297,158	\$ 12,469,230

*Sensitivity of the Total OPEB Liability to Changes in the Medical Trend Rate.* The following presents the total OPEB liability calculated using the stated medical trend assumption, as well as what the total OPEB liability would be if it was calculated using a medical trend rate that is one-percentage-point lower or one-percentage-point higher than the current rate:

	1% Decrease	Current	1% Increase
Initial rate	5.75%	6.75%	7.75%
Ultimate rate	3.00%	4.00%	5.00%
	\$ 12,176,365	\$ 13,297,158	\$ 14,602,353

*OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEBs.* For the year ended December 31, 2018, the Authority recognized OPEB expense of \$1,325,709. Cash payments into the plan are included in fringe benefits on the statement of revenues, expenses, and changes in net position and any remaining excess (deficiency) is reported as OPEB expense, net.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ -
Changes in assumptions or other inputs	396,357	-
Net differences between projected and actual earnings on trust investments	-	-
Subtotal, to be recognized in future OPEB expense	396,357	-
Employer payments for OPEB subsequent to 12/31/2017 measurement date		
12/31/2018 fiscal year end (expected claims)	536,537	-
Total	\$ 932,894	\$ -

At December 31, 2018, the Authority reported deferred outflows of resources related to OPEBs of \$396,357 due to changes of which assumptions and other inputs will be recognized in OPEB expense as follows:

Year Ending December 31	
2019	\$ 45,558
2020	45,558
2021	45,558
2022	45,558
2023	45,558
Thereafter	168,567
	\$ 396,357

### 9. Contingencies

The Authority is exposed to various risks of loss related to torts; alleged negligence; acts of discrimination; breach of contract; disagreements arising from the interpretation of laws or regulations; theft of, damage to and destruction of assets; errors and omissions; injuries to employees and natural disasters, for which the Authority carries commercial insurance. While some of these claims may be for substantial amounts, they are not unusual in the ordinary course of providing collection, transportation and treatment of wastewater services for applicable municipalities. The Authority does not participate in any public entity risk pool,

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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and does not retain risk related to any aforementioned exposure except for those amounts incurred relative to policy deductibles, which are not significant. Additionally, the Authority has not significantly reduced any of its insurance coverage from the prior years. Settled claims have not exceeded the Authority's commercial coverage in any of the past three years. Except as noted below, the Authority's management does not expect that the resolution of any outstanding claims and litigation will have a material adverse effect on the accompanying financial statements.

### **10. Environmental Permit Requirements**

The Authority is currently engaged in a major capital program to provide additional treatment capacity as required by Pennsylvania Law. This program is the first phase of a multi-phased program designed to reduce or eliminate wet-weather discharges from the Authority's conveyance and treatment system. As required by the Clean Water Act, the Authority concluded negotiations with the U.S. Environmental Protection Agency, Pennsylvania Department of Environmental Protection, and the Allegheny County Health Department (collectively the Agencies) in May of 2007. A Consent Decree resulting from these negotiations was entered by the United States District Court for the Western District of Pennsylvania on January 23, 2008. The Consent Decree requires the Authority to further develop, refine and submit a Long Term Wet Weather Control Plan (Plan) to the Agencies by January 30, 2013. A draft of the Plan was released for public comment at the end of July, 2012, and subsequently provided to the Agencies for review January 30, 2013. In response to public comment, the Authority requested additional time to finalize the Plan to incorporate an evaluation of green technology. The Agencies are reviewing the Authority's submissions and continue to meet with the Authority to discuss implementing the Plan in phases that will accommodate cost and green alternatives.

The final Plan will include provisions for significant capital improvements to the Authority's conveyance and treatment system, to capture and treat a defined flow from its customer municipalities, and to achieve applicable receiving stream water quality standards.

### **11. Clean Water Assistance Fund**

In January 2017, the Authority created the Clean Water Assistance Fund to help families pay their sewage treatment bills. This program serves low-income residential customers in the 83 municipalities that the Authority serves. It is administered by Dollar Energy. The Authority initially contributed approximately \$1 million to establish this fund. During 2018 and 2017,

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# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

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the fund paid \$144,000 and \$47,000, respectively to approved applicants. To date, the Clean Water Assistance Fund has helped over 2,700 customers.

### **12. Green Revitalization of Our Waterways**

The Authority created the Green Revitalization of Our Waterways (GROW) program in June 2017. The GROW program allows for any municipality or municipal sewer authority within the Authority's service area to apply for grants that may be used to install green storm water reduction technology, remove streams from the sewer system, reduce the amount of water seeping in through groundwater, or to separate out storm sewers. As of December 31, 2018, 75 grants have been approved. Payments made as of the end of 2018 total \$2,965,728, of which \$903,173 is included in Depreciable assets and the remainder is included in construction in progress. As of December 31, 2018, the Authority has committed to \$17,635,975 in grants that will be drawn upon in future years.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

### 13. Total Debt Service Schedule

	Series of 2010	Series of 2011	Series of 2013	Series of 2015	Series of 2016	Series of 2018	Combined Debt Service	Annual Debt Service
June 1, 2019	\$ 2,817,412	\$ 11,940,250	\$ 1,612,056	\$ 6,067,813	\$ 2,098,225	\$ 3,524,478	\$ 28,060,234	
December 1, 2019	2,594,112	11,936,125	1,612,056	9,217,813	2,348,225	3,524,479	31,232,810	\$ 59,293,044
June 1, 2020	2,774,112	-	1,612,056	6,004,813	2,097,100	3,524,478	16,012,559	
December 1, 2020	2,591,187	-	1,612,056	33,459,813	2,097,100	3,524,478	43,284,634	59,297,193
June 1, 2021	2,781,187	-	1,612,056	5,341,638	2,097,100	3,524,478	15,356,459	
December 1, 2021	2,586,437	-	1,612,056	34,126,638	2,097,100	3,524,478	43,946,709	59,303,168
June 1, 2022	2,791,437	-	1,612,056	4,624,813	2,097,100	3,524,478	14,649,884	
December 1, 2022	2,581,312	-	1,612,056	34,834,813	2,097,100	3,524,478	44,649,759	59,299,643
June 1, 2023	2,806,312	-	1,612,056	3,872,813	2,097,100	3,524,478	13,912,759	
December 1, 2023	2,575,687	-	1,612,056	35,592,813	2,097,100	3,524,478	45,402,134	59,314,893
June 1, 2024	5,980,687	-	1,612,056	3,090,213	2,097,100	3,769,478	16,549,534	
December 1, 2024	2,490,562	-	7,112,056	17,820,213	8,812,100	3,518,353	39,753,284	56,302,818
June 1, 2025	6,030,562	-	1,489,894	2,735,150	1,929,225	3,958,353	16,143,184	
December 1, 2025	2,402,062	-	8,989,894	12,540,150	10,719,225	3,507,353	38,158,684	54,301,868
June 1, 2026	15,257,063	-	1,312,018	2,509,203	1,709,475	7,317,353	28,105,112	
December 1, 2026	2,080,688	-	8,812,018	4,649,203	1,854,475	3,412,103	20,808,487	48,913,599
June 1, 2027	5,805,688	-	1,124,519	2,478,441	1,706,575	7,417,103	18,532,326	
December 1, 2027	1,987,563	-	8,624,518	13,263,443	2,181,575	3,311,978	29,369,077	47,901,403
June 1, 2028	5,907,563	-	938,518	2,208,816	1,697,075	7,521,978	18,273,950	
December 1, 2028	1,889,563	-	6,438,518	13,528,816	2,192,075	3,206,728	27,255,700	45,529,650
June 1, 2029	6,004,563	-	807,319	1,962,665	1,687,175	7,631,728	18,093,450	
December 1, 2029	1,786,688	-	3,307,319	13,777,666	2,202,175	3,096,103	24,169,951	42,263,401
June 1, 2030	6,116,688	-	754,819	1,667,290	1,676,875	7,746,103	17,961,775	
December 1, 2030	1,678,438	-	754,819	14,072,290	2,206,875	2,979,853	21,692,275	39,654,050
June 1, 2031	4,238,438	-	754,819	1,357,165	1,666,275	7,824,853	15,841,550	
December 1, 2031	1,622,438	-	754,819	3,952,165	12,651,275	2,901,122	21,881,819	37,723,369
June 1, 2032	4,297,438	-	754,819	1,313,374	1,446,575	7,951,122	15,763,328	
December 1, 2032	1,563,922	-	754,819	3,993,374	12,876,575	2,774,872	21,963,562	37,726,890
June 1, 2033	4,353,922	-	754,819	1,246,375	1,217,975	8,039,872	15,612,963	
December 1, 2033	1,502,891	-	754,819	4,061,374	13,107,975	2,686,025	22,113,084	37,726,047
June 1, 2034	4,417,891	-	754,819	1,175,999	980,175	8,151,025	15,479,909	
December 1, 2034	1,439,125	-	754,818	4,131,000	13,340,175	2,576,725	22,241,843	37,721,752
June 1, 2035	4,499,125	-	754,819	1,102,125	732,975	8,266,725	15,355,769	
December 1, 2035	1,362,625	-	754,819	4,207,125	13,587,975	2,462,925	22,375,469	37,731,238
June 1, 2036	4,582,625	-	754,819	1,024,500	475,875	8,382,925	15,220,744	
December 1, 2036	1,282,125	-	754,819	4,284,500	13,840,875	2,344,525	22,506,844	37,727,588
June 1, 2037	4,662,125	-	754,819	943,000	208,575	8,509,525	15,078,044	
December 1, 2037	1,197,625	-	754,819	4,363,000	14,113,575	2,221,225	22,650,244	37,728,288
June 1, 2038	16,372,625	-	754,819	857,500	-	8,636,225	26,621,169	
December 1, 2038	818,250	-	754,819	4,447,500	-	2,092,925	8,113,494	34,734,663
June 1, 2039	16,773,250	-	754,819	767,750	-	8,802,925	27,098,744	
December 1, 2039	419,375	-	754,819	4,537,750	-	1,925,176	7,637,120	34,735,864
June 1, 2040	17,194,375	-	754,819	673,500	-	8,980,175	27,602,869	
December 1, 2040	-	-	754,819	4,633,500	-	1,748,800	7,137,119	34,739,988
June 1, 2041	-	-	754,819	574,500	-	9,163,800	10,493,119	
December 1, 2041	-	-	9,789,819	4,734,500	-	1,563,425	16,087,744	26,580,863
June 1, 2042	-	-	517,650	470,500	-	9,358,425	10,346,575	
December 1, 2042	-	-	6,897,650	4,835,498	-	1,368,550	13,101,698	23,448,273
June 1, 2043	-	-	350,175	361,375	-	9,563,550	10,275,100	
December 1, 2043	-	-	6,855,175	4,946,375	-	1,163,675	12,965,225	23,240,325
June 1, 2044	-	-	179,419	246,750	-	9,778,675	10,204,844	
December 1, 2044	-	-	7,014,419	5,061,750	-	948,299	13,024,468	23,229,312
June 1, 2045	-	-	-	126,375	-	11,228,300	11,354,675	
December 1, 2045	-	-	-	5,181,375	-	691,301	5,872,676	17,227,351
June 1, 2046	-	-	-	-	-	11,756,300	11,756,300	
December 1, 2046	-	-	-	-	-	470,000	470,000	12,226,300
June 1, 2047	-	-	-	-	-	11,985,000	11,985,000	
December 1, 2047	-	-	-	-	-	239,700	239,700	12,224,700
June 1, 2048	-	-	-	-	-	12,224,700	12,224,700	
December 1, 2048	-	-	-	-	-	-	-	12,224,700
	<u>\$ 184,917,763</u>	<u>\$ 23,876,375</u>	<u>\$ 115,654,350</u>	<u>\$ 359,058,913</u>	<u>\$ 164,142,100</u>	<u>\$ 302,422,740</u>	<u>\$ 1,150,072,241</u>	<u>\$ 1,150,072,241</u>

**REQUIRED SUPPLEMENTARY  
INFORMATION**

# ALLEGHENY COUNTY SANITARY AUTHORITY

## SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS - MANAGEMENT

YEARS ENDED DECEMBER 31,

	2018	2017	2016	2015
<b>Total Pension Liability:</b>				
Service cost	\$ 1,668,851	\$ 1,420,751	\$ 1,193,822	\$ 1,012,344
Interest	3,420,033	3,135,922	2,864,194	2,597,036
Differences between expected and actual experience	(70,800)	816,498	1,043,646	163,825
Changes of benefit terms	-	228,011	-	-
Changes of assumptions	-	1,342,644	-	1,178,962
Benefit payments, including refunds of member contributions	(1,807,432)	(1,757,159)	(1,591,493)	(1,495,819)
<b>Net Changes in Total Pension Liability</b>	<b>3,210,652</b>	<b>5,186,667</b>	<b>3,510,169</b>	<b>3,456,348</b>
<b>Total Pension Liability - Beginning</b>	<b>46,810,630</b>	<b>41,623,963</b>	<b>38,113,794</b>	<b>34,657,446</b>
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 50,021,282</b>	<b>\$ 46,810,630</b>	<b>\$ 41,623,963</b>	<b>\$ 38,113,794</b>
<b>Plan Fiduciary Net Position:</b>				
Plan member contributions	\$ 266,378	\$ 242,438	\$ 215,651	\$ 217,014
Employer actuarially recommended contributions	1,916,633	1,795,051	1,642,817	1,647,664
Net investment income	5,367,534	2,427,121	(64,985)	3,062,959
Benefit payments, including refunds of member contributions	(1,807,432)	(1,757,159)	(1,591,493)	(1,495,819)
<b>Net Change in Plan Fiduciary Net Position</b>	<b>5,743,113</b>	<b>2,707,451</b>	<b>201,990</b>	<b>3,431,818</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>38,156,297</b>	<b>35,448,846</b>	<b>35,246,856</b>	<b>31,815,038</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 43,899,410</b>	<b>\$ 38,156,297</b>	<b>\$ 35,448,846</b>	<b>\$ 35,246,856</b>
<b>Net Pension Liability (Asset) - Ending (a-b)</b>	<b>\$ 6,121,872</b>	<b>\$ 8,654,333</b>	<b>\$ 6,175,117</b>	<b>\$ 2,866,938</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<b>87.76%</b>	<b>81.51%</b>	<b>85.16%</b>	<b>92.48%</b>
<b>Covered Payroll</b>	<b>\$ 9,342,295</b>	<b>\$ 8,594,987</b>	<b>\$ 7,340,502</b>	<b>\$ 6,455,960</b>
<b>Net Pension Liability as a Percentage of Covered Payroll</b>	<b>65.53%</b>	<b>100.69%</b>	<b>84.12%</b>	<b>44.41%</b>

**ALLEGHENY COUNTY SANITARY AUTHORITY**

SCHEDULE OF CHANGES IN THE NET  
PENSION LIABILITY AND RELATED RATIOS - UNION

YEARS ENDED DECEMBER 31,

	2018	2017	2016	2015
<b>Total Pension Liability:</b>				
Service cost	\$ 2,944,731	\$ 2,616,615	\$ 2,476,956	\$ 2,293,999
Interest	8,525,299	8,080,735	7,634,199	7,030,443
Differences between expected and actual experience	(238,155)	(179,689)	389,969	(415,816)
Changes of benefit terms	-	603,344	-	-
Changes of assumptions	-	3,411,383	-	3,319,486
Benefit payments, including refunds of member contributions	<u>(5,052,414)</u>	<u>(4,763,085)</u>	<u>(4,509,841)</u>	<u>(4,067,193)</u>
<b>Net Changes in Total Pension Liability</b>	6,179,461	9,769,303	5,991,283	8,160,919
<b>Total Pension Liability - Beginning</b>	<u>118,198,928</u>	<u>108,429,625</u>	<u>102,438,342</u>	<u>94,277,423</u>
<b>Total Pension Liability - Ending (a)</b>	<u>\$ 124,378,389</u>	<u>\$ 118,198,928</u>	<u>\$ 108,429,625</u>	<u>\$ 102,438,342</u>
<b>Plan Fiduciary Net Position:</b>				
Plan member contributions	\$ 219,633	\$ 205,330	\$ 194,364	\$ 179,401
Employer actuarially recommended contributions	3,059,402	3,307,866	3,170,502	3,124,830
Net investment income	18,425,789	7,341,987	(1,652,268)	12,699,402
Benefit payments, including refunds of member contributions	<u>(5,052,414)</u>	<u>(4,763,085)</u>	<u>(4,509,841)</u>	<u>(4,067,193)</u>
<b>Net Change in Plan Fiduciary Net Position</b>	16,652,410	6,092,098	(2,797,243)	11,936,440
<b>Plan Fiduciary Net Position - Beginning</b>	<u>110,431,556</u>	<u>104,339,458</u>	<u>107,136,701</u>	<u>95,200,261</u>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 127,083,966</u>	<u>\$ 110,431,556</u>	<u>\$ 104,339,458</u>	<u>\$ 107,136,701</u>
<b>Net Pension Liability (Asset) - Ending (a-b)</b>	<u>\$ (2,705,577)</u>	<u>\$ 7,767,372</u>	<u>\$ 4,090,167</u>	<u>\$ (4,698,359)</u>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<u>102.18%</u>	<u>93.43%</u>	<u>96.23%</u>	<u>104.59%</u>
<b>Covered Payroll</b>	<u>\$ 19,156,669</u>	<u>\$ 18,107,692</u>	<u>\$ 17,147,336</u>	<u>\$ 16,613,080</u>
<b>Net Pension Liability (Asset) as a Percentage of Covered Payroll</b>	-14.12%	42.90%	23.85%	-28.28%

**ALLEGHENY COUNTY SANITARY AUTHORITY**

SCHEDULE OF AUTHORITY CONTRIBUTIONS - PENSIONS

YEARS ENDED DECEMBER 31,

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Actuarially determined contribution:</b>											
Management	\$ 2,516,461	\$ 1,916,633	\$ 1,795,051	\$ 1,642,817	\$ 1,647,664	\$ 1,606,029	\$ 1,529,224	\$ 1,358,351	\$ 1,328,190	\$ 934,784	\$ 850,919
Union	3,085,109	3,059,402	3,307,866	3,170,502	3,124,830	2,260,312	2,199,113	1,804,689	1,765,668	667,181	624,065
	<u>5,601,570</u>	<u>4,976,035</u>	<u>5,102,917</u>	<u>4,813,319</u>	<u>4,772,494</u>	<u>3,866,341</u>	<u>3,728,337</u>	<u>3,163,040</u>	<u>3,093,858</u>	<u>1,601,965</u>	<u>1,474,984</u>
<b>Contributions in relation to the actuarially determined contribution:</b>											
Management	2,516,461	1,916,633	1,795,051	1,642,817	1,647,664	1,606,104	1,529,224	1,358,400	1,328,190	934,800	850,919
Union	3,085,109	3,059,402	3,307,866	3,170,502	3,124,830	2,260,313	2,199,952	1,804,700	1,765,668	667,181	624,065
	<u>5,601,570</u>	<u>4,976,035</u>	<u>5,102,917</u>	<u>4,813,319</u>	<u>4,772,494</u>	<u>3,866,417</u>	<u>3,729,176</u>	<u>3,163,100</u>	<u>3,093,858</u>	<u>1,601,981</u>	<u>1,474,984</u>
<b>Contribution deficiency (excess)</b>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (76)</u>	<u>\$ (839)</u>	<u>\$ (60)</u>	<u>\$ -</u>	<u>\$ (16)</u>	<u>\$ -</u>
<b>Covered payroll:</b>											
Management	\$ 10,179,102	\$ 9,342,295	\$ 8,594,987	\$ 7,340,502	\$ 6,455,960	\$ 7,066,389	\$ 6,957,730	\$ 6,554,237	\$ 6,198,835	\$ 5,783,644	\$ 5,259,790
Union	20,346,885	19,156,669	18,107,692	17,147,336	16,613,080	16,193,768	15,871,099	15,750,647	15,233,174	14,618,183	13,899,054
	<u>\$ 30,525,987</u>	<u>\$ 28,498,964</u>	<u>\$ 26,702,679</u>	<u>\$ 24,487,838</u>	<u>\$ 23,069,040</u>	<u>\$ 23,260,157</u>	<u>\$ 22,828,829</u>	<u>\$ 22,304,884</u>	<u>\$ 21,432,009</u>	<u>\$ 20,401,827</u>	<u>\$ 19,158,844</u>
<b>Contributions as a percentage of covered payroll</b>	18.35%	17.46%	19.11%	19.66%	20.69%	16.62%	16.33%	14.18%	14.44%	7.85%	7.70%

**Notes to Required Supplementary Pension Schedules:**

Valuation date: Actuarial calculations are performed each year as of January 1. Contributions noted above are as of each pension plan's calendar year ending December 31 using actuarially determined contribution rates calculated as of January 1, one year prior to the end of the calendar year in which contributions are reported.

Methods and assumptions used to determine the contribution rates:

Actuarial cost method	Entry Age Normal - Union Plan Entry Age Normal - Management Plan
Amortization method	Level-dollar monthly payments - Union Plan Level-dollar monthly payments - Management Plan
Remaining amortization period	16 years            Union Plan 14 years            Management Plan
Asset valuation method	Smoothed market value (without phase-in) - Union Plan Smoothed market value (with phase-in) - Management Plan
Inflation	2.50%            2.50%    Union Plan 2.50%            2.50%    Management Plan
Salary increases	4.50%            4.50%    Union Plan 4.50%            4.50%    Management Plan
Investment rate of return (gross return assumption)	7.50%            7.50%    Union Plan 7.50%            7.50%    Management Plan
Mortality - Union Plan	For healthy lives, mortality is in accordance with the RP-2000 Combined Mortality Table adjusted for blue-collar employees with using separate rates for employees and annuitants, and with fully generational projected mortality improvement under Scale BB2D. Previously, combined mortality rates were used for all participants and mortality improvement was projected under Scale AA. For disabled lives, mortality is in accordance with the disabled mortality table specified in IRS Revenue Ruling 96-7 for disabilities occurring prior to 1995.
Mortality - Management Plan	For healthy lives, mortality is in accordance with the RP-2000 Combined Mortality Table adjusted for white-collar employees with using separate rates for employees and annuitants, and with fully generational projected mortality improvement under Scale BB2D. Previously, combined mortality rates were used for all participants and mortality improvement was projected under Scale AA. For disabled lives, mortality is in accordance with the disabled mortality table specified in IRS Revenue Ruling 96-7 for disabilities occurring prior to 1995.

Note: the mortality improvement assumptions were updated as of the December 31, 2006, 2010, 2012, 2014, 2015, 2016 valuations.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## SCHEDULE OF CHANGES IN THE TOTAL OPEB LIABILITY AND RELATED RATIOS

YEAR ENDED DECEMBER 31, 2018  
LAST TEN YEARS\*

	2018
<b>Total OPEB Liability:</b>	
Service cost	\$ 798,043
Interest	482,108
Differences between expected and actual experience	-
Changes of benefit terms	-
Changes of assumptions	441,915
Benefit payments, including refunds of member contributions	(561,220)
<b>Net Changes in Total OPEB Liability</b>	1,160,846
<b>Total OPEB Liability - Beginning</b>	12,136,312
<b>Total OPEB Liability - Ending (a)</b>	\$ 13,297,158
<b>Covered Payroll</b>	\$ 28,498,964
<b>Net OPEB Liability as a Percentage of Covered Payroll</b>	46.66%

\* Until a full 10-year trend is compiled, the required information for the Plan is presented for as many years as are available.

## **SUPPLEMENTARY INFORMATION**

# ALLEGHENY COUNTY SANITARY AUTHORITY

## SCHEDULE OF INVESTMENTS AND OTHER ASSETS

YEAR ENDED DECEMBER 31, 2018

	Cash and Cash Equivalents	Investments	Accrued Interest Receivable	Total
<b>Current Account:</b>				
Revenue Fund	\$ 142,482,220	\$ -	\$ -	\$ 142,482,220
<b>Special Accounts:</b>				
Capital Facilities Fund	69,547,819	-	-	69,547,819
Construction Fund 2013	-	-	-	-
Construction Fund 2015	12,919,589	-	-	12,919,589
Construction Fund 2018	954,978	167,782,528	622,842	169,360,348
	83,422,386	167,782,528	622,842	251,827,756
<b>Debt Service Accounts:</b>				
Debt Service Fund	23,334	-	-	23,334
Total	\$ 225,927,940	\$ 167,782,528	\$ 622,842	\$ 394,333,310

# ALLEGHENY COUNTY SANITARY AUTHORITY

## SCHEDULE OF INVESTMENTS AND OTHER ASSETS

YEAR ENDED DECEMBER 31, 2017

	<u>Cash and Cash Equivalents</u>	<u>Investments</u>	<u>Accrued Interest Receivable</u>	<u>Total</u>
<b><u>Current Account:</u></b>				
Revenue Fund	\$ 119,248,255	\$ -	\$ -	\$ 119,248,255
<b><u>Special Accounts:</u></b>				
Capital Facilities Fund	56,241,232	-	-	56,241,232
Construction Fund 2013	710	-	-	710
Construction Fund 2015	44,040,820	-	-	44,040,820
	<u>100,282,762</u>	<u>-</u>	<u>-</u>	<u>100,282,762</u>
<b><u>Debt Service Accounts:</u></b>				
Debt Service Fund	6,747	-	-	6,747
Total	<u>\$ 219,537,764</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 219,537,764</u>