

# ANNUAL DISCLOSURE REPORT FOR WATER AND SEWER SYSTEM AND DISTRICT ENERGY SYSTEM FOR FISCAL YEAR ENDED SEPTEMBER 30, 2018

(Prepared pursuant to certain continuing disclosure undertakings relating to the Bonds listed in APPENDIX E hereto)

Filed with EMMA

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Dated as of

May 28, 2019



#### JEA 21 W. CHURCH STREET JACKSONVILLE, FLORIDA 32202 (904) 665-7410

(http://www.jea.com)

#### JEA OFFICIALS

#### **BOARD MEMBERSHIP**<sup>(1)</sup>

Chair
Vice Chair
Secretary

April Green
Frederick D. Newbill
Camille J. Lee-Johnson
John Campion
Kelly Flanagan

#### **MANAGEMENT**

G. Alan Howard<sup>(2)</sup>

Managing Director and Chief Executive Officer Aaron F. Zahn President and Chief Operating Officer Melissa H. Dykes Chief Administrative Officer Herschel Vinyard Ryan F. Wannemacher Chief Financial Officer Chief Innovation and Transformation Officer Julio Romero Agüero Chief Public and Stakeholder Affairs Officer Michael R. Hightower Vice President and General Manager, Energy Caren B. Anders Vice President and General Manager of Water and Wastewater Systems Deryle I. Calhoun Vice President of Energy and Water Planning Steven G. McInall Vice President and Chief Customer Officer Kerri Stewart Vice President and Chief Compliance Officer Ted E. Hobson Vice President, Chief Legal Officer Lynne Rhode Interim Chief Human Resources Officer Jon Kendrick Vice President and Chief Information Officer Shawn Eads Vice President and Chief Supply Chain Officer John P. McCarthy Vice President and Chief Environmental Services Officer Paul K. Steinbrecher Treasurer Joseph E. Orfano

#### **GENERAL COUNSEL**

Jason R. Gabriel, Esq. General Counsel of the City of Jacksonville Jacksonville, Florida

<sup>(1)</sup> There is currently one vacancy on the JEA Board.

<sup>(2)</sup> Mr. Howard's term has expired, but he continues to serve until his successor has been appointed and qualified.



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## ANNUAL DISCLOSURE REPORT FOR WATER AND SEWER SYSTEM AND DISTRICT ENERGY SYSTEM FOR FISCAL YEAR ENDED SEPTEMBER 30, 2018

#### INTRODUCTION

#### General

This Annual Disclosure Report for Water and Sewer System and District Energy System for Fiscal Year Ended September 30, 2018 (together with the Schedule and the Appendices hereto, this "Annual Disclosure Report") is furnished by JEA to provide information concerning (a) JEA, (b) JEA's combined water and sewer utilities system, (c) JEA's local district energy facilities, (d) outstanding debt of JEA relating to the combined water and sewer utilities system, and (e) outstanding debt of JEA relating to the local district energy facilities. This Annual Disclosure Report is being filed with the Municipal Securities Rulemaking Board (the "MSRB"), through the MSRB's Electronic Municipal Market Access ("EMMA") website currently located at <a href="http://emma.msrb.org">http://emma.msrb.org</a> pursuant to certain continuing disclosure undertakings made by JEA in accordance with the provisions of Rule 15c2-12, as amended ("Rule 15c2-12"), promulgated by the United States Securities and Exchange Commission (the "SEC") pursuant to the Securities Exchange Act of 1934, as amended. The bonds to which such continuing disclosure undertakings relate (including the CUSIP numbers thereof) are listed in APPENDIX E hereto. As permitted by the provisions of Rule 15c2-12, this Annual Disclosure Report also is intended to be included by reference in official statements and other offering and remarketing documents prepared by JEA in connection with (a) the sale and issuance, after the date hereof, of certain securities of JEA and (b) the remarketing in the secondary market, after the date hereof, of certain securities of JEA.

JEA is a body politic and corporate organized and existing under the laws of the State of Florida and is an independent agency of the City of Jacksonville, Florida (the "City"). The City is a consolidated city-county local government for Duval County, located in Northeast Florida. The governing body of JEA (the "JEA Board") consists of seven members appointed by the Mayor of the City and confirmed by the City Council of the City (the "Council"). JEA (then known as Jacksonville Electric Authority) was established in 1968 to own and manage the electric utility which had been owned by the City since 1895 (the "Electric System"). In 1997, the Council amended the Charter of the City (the "Charter") in order to authorize JEA to own and operate additional utility functions and, effective on June 1, 1997, the City transferred to JEA the City's combined water and sewer utilities system (the "Water and Sewer System"). Effective as of October 1, 2004, JEA established a separate utility system (the "District Energy System") for its local district energy facilities, including its chilled water activities and any local district heating facilities JEA may develop in the future. JEA operates and maintains its records on the basis of a fiscal year ending on each September 30th (a "Fiscal Year").

Each of the Electric System, the Water and Sewer System and the District Energy System is owned and operated by JEA separately. For information relating to JEA's Electric System see "ANNUAL DISCLOSURE REPORT FOR ELECTRIC UTILITY SYSTEM FOR FISCAL YEAR ENDED SEPTEMBER 30, 2018" (the "Electric ADR") available from the Municipal Securities Rulemaking Board's Electronic

Municipal Market Access ("EMMA") website at <a href="http://emma.msrb.org">http://emma.msrb.org</a>. The revenues of each system do not constitute revenues of the other two systems, and, except as described under "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Debt Relating to Water and Sewer System - Water and Sewer System Support of the District Energy System Bonds" herein, revenues of each system are not pledged to the payment of any debt issued or to be issued by JEA to finance and refinance the other two systems. JEA may, however, satisfy its annual obligation to transfer funds to the City with funds derived from any of its utilities systems. See "OTHER FINANCIAL INFORMATION - Transfers to the City" herein.

This Annual Disclosure Report contains information regarding JEA's Water and Sewer System and the District Energy System. For financing purposes and except as described under "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Debt Relating to Water and Sewer System - Water and Sewer System Support of the District Energy System Bonds" herein, the debt of JEA relating to the Water and Sewer System is payable from and secured by the revenues derived by the Water and Sewer System from the sale of water and the provision of sewer treatment and related services. The debt of JEA relating to the District Energy System is payable from and secured by the revenues derived from JEA's chilled water activities and any local district heating facilities JEA may develop in the future. Accordingly, (a) except as described under "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Debt Relating to Water and Sewer System - Water and Sewer System Support of the District Energy System Bonds" herein, the information contained herein relating to the Water and Sewer System is not relevant to the Electric System Bonds, the Subordinated Electric System Bonds or the District Energy System Bonds and should not be taken into account in evaluating such debt; and (b) the information contained herein relating to the District Energy System is not relevant to the Electric System Bonds, Subordinated Electric System Bonds, Water and Sewer System Bonds or Subordinated Water and Sewer System Bonds and should not be taken into account in evaluating such debt.

The summaries of or references to the Water and Sewer System Resolution, the Subordinated Water and Sewer System Resolution and the District Energy System Resolution, and certain amendments thereto, where applicable, (as such terms are hereinafter defined) and certain statutes and other ordinances and documents included in this Annual Disclosure Report do not purport to be comprehensive or definitive; and such summaries and references are qualified in their entirety by references to each such resolution, statute, ordinance, and document. Copies of the Water and Sewer System Resolution, the Subordinated Water and Sewer Resolution and the District Energy System Resolution are available on the JEA website at <a href="https://www.jea.com/About/Investor\_Relations/Bonds.aspx">https://www.jea.com/About/Investor\_Relations/Bonds.aspx</a> and the other documents referred to in this Annual Disclosure Report may be obtained from JEA; <a href="provided">provided</a> that a reasonable charge may be imposed for the cost of reproduction.

#### **JEA Establishment and Organization**

JEA was established in 1968 to own and manage the electric utility which had been owned by the City since 1895. The City's Charter was amended in 1997 to authorize JEA to own and operate other utility systems, including the Water and Sewer System. In 2004, the City authorized JEA to create the District Energy System. The JEA Board consists of seven members appointed by the Mayor of the City, subject to confirmation by the Council. The members serve without pay for staggered terms of four years each, with a maximum of two consecutive full terms each.

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Current members of the JEA Board, their occupations and the commencement and expiration of their terms are as follows:

MEMBER <sup>(1)</sup>	OCCUPATION	TERM
April Green Chair	Chief Financial Officer/ Chief Operating Officer Bethel Baptist Institutional Church	December 1, 2017–February 28, 2021
Frederick D. Newbill Vice Chair	Pastor First Timothy Baptist Church	January 12, 2017–February 28, 2023
Camille J. Lee-Johnson Secretary	Chief Operating Officer Lee Wesley & Associates, LLC	July 25, 2018–February 28, 2020
John Campion	Co-founder & Chairman APR Energy	July 25, 2018–February 28, 2022
Kelly Flanagan	Senior Vice President & CFO Jacksonville Jaguars, LLC	November 25, 2015–February 28, 2020
G. Alan Howard	Founder & President Milam Howard Nicandri Gillam & Renner P.A.	November 25, 2015–February 28, 2019 <sup>(2)</sup>

<sup>(1)</sup> There is currently one vacancy on the JEA Board.

In addition, in accordance with the provisions of the interlocal agreement entered into between JEA and Nassau County, Florida in connection with JEA's acquisition of certain assets and franchises of a private water and sewer utility in Nassau County, Nassau County is entitled to appoint a non-voting representative to the JEA Board. The Nassau County representative is entitled to attend all JEA Board meetings and to participate in discussions concerning matters that affect the provision of water and sewer services within Nassau County. Nassau County has appointed Mike Mullin, a Commissioner on Nassau County's Board of County Commissioners, as its representative to the JEA Board.

The Charter authorizes JEA to construct, acquire (including acquisition by condemnation), establish, improve, extend, enlarge, maintain, repair, finance, manage, operate and promote its utilities systems (which consist of (1) the Electric System, (2) the Water and Sewer System, (3) the District Energy System and (4) any additional utilities systems which JEA may undertake in the future upon satisfaction of the conditions set forth in the Charter), and to furnish electricity, water, sanitary sewer service, natural gas and other utility services as authorized therein within and outside of the City and for said purposes to construct and maintain electric lines, pipelines, water and sewer mains, natural gas lines and related facilities along all public highways and streets within and outside of the City. Should any additional utility system be undertaken by JEA in the future, such utility system may, at the option of JEA, constitute an additional utility function added to, and may become a part of, the Water and Sewer System or the District Energy System. See "SUMMARY OF CERTAIN PROVISIONS OF THE WATER AND SEWER SYSTEM RESOLUTION - Certain Other Covenants - Additional Utility Functions" in APPENDIX B attached hereto. The Charter also confers upon JEA the power to sue, to enter into contracts, agreements and leases, and to sell revenue bonds to finance capital improvements and to refund previously issued evidences of indebtedness of JEA.

#### **Management and Employees**

The Charter assigns responsibility for the management of JEA's utilities systems to the JEA Board. JEA employs a Managing Director and Chief Executive Officer as its chief executive officer. The Managing Director, executive officers, vice presidents, directors, managers, executive assistants and other appointed staff,

<sup>(2)</sup> Mr. Howard's term has expired, but he continues to serve until his successor has been appointed and qualified.

numbering approximately 411 persons, form the management team (the "Management Team") and are not subject to the City's civil service system.

#### Management

On November 27, 2018, the JEA Board appointed Aaron F. Zahn as Managing Director and Chief Executive Officer of JEA. Mr. Zahn served as Interim Managing Director and Chief Executive Officer from April 17, 2018 until his appointment in November.

Information regarding the Managing Director and Chief Executive Officer of JEA and the thirteen executive officers of JEA follow:

Aaron F. Zahn, Managing Director and Chief Executive Officer. Aaron F. Zahn is Managing Director and Chief Executive Officer for JEA. In this role, Mr. Zahn oversees all operations for the eighth-largest public utility in the nation, providing electric, water and sewer services to customers across a 900-mile service territory in Northeast Florida.

Prior to being appointed Interim Managing Director and Chief Executive Officer in April 2018, Mr. Zahn served as Managing Partner and Chief Executive Officer of Pascal Partners, a distributed infrastructure investment and development company. From 2009 to 2017, he was Chairman and Chief Executive Officer of BCR Environmental Corporation, a water/wastewater technology firm and public-private-partnership development and operations company. Prior to BCR, Mr. Zahn worked as an investment professional for two multi-strategy hedge funds in New York City, managing over \$6 billion in equity. He was also a Senior Manager of the Capital Markets team at General Growth Properties, playing a key role in \$25+ billion of acquisitions and financing activities along with providing financial oversight for \$200+ million of commercial real estate development.

A graduate of Yale University, Mr. Zahn is a supporter of YMCA of Jacksonville, Baptist Health System, Nemours Children's Health System and Yale University. He is a member of the Board of Directors for the Young Presidents Organization and the Bob Graham Center for Public Service at University of Florida.

*Melissa H. Dykes, President and Chief Operating Officer*. Melissa Dykes serves as JEA's President and Chief Operating Officer. She leads the operation of the utility, responsible for providing utility services to more than one million people across four counties. She manages nearly 1,800 employees in the areas of energy, water, wastewater, customer experience, human resources, environmental services, compliance and supply chain.

Ms. Dykes served as JEA's Chief Financial Officer for nearly six years prior to her current role. As CFO, she provided leadership to ensure the financial health of JEA, resulting in access to capital at low cost on behalf of JEA's customers. She was responsible for all aspects of JEA's finances, including treasury, financial reporting, budgeting, supply chain management, and shared services, and had lead responsibility for ensuring compliance with all reporting, regulatory and tax requirements for JEA.

Prior to joining JEA, Ms. Dykes was CFO at a portfolio company of a large energy private equity firm and a principal in a renewable energy development company, where she was responsible for origination, commercial structuring, development and capital raising for renewable energy projects. She also was Vice President of Investment Banking at JPMorgan, where she was responsible for providing capital solutions for clients, including more than \$26 billion in financings for many municipal electric and water systems across the country, risk management product delivery and mergers and acquisitions. Prior to joining JPMorgan, Ms. Dykes worked for The World Bank Group, where she researched and published on private participation in infrastructure industries in developing countries. She is a graduate of the University of Florida and holds a certificate in Advanced Management from the Tuck School of Business at Dartmouth.

Ms. Dykes serves on the Boards of Directors of the United Way of Northeast Florida, the Association of Edison Illuminating Companies, the Florida Coordinating Group, and the Florida Reliability Coordinating Council (where she serves as Secretary/Treasurer and Chair of the Corporate Compliance and Finance and Audit Committee).

*Herschel Vinyard, Chief Administrative Officer.* Mr. Vinyard has 25 years of environmental law, business, and government experience and comes to JEA from the law firm of Foley & Lardner where he was a member of the Environmental Regulation and Government & Public Policy practices.

He also served a four-year term as Secretary of the Florida Department of Environmental Protection (DEP) during Governor Rick Scott's first term, where he was involved in environmental permitting, water rights, and real estate development. He has been a champion for the state's waterways and natural springs including restoration of the Everglades.

Under his leadership, the Florida Park Service received the National Gold Medal Award for Excellence in the management of state park systems from the National Recreation and Park Association.

Prior to serving the State of Florida, Mr. Vinyard was the director of business operations responsible for strategic planning, business development, and regulatory and government affairs for the Southeast Shipyards division of BAE Systems.

Mr. Vinyard obtained both his law and bachelor's degrees from Louisiana State University.

Ryan F. Wannemacher, Chief Financial Officer. Mr. Wannemacher serves as JEA's Chief Financial Officer. He provides leadership to ensure fiscal responsibility for the long-term financial health of JEA, resulting in access to capital at low cost for JEA's customers. He is responsible for all aspects of JEA's finances, including treasury, financial reporting, financial planning and analysis, and budgeting. He has lead responsibility for ensuring compliance with all reporting, regulatory and tax requirements for JEA. Mr. Wannemacher currently serves on the Finance and Audit Committee of The Energy Authority ("TEA").

Prior to his current role at JEA, Mr. Wannemacher served as JEA's Director of Financial Planning and Analysis from April 2015 to 2018. Prior to joining JEA, Mr. Wannemacher was Vice President of Investment Banking at JPMorgan. While at JPMorgan, Mr. Wannemacher was responsible for providing capital solutions for clients, including over \$20 billion in financings for many municipal electric, water and natural gas systems across the country, risk management product delivery, and mergers and acquisitions. Mr. Wannemacher holds a B.B.A. in Financial Consulting from Southern Methodist University graduating Magna Cum Laude.

Julio Romero Agüero, Chief Innovation and Transformation Officer. Dr. Agüero provides leadership in the identification, development, evaluation, and adoption of emerging technologies, business models, services, processes, and industry leading practices to improve overall enterprise performance and sustainability, and achieve digital transformation. He has 23 years of industry experience in the areas of technology and business strategy, grid modernization, smart grid, utility of the future, distribution systems analysis, planning, and operations, and integration of distributed generation, energy storage, microgrids and electric vehicles. He has developed solutions in these areas for electric utilities and regulatory boards in the USA, Canada, Latin America, the Caribbean and Asia. He has published over 40 articles in topics pertaining to these areas and is a frequent speaker in industry events.

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Before joining JEA he served as Vice President of Strategy and Business Innovation at Quanta Technology, where he led high performing teams in the development of pioneering methodologies and concepts for planning and analysis of modern and future power distribution systems, grid modernization, and distributed energy resources. He has been Adjunct Professor at University of North Carolina at Charlotte and University of Houston. He is a former Commissioner of the National Energy Commission of Honduras. He is a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE"), and has served as Chair of the IEEE Distribution Subcommittee, Chair of the IEEE Working Group on Distributed Resources Integration, Editor of IEEE Transactions on Power Delivery, and Editor of IEEE Transactions on Smart Grid. He is a member of the Advisory Committee of DistributECH.

He holds PhD, MBA and BSEE degrees from National University of San Juan (Argentina), North Carolina State University and National Autonomous University of Honduras, respectively.

*Michael R. Hightower, Chief Public and Stakeholder Affairs Officer*. Mr. Hightower joined JEA in 2015, bringing over 35 years of governmental and legislative relations experience. He also previously served 16 years on JEA's Board of Directors including two two-year terms as JEA Chair.

Mr. Hightower joined Blue Cross and Blue Shield of Florida (now Florida Blue) in 1981 as the Director of Governmental and Legislative Relations and in 1985 was named its Vice President of Governmental and Legislative Relations. He worked closely with key political leaders in the federal, state and local government and, after three decades of a successful career at Florida Blue, retired in late 2014. He then joined the international law firm of Holland & Knight LLP as a Senior Policy Advisor before joining the JEA senior leadership team.

In addition to his professional accomplishments, Mr. Hightower has dedicated his time, talents and leadership to numerous boards and commissions over the last 38 years. He is immediate past chair of the Florida Governor's Mansion Foundation and the Florida Association of Professional Lobbyists. Mr. Hightower is in his second year as Vice President, Florida House and Florida's embassy in Washington, D.C. He also serves as an active board member of the Florida State College Foundation, Florida Association of Professional Lobbyists, Florida Ounce of Prevention, and Vice Chair, Five Star Veterans Center.

Prior to joining JEA, Mr. Hightower chaired the following organizations and civic and trade associations: United States Naval Academy; Jacksonville Chamber of Commerce; Florida House, Florida's Embassy in Washington, D.C.; Associated Industries of Florida; Florida Insurance Council; Florida News Service; Florida College System Foundation; Jacksonville Library Foundation; Jacksonville Political Leadership Institute; JaxBiz; Duval County Republican Party and the Cecil Field Base Closure Commission.

Throughout the state, he is well-known for his political leadership, having served as chair or finance chair for more than 580 successful local, state, and/or federal candidates since 1972. He has assisted in raising more than \$136.3 million for charitable, candidate and political party campaigns since 1981.

In 2006, Leadership Florida's leaders appointed Mr. Hightower to the Florida Energy Commission. The nine-member panel was charged with making recommendations to the Florida Legislature on ways to secure Florida's energy future.

In 2010, Florida's legislative leadership appointed Mr. Hightower to the Public Service Commission Nominating Council, charged with interviewing and recommending qualified candidates for gubernatorial appointment to the Florida Public Service Commission.

Mr. Hightower, a 1972 graduate of Jacksonville University, resides in Jacksonville. He was a third term 2003, 2005, 2007 University of Florida Graduate School adjunct instructor, "Principles of Lobbying."

Caren B. Anders, Vice President and General Manager, Energy. (1) Ms. Anders has lead responsibility for producing and delivering electricity to JEA's 485,000 electric customers in a safe, reliable and cost-competitive manner, and in full compliance with regulatory objectives. In this role, she and her team are responsible for planning, constructing, operating and maintaining JEA's electric system, including generation plants and the transmission, substations and distribution systems.

Ms. Anders joined JEA in January 2019 from Duke Energy. She brings operational leadership, financial acumen, strategy and innovation, and compliance and risk management to her leadership role at JEA. At both Duke and Exelon Corp., she led high-performing teams across the energy spectrum, including Generation, Transmission, Distribution, Emerging Technologies, and Shared Services. Along with her vast electric experience, she also has expertise in new technologies, strategic business performance, compliance, financial management, employee engagement and customer satisfaction.

Ms. Anders has served on the boards of PT Holding Company LLC, Peak Tower LLC, SERC Reliability Corp. and the Florida Reliability Coordination Council. She has also served her community as a board member for Junior Achievement, Central Carolinas and United Way, Greater Triangle N.C. She earned a bachelor's degree in engineering from the University of Pennsylvania and a master's degree in finance from Drexel University and is a licensed Professional Engineer in the state of Pennsylvania.

Deryle Calhoun, Vice President and General Manager of Water and Wastewater Systems. (2) Deryle Calhoun is responsible for leading JEA's water and wastewater operations, construction and strategy execution, and delivering exceptional service to JEA customers across a four-county area. Mr. Calhoun is currently leading a resiliency program that will improve water, wastewater and district energy system reliability during extreme weather events like hurricanes.

Mr. Calhoun began his career in water/wastewater in 1993 with the City of Jacksonville Public Utilities as a project engineer and joined JEA in 1997 when the City's water and wastewater services were transferred to JEA. Mr. Calhoun served at the director level for 20 years, first with the Distribution and Collection team and most recently with Water, Wastewater and Reuse Treatment and District Energy Services.

Mr. Calhoun holds a Bachelor of Science degree in Environmental Engineering from the University of Florida and is a registered Professional Engineer in the State of Florida.

Steven G. McInall, Vice President of Energy and Water Planning. Mr. McInall is responsible for long-term planning for JEA's energy and water sectors, overseeing the development of a more than \$1 billion capital program. Mr. McInall's groups are responsible for the Integrated Resource Plans for both the electric and water systems. He is responsible for JEA's renewable energy portfolio, including landfill gas and solar photovoltaic (PV). During his tenure, JEA's solar PV portfolio has grown from 12 MW to 34 MW, with another 5 MW plant under construction and 5-50 MW facilities (250 MW) in the contract stage. He is also responsible for real estate acquisitions and sales.

Mr. McInall has been with JEA since 2011, serving as the Director of the Electric Production Resource Planning Department, with oversight of the Electric Generation Planning, Fuels Management Services, Natural Gas Commercial Services and Byproducts Production Services areas, and as the Manager of Nuclear Generation Business.

Prior to joining JEA, Mr. McInall had a 27-year career at several regional and national engineering consulting firms, including Stone & Webster Engineering Corporation, Boston, and MACTEC Engineering and Consulting, in Tallahassee and Jacksonville. Clients included major U.S. utilities, such

<sup>(1)</sup> Michael J. Brost retired from his position of Vice President and General Manager of Electric Systems in January 2019.

<sup>(2)</sup> Brian J. Roche retired from his position of Vice President and General Manager of Water and Wastewater Systems in June 2018.

as Dominion Energy, Inc. and the Tennessee Valley Authority, as well as the U.S. Department of Energy and the U.S. Army Corps of Engineers.

Mr. McInall holds Bachelor and Master degrees in Nuclear Engineering from the Massachusetts Institute of Technology, and will receive a Master of Public Policy degree from Jacksonville University in April, 2019. He is a licensed Professional Engineer in Florida, Georgia, South Carolina, North Carolina, Massachusetts, New Hampshire and Vermont. He is also a Leadership in Energy and Environmental Design (LEED) Accredited Professional, in Building Design and Construction. Mr. McInall is on the Board of the North Florida Chapter of the US Green Building Council, and serves on the St Johns County Citizens Flood Mitigation Advisory Committee

*Kerri Stewart, Vice President and Chief Customer Officer*. Ms. Stewart joined JEA as Chief Customer Officer in 2017, bringing more than 14 years of experience to the organization. Previously, Ms. Stewart served as Chief of Staff for Jacksonville, Florida Mayor Lenny Curry, providing policy and public affairs guidance to the mayor.

Prior to returning to the City, Ms. Stewart was a Partner and Senior Vice President at Infinity Global Solutions. Drawing on her extensive experience in both the public and private sectors, she focused on assisting clients in the areas of government privatization, public infrastructure development, general management consulting and government relations. She also served as interim president of Visit Jacksonville, Local Initiative Support Corporation (LISC) and Cultural Council of Greater Jacksonville as part of her management consulting practice.

Prior to joining IGS, Ms. Stewart served as the Chief Administrative Officer for the City of Jacksonville/Duval County, Florida under Mayor John Peyton and Mayor Alvin Brown. In this role, she oversaw day-to-day government operations for the City, including directing a nearly 5,000-member workforce and managing the \$1 billion municipal budget and \$164 million annual capital improvement plan. During her first tenure with the City, Stewart led several successful privatization studies and implementations; and she has shared her experiences in this area at a variety of conferences and other professional venues.

During her years of public service, Ms. Stewart also served as director of the City's Housing and Neighborhoods Department, created the Office of Operational Efficiency (now known as the Inspector General's Office), and served as a policy advisor to Mayor Peyton.

Prior to joining the City, Ms. Stewart worked as a Program Manager for Alltel Information Systems in Leeds, UK and Jacksonville, Florida. She is a graduate of the University of North Florida's Coggin School of Business with a bachelor's degree in Business Administration, double-majoring in Marketing and Management.

Ted E. Hobson, Vice President and Chief Compliance Officer. Mr. Hobson joined JEA in 1973 and has overall responsibility for development, implementation and maintenance of JEA's Compliance Programs including NERC Electrical Standards, NERC Critical Infrastructure Protection ("CIP") standards, FACTA regulations and other related federal and state regulations. He is also responsible for JEA's Physical Security department as well as Audit Services and Enterprise Risk Management. Mr. Hobson is currently on the Board of Directors of TEA and is JEA's representative on the TEA Settlement and Operating Committee. Mr. Hobson is JEA's alternate board member for the Florida Electric Reliability Coordinating Council ("FRCC") and the alternate board member for the Florida Electric Coordinating Group ("FCG"). Additionally, Mr. Hobson currently serves on the Board of Directors of the Jacksonville Museum of Science and History.

Mr. Hobson's previous position was Director of Energy Delivery, where he was responsible for all electric field activities including overhead and underground line work, system protection and controls, substation maintenance and the 24-hour operation of the JEA power system including generation commitment and dispatch, transmission operation and security and interchange services with other utilities. During his over 40 years with JEA, he has worked in the areas of distribution, engineering, trouble dispatching, system operations and system planning. Mr. Hobson has served as JEA's representative to the FRCC for over 15 years and was chair of the Operating Committee for the past six years. He also served on various North American Electric Reliability Corporation ("NERC") committees and subcommittees and is a member and past chair of the NERC Compliance and Certification Committee.

Mr. Hobson holds a BSEE from the University of Florida, and is a registered Professional Engineer in the State of Florida.

Lynne Rhode, Vice President, Chief Legal Officer. Ms. Rhode has 14 years of legal experience in the public and private sectors, primarily in environmental and natural resources law and also in administrative, civil litigation, general corporate, lobbying and government affairs, and zoning law. She has most recently practiced transactional, regulatory and corporate law with a prominent Jacksonville law firm.

Ms. Rhode is employed with the City's Office of General Counsel and is the lead attorney assigned exclusively to JEA. Pursuant to the Charter, the Office of General Counsel is responsible for providing and overseeing all legal services to JEA. The Office of General Counsel represents the City's consolidated city-county government, which includes the independent agencies, constitutional officers, City Council members, Mayor, executive branch departments and over 30 boards, commissions, and agencies. Ms. Rhode provides counsel to JEA on various legal matters and oversees JEA's outside counsel engagements.

Prior to relocating to Jacksonville, Ms. Rhode served as Senior Assistant Attorney General and Section Chief of the Environmental and Natural Resources Division of the Virginia Attorney General's Office. She led a team of eight attorneys and staff providing counsel to the environmental health, environmental and natural resources agencies of the Commonwealth of Virginia; advising on administrative, compliance, contract, enforcement, labor and employment, permitting, procurement, rulemaking, and other legislative issues.

Ms. Rhode has served as a guest professor at the William and Mary School of Law Coastal Policy Clinic and on the Virginia Department of Environmental Quality's Combustion Regulatory Advisory Panel and Small Solar Working Group.

Ms. Rhode is a member of the Florida and Virginia bars. She is a graduate of the North Carolina Fellows Leadership Program and the Sorenson Institute Political Leaders Program. She holds a Bachelor of Arts in Economics from the University of North Carolina at Chapel Hill, where she was a John Motley Morehead Scholar; a Juris Doctor degree from the University of Virginia; and a Master of Science in Regulation from the London School of Economics and Political Science.

*Jon Kendrick, Interim Chief Human Resources Officer*. (1) Mr. Kendrick joined JEA in April 2019 after previously working as a Human Resources Business Partner from 2015 – 2017 where he was instrumental in providing strategic direction for the JEA Customer Experience, Technology Services and Compliance business units.

Angelia R. Hiers retired from her position as Chief Human Resources Officer in April 2019.

Mr. Kendrick has more than 25 years of human resources experience that spans healthcare, financial services, transportation, utility and technology industries. He most recently served as the Human Resources Director for Yusen Logistics (Americas), Inc., in Jacksonville.

Mr. Kendrick holds certifications as a Senior Professional in Human Resources (SPHR) and as a Senior Certified Professional from the Society for Human Resource Management (SCP-SHRM). He has a bachelor's degree in Economics from the University of Florida and a Master of Divinity from New Orleans Baptist Theological Seminary

Mr. Kendrick was also a commissioned officer in the U.S. Coast Guard Reserve where he led an expeditionary unit and served in both Operation Enduring Freedom & Iraqi Freedom.

*Shawn Eads, Vice President and Chief Information Officer*. (1) Mr. Eads is Vice President and Chief Information Officer. In this role, he is responsible for JEA's information technology (IT) strategy and the computer systems required to support the organization's unique objectives and goals.

Mr. Eads has over 22 years of experience in the IT industry. Most recently, he served as Senior Director for IT at GE Appliances, where he led various responsibilities including Oracle ERP, Risk & Compliance, Predictive Analytics, Engineering Systems, Vendor Management, Enterprise Architecture, Innovation and New Product Introduction. While working in the Home Appliances industry, Mr. Eads spent time developing solutions for home energy management. One example includes integrating smart meters via the cloud with home appliances to respond to time of use pricing and demand management events. Prior to his 13-year career at GE Appliances, Mr. Eads held IT roles with Accenture and GE Aircraft Engines.

Mr. Eads holds a Bachelor of Science degree in Chemical Engineering from Rose-Hulman Institute of Technology, and earned his MBA at Xavier University.

John P. McCarthy, Vice President and Chief Supply Chain Officer. Mr. McCarthy is responsible for leading JEA's supply chain strategy and operations. His responsibilities include JEA's facilities, fleet, real estate, procurement, inventory management, investment recovery, emergency management planning and recovery and utility locates groups. The team ensures JEA's material readiness is at the highest levels and lowest cost, while ensuring corporate funds are committed under ethical standards to deliver the greatest value to JEA in compliance with state and local laws.

Mr. McCarthy joined JEA in 2002 after a successful 20-year career as a U.S. Navy Supply Officer. During his 16 years at JEA, he has served in various leadership roles within the procurement and logistics groups including an initial assignment as a Procurement Project Coordinator where he developed an aggregated sourcing model adopted by seven different utility companies. This resulted in the strategic sourcing of over \$400 million over a ten-year period. Other notable roles include JEA's Chief Procurement Officer and Incident Command Logistics Section Chief where he implemented advanced contract negotiation processes and a hurricane preparedness strategy for critical storm materials, providing 100 percent on-site material availability for the restoration periods following Hurricanes Matthew and Irma. He also served as JEA's United Way Campaign Chairman.

Mr. McCarthy received his B.S. degree from the U.S. Naval Academy, and an M.B.A. degree from The Ohio State University. He is a member of Leadership Jacksonville, class of 2013, and holds advance certificates in executive contract negotiations and supply chain strategy and management from the Massachusetts Institute of Technology Sloan School of Management.

<sup>(1)</sup> Paul J. Cosgrave retired from his position of Vice President and Chief Information Officer in January 2019.

Paul K. Steinbrecher, Vice President and Chief Environmental Services Officer. Mr. Steinbrecher is responsible for leading JEA's Environmental Services group. Core group functions include environmental permitting and compliance assistance for JEA's numerous electric and water business facilities, environmental incident response and reporting, due diligence, waste management and remediation, wetlands and wildlife issues, industrial pretreatment and other programs in which JEA serves as an environmental regulatory agency, and full service environmental laboratory functions to support the enterprise's extensive monitoring and environmental reporting activities. In this role he leads the organization in ensuring the highest levels of environmental compliance and incorporation of sustainability into all JEA's planning activities.

Mr. Steinbrecher's career has focused on finding and advancing cost effective environmental and engineering solutions for utilities, business and industry and governments. Mr. Steinbrecher joined JEA in 2001. He is highly active on Florida environmental policy and regulatory issues, currently serving as President of the Florida Water Environment Association Utility Council and as a national board member of the WateReuse Association. He is also a long term member of the Florida Electric Power Coordinating Group Environmental Committee. Based on his prior experience, he also helps lead the utility in forward thinking water resource solutions.

Prior to joining JEA Mr. Steinbrecher was a process engineer and program manager for CH2M Hill, designing water and wastewater systems and assisting industries and municipalities with environmental projects worldwide. Mr. Steinbrecher holds BS and MS degrees in Civil Engineering from Valparaiso University and the University of Arkansas, respectively. He is a registered professional engineer in Florida and a member of the Leadership Jacksonville, class of 2015.

#### **Employees**

The employees of JEA are considered to be governmental (public) employees and, as such, have the right to organize, be represented and bargain collectively for wages, hours and terms and conditions of employment, as provided in Chapter 447, Part II, Florida Statutes. Florida state law prohibits strikes and concerted work slowdowns by governmental (public) employees. Pursuant to the Charter, JEA has full and independent authority to hire, transfer, promote, discipline, terminate and evaluate employees and, consistent with the provisions of the Charter relating to civil service, to establish employment policies relating to hiring, promotion, discipline, termination and other terms and conditions of employment, to enter into negotiations with employee organizations with respect to wages, hours and terms and conditions of employment and to take such other employment related action as needed to assure effective and efficient administration and operation of its utilities systems. The Council is the legislative body with authority to approve or not approve collective bargaining agreements and to resolve any statutory impasses that may arise from collective bargaining.

As of October 1, 2018, JEA had 2,158 budgeted employee positions (exclusive of the Power Park (as defined in the Electric ADR) employees referred to below), of which 599 were budgeted to the Water and Sewer System, six were budgeted to the District Energy System, and 1,553 were budgeted to the Electric System. Except for the Management Team and a minor number of contract employees, such employees have civil service status.

Approximately 1,561 employees are covered by five collective bargaining agreements. These employees are represented by the American Federation of State, County, and Municipal Employees ("AFSCME"), the International Brotherhood of Electrical Workers ("IBEW"), Local 2358 and the Northeast Florida Public Employees, Local 630, Laborers' International Union of North America ("LIUNA"), all of which are affiliated with the AFL-CIO, and by a professional employees' association (the "PEA," Professional Employees Association) and a supervisors' association (the "JSA," Jacksonville Supervisors Association) that have no AFL-CIO affiliation. JEA has collective bargaining agreements with all the collective bargaining

agents, and all of the collective bargaining agreements have been ratified and approved by the legislative body, the Council, and are effective through September 30, 2019.

#### Pension

Substantially all of JEA's employees participate in the City's general employees pension plan ("GEPP"). See Note 12 to JEA's Financial Statements set forth in APPENDIX A to this Annual Disclosure Report for a discussion of certain information on the City's plan. The Actuarial Valuation as of October 1, 2017 for the City's GEPP (the "2017 Actuarial Valuation Report") and the Actuarial Valuation as of October 1, 2018 for the City's GEPP (the "2018 Actuarial Valuation Report") are available for viewing and downloading from the City's website link:(<a href="http://www.coj.net/departments/finance/retirement-system/gasb-and-plan-valuation-statements">http://www.coj.net/departments/finance/retirement-system/gasb-and-plan-valuation-statements</a>) and selecting the October 1, 2017 Valuation or the October 1, 2018 Valuation, respectively, under "General Employees Retirement Plan."

For the five Fiscal Years ended September 30, 2014, 2015, 2016, 2017 and 2018, JEA contributed \$34,544,000, \$40,179,000, \$43,156,000, \$48,942,000, and \$35,459, 523, to the GEPP.

JEA expects that its annual contributions to GEPP will be at lower levels in the near term than it had been for Fiscal Year Ended September 30, 2017 primarily due to the recognition of a pension liability surtax beginning with Fiscal Year Ended September 30, 2018 and then it expects its annual contributions to GEPP to increase over the longer-term as a result of the expected increase in the GEPP's unfunded actuarial accrued liability. JEA expects that the GEPP's unfunded actuarial accrued liability and JEA's portion of that unfunded liability will continue to increase over the near term primarily due to a delay in receipt of the revenues from the pension liability surtax.

For the Fiscal Year ended September 30, 2018, the aggregate unfunded actuarial accrued liability for the GEPP was \$1,175,135,210, which represented an increase of \$93,821,769 from an aggregate unfunded actuarial accrued liability for the GEPP for the Fiscal Year ended September 30, 2017 of \$1,081,313,441. For the Fiscal Year ended September 30, 2017, the aggregate unfunded actuarial accrued liability for the GEPP was \$1,081,313,441, which represented an increase of \$56,816,369 from an aggregate unfunded actuarial accrued liability for the GEPP for the Fiscal Year ended September 30, 2016 of \$1,024,497,072. JEA has been informed by the City that the actuary for the GEPP has calculated (i) JEA's allocated share of the unfunded actuarial accrued liability for the GEPP reported for Fiscal Year 2018 of \$565,792,869 (an increase of \$42,416,322 from JEA's allocated share for Fiscal Year 2017) of the aggregate amount of \$1,175,135,210 and (ii) JEA's allocated share of the unfunded actuarial accrued liability for the GEPP reported for Fiscal Year 2017 of \$523,376,547 (an increase of \$28,552,073 from JEA's allocated share for Fiscal Year 2016) of the aggregate amount of \$1,081,313,441. The actuarial accrued liability is an estimate by the actuary for GEPP of the present value of the amount of earned benefit payments that GEPP will pay to retirees during retirement. The unfunded actuarial accrued liability represents the amount that the actuarial accrued liability exceeds assets in GEPP available to pay those benefit payments. These figures are based on numerous assumptions, such as retirement age, mortality rates, and inflation rates, and use numerous methodologies all of which can cause the actual performance of the GEPP to differ materially from the estimates of the actuary in any actuarial valuation. However, based on the current unfunded actuarial accrued liability of the GEPP, JEA expects that its annual contributions to GEPP will be increasing over the near future to fund its portion of the unfunded amount.

JEA also provides a medical benefits plan that it makes available to its retirees.

See Note 12, Note 13 and pages 111-118 of JEA's Financial Statements set forth in APPENDIX A to this Annual Disclosure Report for a discussion of the pension plans, "other post-employment benefit" plan and actuarial accrued liability.

#### **Certain Demographic Information**

Under Florida law, the City and Duval County are organized as a single, consolidated government. Based upon the 2010 United States Census, the consolidated City is the most populous city in the State of Florida. The City covers 840 square miles and is one of the largest cities in area in the United States.

The Jacksonville Metropolitan Statistical Area ("MSA") is composed of Duval, Clay, Nassau, St. Johns and Baker Counties, an area covering 3,202 square miles. The U.S. Census Bureau estimates that the Jacksonville MSA had a population of 1,534,701 as of July 1, 2018. The Jacksonville MSA is currently the fourth most populous MSA in the State of Florida. The table below shows population for the Jacksonville MSA.

Population		
<b>Year</b>	Jacksonville MSA	
1980	722,252	
1990	906,727	
$2000^{(1)}$	1,122,750	
2010	1,345,596	
2018	1,534,701	

Source: United States Census Bureau

The economy of the Jacksonville MSA contains significant elements of trade and services, transportation services, manufacturing, insurance and banking and tourism. The Port of Jacksonville is one of the largest ports on the South Atlantic seaboard and in terms of tonnage ranks third in the State of Florida. A number of insurance and banking companies maintain regional offices in the City. The tourism and recreational facilities in the City include an arena, a performing arts center, a convention center, TIAA Bank Field (the home field of the National Football League's Jacksonville Jaguars), a baseball park, numerous golf courses and resorts and various recreational facilities at the beaches. Two large United States Navy bases are located in the City.

The table below sets forth the annual, not seasonally adjusted, labor force, employment and unemployment figures for the Jacksonville MSA and comparative unemployment figures for the State of Florida and the United States for the most recent 10 years ended December 2018.

	Jac	ksonville MSA Labo	or Force	Unemploymer	nt Rate (%)
			Unemployment		
<u>Year</u>	<u>Civilian</u>	<b>Employment</b>	<u>Rate (%)</u>	<u>Florida</u>	<u>U.S.</u>
2009	681,026	612,993	10.0	10.4	9.3
2010	697,120	622,208	10.7	11.1	9.6
2011	701,533	633,405	9.7	10.0	8.9
2012	704,090	646,370	8.2	8.5	8.1
2013	709,351	659,773	7.0	7.2	7.4
2014	715,253	670,631	6.2	6.3	6.2
2015	719,098	680,375	5.4	5.5	5.3
2016	735,832	701,636	4.6	4.8	4.9
2017	760,298	729,627	4.0	4.2	4.4
2018	773,492	747,223	3.4	3.6	3.9

Source: Florida Research and Economic Information Database Application, http://freida.labormarketinfo.com/default.asp.

Baker County was included in the Jacksonville MSA starting with the 2000 United States census.

The table below shows the estimated average non-agricultural wage and salary employment by sector for the Jacksonville MSA for the calendar year 2018.

	Number of <u>Employees</u>	Percent of <u>Distribution</u>
Trade, Transportation and Utilities	150,400	21.2
Professional and Business Services	108,000	15.2
Education and Health Services	107,500	15.2
Leisure and Hospitality	85,500	12.1
Government	77,000	10.9
Finance	67,000	9.5
Construction	45,400	6.4
Other Services <sup>(1)</sup>	36,300	5.1
Manufacturing	31,400	4.4
Total Non-Agricultural Employment	<u>708,500</u>	<u>100.0</u>
(Except Domestics, Self-Employed		
And Unpaid Family Workers)		

Source: United States Department of Labor.

The following table lists the 10 largest non-governmental employers in the Jacksonville MSA and the approximate size of their respective work forces.

Name of Employer	<b>Product or Service</b>	Approximate No. of Employees
Baptist Health System	Healthcare	10,500
Bank of America / Merrill Lynch	Banking	8,000
Florida Blue	Health Insurance	7,000
Mayo Clinic	Healthcare	6,000
Southeastern Grocers	Supermarkets	5,700
St. Vincent's Healthcare	Healthcare	5,300
Citibank	Banking	4,200
JP Morgan Chase	Banking	3,900
UF Health Jacksonville	Healthcare	3,600
Wells Fargo	Banking	3,500

Source: Jacksonville Regional Chamber of Commerce Research Department employer survey, fall 2012, as partially amended through December 2018.

The following table lists the eight largest governmental employers in the Jacksonville MSA and the approximate size of their respective work forces.

Name of Employer	Type of Entity/Activity	Approximate No. of Employees
Naval Air Station, Jacksonville	United States Navy	19,800
<b>Duval County Public Schools</b>	Public Education	$11,876^{(1)}$
Naval Air Station, Mayport	United States Navy	9,000
City of Jacksonville	Municipal Government	$7,471^{(2)}$
St. Johns County School District	Public Education	$5,039^{(3)}$
Clay County School Board	Public Education	5,000
Fleet Readiness Center	Maintenance / Repair Overhaul	3,850
United States Postal Service	United States Government	3,800

Source: Jacksonville Regional Chamber of Commerce Research Department employer survey, fall 2012, as partially amended through December 2018.

<sup>(1)</sup> Consists of other services, information and natural resources and mining.

<sup>(1)</sup> Duval County Public Schools website, full-time staff (http://www.duvalschools.org/domain/5268)

<sup>(2)</sup> City of Jacksonville Annual Budget 2018-19 (<a href="http://www.coj.net/departments/finance/docs/budget/fy18-19-proposed-budget-website.aspx">http://www.coj.net/departments/finance/docs/budget/fy18-19-proposed-budget-website.aspx</a>)

<sup>(3)</sup> St. Johns County School District website (<a href="http://www.stjohns.k12.fl.us/about/">http://www.stjohns.k12.fl.us/about/</a>)

#### **Indebtedness of JEA**

The indebtedness of JEA relating to its Water and Sewer System as of the date of this Annual Disclosure Report consists of Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds (as such terms are hereinafter defined) and borrowings under the Revolving Credit Facility for the account of the Water and Sewer System. See, "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Debt Relating to Water and Sewer System" herein. The indebtedness of JEA relating to the District Energy System currently consists of District Energy System Bonds (as such term is hereinafter defined) and borrowings outstanding under the Revolving Credit Facility for the account of the District Energy System. See "DISTRICT ENERGY SYSTEM - FINANCIAL INFORMATION RELATING TO DISTRICT ENERGY SYSTEM - Debt Relating to the District Energy System" herein. For information regarding the Revolving Credit Facility, see "OTHER FINANCIAL INFORMATION - Revolving Credit Facilities" herein. As described under "INTRODUCTION - General" herein, and except as described under "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Debt Relating to Water and Sewer System - Water and Sewer System Support of the District Energy System Bonds" herein, the debt of JEA relating to its Electric System, the debt of JEA relating to the Water and Sewer System and the debt of JEA relating to the District Energy System are payable from and secured by separate revenue sources. Accordingly, (a) except as described under "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Debt Relating to Water and Sewer System - Water and Sewer System Support of the District Energy System Bonds" herein, the information contained in this Annual Disclosure Report relating to JEA's Water and Sewer System is not relevant to the Electric System Bonds (as described in the Electric ADR), the Subordinated Electric System Bonds (as described in the Electric ADR), Power Park Issue Three Bonds (as described in the Electric ADR), Additional Bulk Power Supply System Bonds (as described in the Electric ADR) or the District Energy System Bonds and should not be taken into account in evaluating such debt; and (b) the information contained in this Annual Disclosure Report relating to the District Energy System is not relevant to the Electric System Bonds, the Subordinated Electric System Bonds, the Power Park Issue Three Bonds, the Additional Bulk Power Supply System Bonds, the Water and Sewer System Bonds or the Subordinated Water and Sewer System Bonds.

The description of the debt of JEA contained herein and of the documents authorizing, securing and relating to such debt do not purport to be comprehensive or definitive. All references herein to such documents are qualified in their entirety by reference to such documents.

For a detailed description of the outstanding debt of JEA as of September 30, 2018, see Note 8 to the financial statements of JEA set forth in APPENDIX A attached hereto.

#### Forward-Looking Statements and Associated Risks

This Annual Disclosure Report contains forward-looking statements, including statements regarding, among other items, (a) anticipated trends in JEA's business and (b) JEA's future capital requirements and capital resources. These forward-looking statements are based on, among other things, JEA's expectations and are subject to a number of risks and uncertainties, certain of which are beyond JEA's control. Actual results could differ materially from those anticipated by these forward-looking statements. In light of these risks and uncertainties, there can be no assurance that events anticipated by the forward-looking statements contained in this Annual Disclosure Report will in fact transpire.

JEA's independent certified public accountants have not examined, compiled or otherwise applied procedures to the forward-looking statements or financial forecasts presented herein and, accordingly, do not express an opinion or any other form of assurance on such forward-looking statements or financial forecasts.

#### Privatization of JEA

At the JEA Board meeting on November 28, 2017, JEA Board member Tom Petway requested that the JEA Board and the City consider the financial benefits that would result from a privatization of JEA's Electric System, Water and Sewer System and District Energy System and whether the customers of JEA and the people of the City would be better served by the private marketplace.

In response to Mr. Petway's request, Alan Howard, Chair of the JEA Board, authorized JEA staff to cause the necessary work to be done for the JEA Board to be able to consider the answer to these questions.

JEA commissioned Public Financial Management ("PFM") to prepare a report to inform the JEA Board, the City and the public as to several important considerations that must be evaluated in order to make any decisions regarding JEA's future. A copy of that report, entitled "The Future of JEA: Opportunities and Considerations," dated February 14, 2018 (the "Report"), has been filed with the MSRB, through the MSRB's EMMA website currently located at <a href="http://emma.msrb.org">http://emma.msrb.org</a>.

JEA provided the Report to the holders of its bonds for general information purposes only. The Report does not include every item which may be of interest, nor does it purport to present full and fair disclosure with respect to any of JEA's bond programs within the meaning of the federal securities laws. PFM prepared the Report with a view to informing JEA's Board, the City and the public concerning the matters it covers, and PFM did not prepare the Report with a view to informing the holders of JEA's bonds or with a view to informing any person concerning an investment decision in JEA's bonds. Accordingly, the Report is not suitable for informing any person in the making of an investment decision in any of JEA's bonds. The Report does not purport to, and does not, inform any person concerning how any sale of JEA or any other action taken in response to the Report may impact the holders of JEA's bonds. In addition, the valuation-related statements in the Report regarding JEA are not prepared with a view to assess the value of JEA's bonds.

Any potential sale of JEA's Electric System, Water and Sewer System and District Energy System would require the approval of the Council. In early 2018, the Council appointed a special committee ("Special Committee") consisting of the 19 members of the Council to examine and understand all aspects and implications of a potential sale of JEA and to gather the relevant facts the Council should consider in any decisions related to a potential sale of JEA. The Special Committee met regularly through July 25, 2018 to ensure a transparent and open process for the citizens of the City as to the consideration of a potential sale of JEA.

On April 26, 2018, Mayor Curry stated that he will not submit any JEA privatization plan to the Council. In April 2018, the Council enacted an ordinance setting up a public straw poll ballot vote referendum as to whether the Council should call for a binding referendum approving the terms and conditions of any action to sell more than ten percent of JEA. On November 6, 2018 voters overwhelmingly approved the referendum item.

Effective December 10, 2018, the Council amended the Charter to require referendum approval of the terms and conditions of the sale of any function or operation which comprises more than ten percent of the total of the JEA utilities system to any other utility, public or private and has been approved by the Council.

At this time, JEA is unable to predict the likelihood of whether a sale will occur, whether there is any potential timetable for a sale, or how, if at all, the holders of JEA's bonds may be impacted by any actions that the Council, the City or the JEA Board may take in connection with a possible sale of JEA.

JEA also cannot determine what additional action, if any, may be taken by the JEA Board, the Council or the City relating to the privatization of JEA.

#### **Strategic Planning**

JEA is actively engaged in strategic planning. As part of its planning process, JEA is considering various options with respect to its business which include potential rate increases and/or the redemption or defeasance of various debt obligations of JEA. Consistent with this focus, JEA has launched its Strategic Asset Realignment Plan ("STAR Plan"), a plan designed to accelerate debt repayment through 2023. In connection with the plan, JEA has proposed to utilize a combination of current and future year net revenues and available cash and investments in order to accelerate debt repayment. Due to the expected reduction in cash and investment balances, JEA has also increased the size of its Revolving Credit Facility by \$200,000,000 for a total commitment equal to \$500,000,000. See "OTHER FINANCIAL INFORMATION – Revolving Credit Facilities" for additional information. In February 2019, JEA retired \$94,955,000 of Water and Sewer System debt as part of this effort. Future redemptions or defeasance of Water and Sewer System debt is subject to availability of funds and Board approval. Furthermore, the ultimate outcome and recommendations of the planning process is unknown at this time and may have an impact on the approval and/or timing of future redemption or defeasance activity. JEA may modify this plan at any time.

#### WATER AND SEWER SYSTEM

#### WATER AND SEWER SYSTEM FUNCTIONS

#### General

The Water and Sewer System consists of (a) facilities for the provision of potable water (hereinafter referred to as the "Water System"), (b) facilities for the collection and treatment of wastewater (hereinafter referred to as the "Sewer System") and (c) facilities for the treatment and distribution of reclaimed water (herein referred to as the "Reclaimed Water System"). The Water and Sewer System provides water and sewer service within the urban and suburban areas of the City, other than certain excluded areas described below. The Water and Sewer System's service territory extends into St. Johns County, which is southeast of the City, and Nassau County, which is north of the City, and also serves a number of customers in Clay County, which is southwest of the City. It is JEA's policy to serve any customer requesting service within its urban and suburban service area. Investor-owned utilities must file a petition with the Public Service Commission in order to provide water or wastewater service within the City, and JEA would object to any petition for expansion of investor-owned utility service areas unless it otherwise determines that it would be in JEA's interest not to do so.

The Water System, which served an average of 348,159 customer accounts and 11,498 reuse water customers, respectively, in the Fiscal Year ended September 30, 2018, currently is composed of 38 water treatment plants and two repump facilities, 136 active water supply wells, approximately 4,755 miles of water distribution mains and water storage capacity of 81 million gallons (including the repump facilities). The overall peak capacity of the Water System is approximately 310 million gallons per day ("mgd"), and the Water System experienced an average daily flow of approximately 112 mgd and a maximum daily flow of approximately 152 mgd during the Fiscal Year ended September 30, 2018. Water supply is from the Floridan Aquifer, one of the most productive aquifers in the world, which provides high quality water. Total Water System sales revenues (including water capacity fees) during the Fiscal Year ended September 30, 2018 were approximately \$180,946,000 (see "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Schedules of Debt Service Coverage" herein).

The Sewer System, which served an average of 270,871 customer accounts in the Fiscal Year ended September 30, 2018, currently is composed of 11 wastewater treatment plants that have a rated average daily treatment capacity of approximately 120 mgd and a maximum daily flow capacity of approximately 241 mgd, approximately 1,422 pumping stations, approximately 697 low pressure sewer units and approximately 4,027 miles of gravity sewers and force mains. The Sewer System experienced an average daily flow of approximately 80 mgd and a non-coincident maximum daily flow of approximately 143 mgd during the Fiscal Year ended September 30, 2018. Total Sewer System sales revenues (including sewer capacity fees) during the Fiscal Year ended September 30, 2018 were approximately \$278,874,000 (see "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM - Schedules of Debt Service Coverage" herein).

Since the transfer of the Water and Sewer System from the City to JEA in 1997, JEA has acquired the assets and customers of seven privately-owned water and sewer companies and one governmentally-owned water and sewer utility. From time to time, JEA may explore other potential acquisition opportunities but presently has no plans to do so.

Pursuant to a 30-year interlocal agreement with St. Johns County, JEA made an up-front payment in December 2001 to St. Johns County in the amount of the net present value of five percent of JEA's projected gross revenues from the retail sale of water and wastewater (excluding reclaimed water) which JEA expected to realize in providing such services for the next 10 years in St. Johns County, calculated to be \$3,616,576. Under the terms of the interlocal agreement, subsequent utilities were purchased under the interlocal agreement and St. Johns County granted JEA the right to: 1) provide water and wastewater service to those customers in an acquired franchise area within St. Johns County, 2) provide water and wastewater service to additional areas in St. Johns County not currently served by either the St. Johns County Water and Sewer Department or other water and wastewater utilities and 3) acquire, in JEA's sole discretion, other private utilities in northern St. Johns County. Under the original terms of the interlocal agreement, at the end of each 10-year anniversary of this 30-year interlocal agreement with St. Johns County, JEA will calculate a "true-up" to adjust for the net present value of the actual retail revenues realized if the revenues exceed the projected revenues during the 10year period. Additionally, after the 10-year and 20-year anniversaries of the agreement, JEA agrees to pay St. Johns County the net present value of five percent of the projected water and wastewater retail revenues that JEA expects to receive for the ensuing 10-year period. Based on this methodology, JEA paid St. Johns County \$12,176,152 on January 11, 2012 for both components related to the first 10-year anniversary. St. Johns County disputed JEA's methodology for computing the true-up payment related to the first 10-year anniversary, and the parties entered mediation and resolved the issue, with the result that future payments will be made on an annual basis.

Pursuant to a 30-year interlocal agreement with Nassau County, JEA made an up-front payment in December 2001 to Nassau County in the amount of the net present value of five percent of JEA's projected gross revenues from the sale of water and wastewater (excluding reclaimed water) which JEA expected to realize in providing such services for the next 10 years in Nassau County, calculated to be \$720,000. Under the terms of the interlocal agreement, Nassau County granted JEA the right to: 1) provide water and wastewater service to those customers in an acquired franchise area within Nassau County and 2) provide water and wastewater service to additional areas in Nassau County not currently served by either Nassau County or other water and wastewater utilities. At the end of each 10-year anniversary of this 30-year interlocal agreement with Nassau County, JEA will calculate a "true-up" based on the actual revenues realized during the 10-year period. If the revenues exceed the projected amount, JEA will pay Nassau County the amount that would have been due based on actual revenues. Additionally, after the 10-year and 20-year anniversaries of the agreement, JEA agrees to pay the county the net present value of five percent of the projected water and wastewater retail revenues that JEA expects to receive for the ensuing 10-year period. Based on this methodology, JEA paid Nassau County \$3,480,556 on January 11, 2012 for both components related to the first 10-year anniversary.

#### Area Served

#### Water System

The service territory of the Water System includes (a) virtually the entire City, other than the beach communities (Jacksonville Beach, Atlantic Beach and Neptune Beach), the Town of Baldwin, the active United States Navy facilities located within the City and those areas served by a community-owned water and wastewater utility that is not subject to jurisdiction of the Florida Public Service Commission (PSC) and one investor-owned water utility and one investor-owned sewer utility that provide service within certificated territories under jurisdiction of the PSC, (b) approximately 143 square miles in St. Johns County and (c) approximately 620 square miles in Nassau County. In addition, the Water System serves a small number of customers in Clay County.

The Water System provides service in an area currently comprising approximately 769 square miles in Duval County, approximately 63 square miles in St. Johns County, approximately 77 square miles in Nassau County and approximately four square miles in Clay County. In the remaining areas of the Water System's service territory not currently served by the Water System, other cities, the Navy, the community-owned utility or investor-owned utility, water service is provided through privately owned and operated wells.

Customers of the Water System are charged for water service based upon customer classification (residential, non-residential or multi-family). Charges within each classification vary based upon meter size and monthly consumption.

#### Sewer System

The service territory for the Sewer System is essentially the same as that for the Water System; the area currently served by the Sewer System is approximately 76 percent of the service territory. In the remaining areas of the Sewer System's service territory not currently served by the Sewer System, other cities, the Navy, the community-owned utility or the investor-owned utility, wastewater service is provided through privately owned and operated septic tanks. Customers of the Sewer System are charged for sewer service based upon customer classification (residential, non-residential or multi-family). Charges within each classification vary and are based upon meter size and monthly flow. The Sewer System provides wholesale bulk sewer service to the investor-owned utility mentioned above and to two commercial customers.

#### **Existing Facilities**

#### Water System

The Water System consists of 20 major and 18 small water treatment plants and two repump facilities, and is divided into two major distribution grids: the north grid and the south grid (one on each side of the St. Johns River), and includes four minor distribution grids: Ponte Vedra, Ponce de Leon, Mayport and Nassau County. The major distribution grids are fully interconnected, which provides the Water System with a high degree of redundancy. The purpose of such interconnectivity is to provide sufficient water capacity at the least cost which meets JEA's desired level of customer service requirements and complies with water quality criteria while avoiding adverse impacts on the Floridan Aquifer. The Water System has 136 wells supplying the various water plants. Each plant consists of wells, aerators, ground storage tanks, water quality treatment and pH control and chlorination facilities. Control is by computer with regular operator oversight. The rated maximum daily treatment capacity of the Water System is approximately 298 mgd for the north and south grids together and 310 mgd for the total Water System, taking into consideration maintenance factors. Treatment at the water plants currently consists of aeration and detention to oxidize hydrogen sulfide and addition of sodium hypochlorite to adjust pH, provide disinfection and prevent biological growth in the water distribution system. JEA also uses packed tower forced draft aeration and ozone to treat hydrogen sulfide at several facilities.

The following table shows the daily average and maximum flow capacities for the Fiscal Years ended September 30, 2014 through 2018:

Fiscal Year Ended September 30,	Average Daily Flow (mgd)	Maximum Daily Flow (Non-Coincident) (mgd)
2014	101	140
2015	104	165
2016	111	154
2017	114	187
2018	112	152

The following table shows the rated maximum daily treatment capacity during the Fiscal Year ended September 30, 2018 for each distribution grid:

	Maximum Daily Treatment	
<u>Grid</u>	Capacity (mgd)	
North grid	136	
South grid	162	
Other	<u>12</u>	
Total	310	

The water distribution system consists of approximately 4,755 miles of water distribution mains ranging from two to 36 inches in diameter. The water distribution mains are made of various materials, including polyvinyl chloride ("PVC"), galvanized steel, ductile iron, cast iron and asbestos cement. The majority of the water distribution mains are made of PVC, with less than one percent of the water distribution system being composed of asbestos cement pipe. Water quality monitoring in the areas containing asbestos cement pipe has shown all areas to be within the United States Environmental Protection Agency ("EPA") and the Florida Department of Environmental Protection ("FDEP") regulatory limits. The asbestos cement pipe has been in service for several decades, and JEA anticipates removal of this pipe from the Water System through routine replacement of aging water mains. Virtually all new water system distribution mains are constructed of PVC.

Total finished water storage capacity of the Water System is 81 million gallons. All water storage facilities are located at the various water treatment plants, including two repump facilities. The Water System does not utilize elevated storage tanks.

Water supply is from the Floridan Aquifer, one of the most productive aquifers in the world, with high quality water. The Floridan Aquifer covers most of Florida and parts of Georgia and South Carolina. The Floridan Aquifer should be capable of meeting JEA's needs well into the future; provided that JEA continues its three-part program and well water quality program described under "Regulation - Public Water Supply System" below. Some capital expenditures are required to maintain this capacity, but these expenditures are expected to be equal to or less than those experienced by other Florida water systems of similar size and with similar water supply. As of the date of this Annual Disclosure Report, water quality monitoring of JEA well fields has not detected the presence of any man-made compounds at actionable levels, and water quality impacts are limited to selected wells on the south grid from localized upwelling of trapped water from deep fissures - not the result of lateral salt water intrusion. JEA is the largest single user of water from the Floridan Aquifer in Duval County. Other major users include the paper industry and investor-owned utilities. JEA currently operates under one Consumptive Use of Water Permit ("CUP"). JEA expects that the current permitted withdrawal allocations should be sufficient to satisfy customer demands for the 20-year planning period, subject to compliance with the various conditions set forth in the CUP for 20 years from May 2011.

#### Sewer System

The Sewer System consists of approximately 4,027 miles of gravity sewers and force mains. The gravity sewers range from six to 84 inches in diameter and the force mains range from three to 54 inches in diameter. Approximately 69 percent of the gravity sewers and force mains are made of PVC, with the remaining sewers and mains consisting of various materials including, among others, concrete, vitrified clay, ductile iron, cast iron and polyethylene. Virtually all new sewer system gravity sewers and force mains are constructed of PVC, and the majority of sewer system rehabilitation (using pipe bursting technology) is constructed of high density polyethylene.

The Sewer System has approximately 1,422 pumping stations, approximately 697 low pressure sewer units and 11 treatment plants ranging in rated average daily treatment capacity from 0.2 to 52.5 mgd. Each of the treatment plants provides a minimum of secondary treatment with biological nutrient removal utilized at the major treatment plants. All sludge from the treatment plants is pumped or trucked to either permitted land application sites or a JEA-owned biosolids processing facility for anaerobic digestion, centrifuge dewatering and pelletization in preparation for beneficial use. Current sludge production averages approximately 26.2 dry tons per day ("dt/day"). The Residuals Management Facility ("RMF") is permitted at an annual capacity of 20,290 dry tons per year (64.1 dry tons per day). The RMF produces a usable product (fertilizer) from the sludge. Design of a new biosolids processing facility is underway, which will include solids thickening, dewatering, and cake loadout facilities in a new building. The existing solids processing building has reached the end of its useful life and will be demolished as part of this project. The new biosolids processing facility will produce dewatered cake only for hauling as opposed to the dried pellets produced under the previous process. JEA has solicited proposals from vendors to utilize its biosolids to produce a beneficial product such as soil amendment. JEA is in the early phases of evaluation proposals for a 20-year contract.

The following table shows the average and maximum daily wastewater treatment flows and the rated average and maximum daily wastewater treatment capacities during the Fiscal Year ended September 30, 2018 for each of JEA's seven regional wastewater treatment plants and corresponding information for JEA's smaller wastewater treatment plants:

Wastewater <u>Treatment Plant</u>	Average Daily Flow (mgd) (Fiscal Year ended September 30, 2018)	Maximum Daily Flow (Non-Coincident) (mgd) (Fiscal Year ended September 30, 2018)	Rated Average Daily Treatment Capacity (mgd) <sup>(1)</sup>	Rated Maximum Daily Treatment Capacity (mgd) <sup>(1)</sup>
Buckman	26.19	62.72	52.50	105.00
District 2	5.52	6.85	10.00	20.00
Southwest	12.04	20.18	14.00	28.00
Arlington East	21.76	32.29	25.00	50.00
Mandarin	8.13	11.49	8.75	17.50
Julington Creek Plantation	0.78	0.98	1.00	2.00
Blacks Ford	2.37	3.02	6.00	12.00
Nassau	1.20	1.69	1.55	3.10
Monterey	1.64	3.16	3.60	7.20
Ponte Vedra	0.39	0.65	0.80	1.60
Ponce De Leon	<u>0.04</u>	<u>0.12</u>	<u>0.24</u>	<u>0.48</u>
Total	<u>80.06</u>	<u>143.15</u>	<u>123.44</u>	<u>246.88</u>

<sup>(1)</sup> Since the rated maximum daily treatment capacity of each wastewater treatment plant is approximately twice the rated average daily treatment capacity, the Sewer System is able to accept and handle surges that come with peak usage periods (morning and evening) and heavy rains. On-going system maintenance and improvements are aimed at continuing to decrease peak surges from heavy rains and infiltration into the collection system (*i.e.*, storm water and/or ground water that enters the sewer system through cracks or openings in the collection system) and inflow (*i.e.*, water that enters the sewer system through illegal or unpermitted piped connections to the collection system).

Five of the regional wastewater treatment plants (Buckman, District 2, Southwest, Arlington East and Mandarin) provide advanced secondary treatment and two of the regional wastewater treatment plants (Blacks Ford and Nassau) provide advanced waste treatment. The Buckman, District 2, Southwest, Arlington East, Mandarin and Blacks Ford wastewater treatment plants utilize ultraviolet light disinfection (irradiation of the water), and the Julington Creek Plantation plant utilizes chlorination for disinfection and  $SO_2$  for dechlorination prior to discharge to the St. Johns River.

Although effluent disposal currently is predominately surface water discharge, JEA initiated implementation of a reclaimed water reuse program in 1999 with its acquisition of the assets and customers of an investor-owned water and wastewater utility which had an existing program for reuse of reclaimed water by customers. JEA has established an expanding program to substantially increase water reclamation systems in Nassau, Duval and St. Johns Counties. JEA is actively developing additional reclaimed water capacity, and as of September 2018, the reclaimed water capacity (in mgd) was approximately:

<b>Facility</b>	Capacity (mgd)
Arlington East (Public Access)	8.00
Mandarin (Public Access)	4.00
Blacks Ford (Public Access)	6.00
Julington Creek Plantation (Public Access)	1.00
Ponte Vedra (Public Access)	0.80
Nassau (Public Access)	1.55
Buckman (Non-Public Access)	7.70
District 2 (Non-Public Access)	6.00
Southwest (Non-Public Access)	0.80
Ponce De Leon (Non-Public Access)	0.24
Total	<u>36.09</u>

#### **Customers and Sales**

#### Water System

During the Fiscal Year ended September 30, 2018, the Water System served an average of 348,159 customer accounts and 11,498 reuse water customers, respectively. Water System revenues, including revenues from environmental charges, sales of water, expressed in 1,000 gallons ("kgal") and the average number of Water System customer accounts, all by customer classification, for the Fiscal Year ended September 30, 2014 through 2018 are shown in the following table:

	Fiscal Year Ended September 30				
	2018	2017	2016	2015	2014
Water Revenues (000's omitted):					
Residential	\$ 91,954	\$ 96,615	\$ 89,946	\$ 86,215	\$ 83,014
Commercial and Industrial	47,494	47,969	46,212	45,078	43,647
Irrigation	32,004	36,836	34,846	32,681	30,088
Subtotal	\$171,452	\$181,420	\$171,004	\$163,974	\$156,749
Reuse Water	13,659	13,216	10,267	7,378	5,533
TOTAL	\$185,111	\$194,636	\$181,271	\$171,352	\$162,282
Water Sales (kgals):					
Residential	16,932,812	17,624,952	17,086,586	16,271,698	15,507,752
Commercial and Industrial	14,023,130	13,402,094	13,343,376	12,870,984	12,131,400
Irrigation	5,230,617	6,218,142	5,927,957	5,415,602	4,829,184
Subtotal	36,186,559	37,245,188	36,357,919	34,558,284	32,468,336
Reuse Water	3,119,739	3,290,311	2,644,046	1,783,730	1,300,838
TOTAL	39,306,298	40,535,499	39,001,965	36,342,014	33,769,174

Fiscal Year Ended September 30

	2018	2017	2016	2015	2014
Average Number of Accounts:					
Residential	285,404	278,838	272,157	265,373	259,159
Commercial and Industrial	25,702	25,423	24,698	23,951	23,722
Irrigation	37,053	36,755	36,284	36,028	35,827
Subtotal	348,159	341,016	333,139	325,352	318,708
Reuse Water	11,498	9,391	7,498	5,891	4,501
TOTAL	359,657	350,407	340,637	331,243	323,209

#### Sewer System

During the Fiscal Year ended September 30, 2018, the Sewer System served an average of 270,871 customer accounts. Sewer System revenues, including revenues from environmental charges, volume of wastfewater treatment billed and the average number of Sewer System customer accounts, all by customer classification, for the Fiscal Years ended September 30, 2014 through 2018 are shown in the following table:

	Fiscal Year Ended September 30				
	2018	2017	2016	2015	2014
Sewer Revenues (000's omitted):					
Residential	\$139,174	\$143,967	\$135,288	\$129,976	\$125,526
Commercial and Industrial	108,126	107,446	103,731	101,910	97,339
TOTAL	\$247,300	\$251,413	\$239,019	\$231,886	\$222,865
Volume (kgals):					
Residential	14,623,682	15,225,124	14,614,026	13,935,981	13,269,638
Commercial and Industrial	11,716,940	11,487,646	11,203,632	10,987,160	10,257,338
TOTAL	26,340,622	26,712,770	25,817,658	24,922,141	23,526,976
Average Number of Accounts:					
Residential	252,531	246,187	239,738	233,203	227,216
Commercial and Industrial	18,340	18,149	17,981	<u>17,771</u>	17,620
TOTAL	270,871	264,336	257,719	250,974	244,836

#### **Largest Customers**

#### Water System

The 10 highest consumption customers served by the Water System composed 6.2 percent of total Water System consumption during the Fiscal Year ended September 30, 2018. The following table sets forth the 10 highest consumption customers, by kgal, during the Fiscal Year ended September 30, 2018.

Customer Account	Annual Billed <u>(kgal)</u>	Percentage of Total
City of Jacksonville	570,571	1.5
St. Johns County Utility	456,884	1.2
Duval County Public Schools	261,446	0.7
Southern Baptist Hospital	220,688	0.6
The American Bottling Company	207,853	0.5
Mayo Clinic Jacksonville	163,766	0.4
St. Vincent's Health Systems	149,339	0.4
WWF Operating Company	115,470	0.3
Twin Creeks Development Associates LLC	110,750	0.3
Johnson & Johnson Vision Care	109,568	<u>0.3</u>
Total	2,366,335	<u>6.2</u>

#### Sewer System

The 10 customers with the highest usage level served by the Sewer System composed 5.9 percent of the total volume of wastewater treatment billed during the Fiscal Year ended September 30, 2018. The following table sets forth the 10 customers with the highest usage level, by volume of wastewater treatment billed, during the Fiscal Year ended September 30, 2018.

Customer Accounts	Annual Billed <u>(kgal)</u>	Percentage <u>of Total</u>
City of Jacksonville	285,577	1.1
St. Johns County Utility	230,897	0.9
Duval County Public Schools	203,106	0.8
The American Bottling Company	132,262	0.5
St. Vincent's Health Systems	123,624	0.5
Southern Baptist Hospital	118,782	0.5
Mayo Clinic Jacksonville	116,633	0.4
Symrise Inc	108,918	0.4
American Home Portfolio LLC	105,612	0.4
WWF Operating Company	95,864	<u>0.4</u>
Total	1,521,275	<u>5.9</u>

#### **Customer Billing Procedures**

Customers are billed on a cycle basis approximately once per month. If the customer has not paid a bill within 42 days after the initial bill date, JEA may discontinue service to that customer. New commercial accounts are generally assessed a deposit. Residential customers who meet JEA's credit criteria are not assessed a deposit. Customers who do not meet JEA's credit criteria or do not maintain a good payment record may be assessed a deposit, which may vary with consumption. A late payment fee of 1.5 percent is assessed to customers for past due balances in excess of 27 days. The amount of uncollectible accounts is budgeted to be approximately 0.15 percent of estimated gross Water and Sewer System revenues for the Fiscal Year ending September 30, 2019. Actual uncollectible accounts were 0.12 percent of gross Water and Sewer System revenues for the Fiscal Year ended September 30, 2018.

#### **Rates**

#### General

Water and Sewer System revenues are derived from two basic types of charges: (a) monthly service charges and (b) connection charges (which include capacity charges). Additionally, environmental charges collected are reflected in Water and Sewer System Revenues. The JEA Board has sole discretion to set rate levels and revenue requirements for the Water and Sewer System. JEA sets its retail rates after a public hearing.

Generally, Water System customers are charged for monthly water service based upon metered consumption, and Sewer System customers are charged for monthly sewer service based upon water consumption during that same month, utilizing readings of the water meters. Approximately 12 percent of the customers of the Water System have separate meters for water used for irrigation purposes. In those cases, billings for monthly sewer service exclude the water used for irrigation purposes. In the case of Sewer System customers that obtain water service from a community- or investor-owned utility, monthly sewer charges are based upon readings of that utility's water meter. In the case of Sewer System customers that obtain water from privately owned wells, water meters meeting JEA's requirements are required to be installed, and monthly sewer charges are based upon readings of those meters. In addition, in some instances, non-residential customers have separate meters to measure wastewater flows, and JEA charges those customers for sewer

service based upon readings of such separate meters. Further, certain non-residential Sewer System customers are subject to surcharges for wastewater discharges that exceed certain designated levels of chemical oxbygen demand and suspended solids.

The rates for monthly water and sewer service shown in the following tables have been in effect since October 1, 2012 and remain in effect as of September 30, 2018 and as of the date of this Annual Disclosure Report.

#### Rates for Monthly Service

The schedules shown in the following tables reflect rates for monthly water, sewer service and reclaimed service effective as of October 1, 2012:

#### Water Rates

Water users are charged a monthly service availability charge according to water meter size, plus a unit rate and an environmental charge according to the following schedules:

Water System Monthly Service Availability Charge

Meter Size	<u>Residential</u>	Residential <u>Irrigation</u>	<u>Commercial</u>	<u>Multi-Family</u>	Multi-Family Irrigation; Commercial Irrigation
5/8"	\$ 12.60	\$ 12.60	\$ 12.60	\$ 18.41	\$ 12.60
3/4"	18.90	18.90	18.90	27.62	18.90
1"	31.50	31.50	31.50	46.03	31.50
1 1/2"	63.00	63.00	63.00	92.05	63.00
2"	100.80	100.80	100.80	147.28	100.80
3"	201.60	201.60	201.60	294.56	201.60
4"	-	-	315.00	460.25	315.00
6"	-	-	630.00	920.50	630.00
8"	-	-	1,008.00	1,472.80	1,008.00
10"	-	-	1,974.55	2,117.15	-
12"	-	-	3,691.55	3,958.15	-
20"	-	-	7,726.50	8,284.50	-

#### Water System Unit Charge (per kgal)

		N	on-Irriga	tion				Irri	gation	
]	Residenti	al	Comr	nercial	_Multi-	Family	Resid	dential		Family; nercial
7	Γiers (kga	nl)	Mete	er Size	Mete	er Size	Tiers	(kgal)	Tiers	(kgal)
<u>1-6</u>	<u>7-20</u>	<u>&gt;20</u>	<u>≤ 8"</u>	<u>&gt; 8"</u>	<u>≤8"</u>	<b>&gt;8</b> ″	<u>1-14</u>	<u>&gt;14</u>	<u>1-14</u>	<u>&gt;14</u>
\$0.93	\$2.60	\$5.60	\$1.49	\$1.24	\$1.00	\$1.00	\$2.60	\$5.60	\$3.44	\$3.96

#### Water System Environmental Charge (per kgal)

Water	\$0.37
Irrigation	0.37

#### Sewer Rates

Users of the Sewer System are charged a monthly service availability charge according to water meter size, plus a unit rate based on water consumption from JEA, community- or investor-owned utilities or private wells, as applicable and an environmental charge according to the following schedules:

Sewer System
Monthly Service Availability Charge

Meter Size	Residential	Multi-Family	Commercial
5/8"	\$ 14.10	\$ 24.68	\$ 21.15
3/4"	21.15	37.01	31.73
1"	35.25	61.69	52.88
1 1/2"	70.50	123.38	105.75
2"	112.80	197.40	169.20
3"	225.60	394.80	338.40
4"	-	616.88	528.75
6"	-	1,233.75	1,057.50
8"	-	1,974.00	1,692.00
10"	-	2,837.63	2,432.25
12"	-	5,305.13	4,547.25
20"	-	11,103.75	9,517.50

Sewer System Unit Charge (per kgal)

<u>Tiers (kgal)</u>	Residential	Multi-Family; Commercial
1-6	\$4.94	-
7-20	6.02	-
All	-	\$6.02

#### Sewer System Environmental Charge (per kgal)

Residential: 1-20 kgal	\$0.37
Commercial; Multi-Family; Limited Service: All kgal	0.37

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#### Reclaimed Water Rates

Reclaimed (reuse) water users are charged a monthly service availability charge according to water meter size, plus a unit rate and an environmental charge according to the following schedules:

Reclaimed System
Monthly Service Availability Charge

Meter Size	Residential <sup>(1)</sup>	Multi-Family (1); Commercial (1)
5/8"	\$ 12.60	\$ 12.60
3/4"	18.90	18.90
1"	31.50	31.50
1 1/2"	63.00	63.00
2"	100.80	100.80
3"	201.60	201.60
4"	=	315.00
6"	=	630.00
8"	-	1,008.00

<sup>(1)</sup> Non-bulk reclaimed customers will be charged an additional \$6.00 regardless of meter size to cover costs due to regulatory requirements.

#### Reclaimed System Unit Charge (per kgal)

Tiers (kgal)	<u>Residential</u>	Multi-Family; Commercial
1-14	\$2.60	\$3.44
> 14	5.60	3.96

#### Reclaimed System Environmental Charge (per kgal)

\$0.37

Note: Environmental charge not applicable to bulk reclaimed usage.

#### Connection and Capacity Charges

In addition to the monthly charges for water and wastewater service described above, JEA assesses connection and capacity charges for new Water and Sewer System customers, which charges are designed to cover some of the capital costs of providing service to new customers. The schedules shown in the following tables show the connection charges for new Water and Sewer System customers:

#### **Water System Connection Charges**

Tap Fee	Set Fee
\$610.00	\$202.33
610.00	223.71
700.00	527.26(1)
700.00	588.96(1)
	\$610.00 610.00 700.00

<sup>(1)</sup> Or actual installation cost, whichever is greater.

#### **Sewer System Connection Charges**

### Connection Size Up to 6" \$1,853.00 Greater than 6"

New Water System customers also are assessed a one-time plant capacity charge for new connections. Effective October 1, 2005, that charge is equal to the greater of (x) (i) in the case of residential customers, a minimum of \$339.50 and (ii) in the case of commercial customers, a minimum of \$414.12 or (y) \$0.97 per connected gallon (average daily flow).

New Sewer System customers also are assessed a one-time capacity charge for new connections. That charge is equal to the greater of (x) (i) in the case of residential customers, a minimum of \$1,274.00 and (ii) in the case of commercial customers, a minimum of \$1,554.02 or (y) \$3.64 per connected gallon (average daily flow).

In each of the foregoing cases, average daily flow is determined by reference to industry standards, subject to review and approval by the JEA Board.

In addition, all new Water and Sewer System connections are assessed a one-time "line extension growth" capacity charge that is a minimum of \$1,695.00.

Capacity charges are included within the revenues pledged for payment of the Water and Sewer System Bonds. However, under applicable Florida law and in accordance with the provisions of the Water and Sewer System Resolution, such capacity charges may be used and applied only for the purpose of paying costs of expansion of the Water and Sewer System, or paying or providing for the payment of debt service on Water and Sewer System Bonds, Subordinated Indebtedness or other indebtedness of JEA relating to the Water and Sewer System issued for such purpose.

On June 19, 2007, the JEA Board modified the retail reclaimed (reuse) water rate, which resulted in a separate rate for commercial customers in DRIs equal to potable, non-DRI, commercial irrigation rates and added a new rate class for commercial bulk reclaimed (reuse) water service. These changes became effective on October 1, 2007.

#### Regulation

#### Water and Sewer System

The future financial condition of the Water and Sewer System could be adversely affected by, among other things, legislation, environmental and other regulatory actions promulgated by applicable federal, state and local governmental agencies. Future changes to new and existing regulations may substantially increase the cost of water and sewer service by requiring changes in the design or operation of existing or new facilities. JEA cannot predict future policies such agencies may adopt.

#### Public Water Supply System

The St. Johns River Water Management District ("SJRWMD") regulates groundwater withdrawals and issues permits for the same. JEA was issued a 20-year CUP in May 2011 from the SJRWMD. As of the date of this Annual Disclosure Report, modeling efforts have indicated that a sustainable groundwater supply can continue to be met for the 20-year planning period out to 2031 and beyond with a three-part program that is the basis of JEA's water capital improvement plan: (i) continued expansion of the reuse system, (ii) measured conservation program and (iii) water transfers from areas with a higher supply on JEA's north

<sup>(1)</sup> Charge based on actual installation cost.

grid to areas with a lower supply on JEA's south grid via river-crossing pipelines. JEA has also implemented a groundwater quality management program to mitigate the effects of (non-lateral) saltwater intrusion into specific wells on the systems south grid that includes routine well monitoring, backplugging of specific wells, and reducing or replacing wells that show continued increases in chlorides. The 2018 permitted CUP allocation was 135.7 million gallons per day. Actual well withdrawals were 111.6 million gallons per day.

The Suwanee River Water Management District ("SRWMD"), FDEP and SJRWMD are each in the process of setting or revising Minimum Flow and Level ("MFL") standards for surface water in the vicinity of the Lower Santa Fe River (SRWMD and FDEP) and Keystone Lakes (SJRWMD) areas. In 2015 two MFLs were adopted in the SRWMD and a determination made that a recovery strategy is necessary. JEA will participate cooperatively in these strategies to the extent of its proportionate share of impact. Because technical tools, such as a new groundwater flow model, are still under development, JEA's effect on the 2015 MFL's is unknown. JEA remains actively engaged in cooperation with seven other northeast Florida utilities known as the Northeast Florida Utility Coordinating Group ("NFUCG") in rule development on these issues.

In addition, the SJRWMD and SRWMD have developed a joint North Florida Regional Water Supply Plan, which was released in October 2016 and approved in January 2017. The plan concludes that future water demands through 2035 can be met with water conservation measures and water supply options included in the plan.

#### Wastewater Treatment System

The Sewer System is regulated by EPA under provisions of the Federal Clean Water Act and the Federal Water Pollution Control Act. EPA has delegated the wastewater regulatory program to the FDEP. Except as described below, the Sewer System is in substantial compliance with all federal and state wastewater regulations.

In 2013 EPA and FDEP reached an agreement on the adoption of numeric nutrient criteria ("NNC") for the State of Florida. As part of the NNC adoption process, EPA re-approved the Lower St. Johns River nutrient Total Maximum Daily Load ("TMDL"). The EPA re-approval means the TMDL will remain the legally enforceable nutrient standard for the Lower St. Johns River. JEA has completed all the treatment plant improvements required of the utility by the TMDL and its facilities are in compliance with its nutrient allocation.

Because JEA has reduced nitrogen well below its own permitted nitrogen reduction goals, it has the ability to generate Water Quality Credits. JEA has previously recorded a reduction in its NPDES permit to generate and transfer 30.34 metric tons per year of Total Nitrogen Water Quality Credits ("Initial Credits") to the City through 2023 and is positioned to remain in compliance with its Aggregate Nitrogen permit. JEA has agreed to provide these annual Initial Credits to the City for no compensation through December 31, 2033 and intends to extend the transfer of the Initial Credits to the City every ten years as long as the Initial Credits are authorized and approved by the appropriate regulatory agency. JEA's current aggregate nitrogen limit for all wastewater plants discharging to the St. Johns River is 683 short tons per year. During the Fiscal Year ended September 30, 2018, JEA facilities discharged 552 short tons to the river.

As the regulatory reduction of Total Nitrogen in the Lower St. Johns River is an ongoing annualized requirement that both the City and JEA will be required to meet beyond December 31, 2023, the City and JEA have agreed to engage in discussions to work on a plan for meeting the future needs of both parties beyond December 31, 2023.

On December 11, 2006, JEA and the FDEP executed a long-term sanitary sewer overflows ("SSO") consent order. The long-term SSO consent order is the mechanism under which periodic, unforeseeable JEA SSOs are reviewed and adjudicated. The SSOs for each fiscal year are typically adjudicated on an annual to

bi-annual basis. In October 2016, Northeast Florida experienced the effects of Hurricane Matthew. In September of 2017, Northeast Florida experienced the effects of a second hurricane, Hurricane Irma. The sustained winds and flooding from those storms caused a number of extended power outages, resulting in SSOs during these extreme weather events. As a result of SSOs that occurred in Fiscal Year 2017 and during Hurricanes Matthew and Irma, JEA was assessed a penalty of \$413,996 by FDEP. In lieu of paying the penalty, JEA has opted to spend at least \$620,994 on an environmental improvement project as approved by FDEP. JEA expects to be assessed a penalty of \$127,000 by FDEP for Fiscal Year 2018 SSOs. To further reduce the frequency of SSOs in the future, JEA is undertaking an extreme weather resiliency plan to evaluate and implement processes or physical projects to reduce the likelihood of SSOs even during extreme weather events.

#### **Capital Program**

The Water and Sewer System's projected capital program for the five-year period ending September 30, 2023 is summarized below. The capital program is centered on renewal and replacement and to enable the Water and Sewer System to remain in compliance with all applicable regulatory requirements, as well as to lower operating and maintenance expenses. Major projects include expansion of the Southwest Water Reclamation Facility from 14.0 mgd to 18.0 mgd, expansion of the Nassau Regional Water Reclamation Facility from 2.0 mgd to 4.0 mgd, construction of the new Greenland Water Reclamation Facility with a capacity of 6.0 mgd, the rebuild of the biosolids operation at the Buckman Water Reclamation Facility and construction of a 6.0 mgd Water Treatment Plant to serve customers in the southwestern part of JEA's service territory and expansion of the Greenland Water Treatment Plant from 6.0 to 9.0 mgd. This program contains funding targeted to improve water and sewer treatment plants, in addition to meeting the three-part program described in "Regulation - *Public Water Supply System*" above to maintain sustainable water supply for JEA's customers.

### Water and Sewer System Capital Program (000's omitted)

Fiscal Year Ending	
September 30,	<u>Amount</u>
2019	\$ 200,000
2020	210,000
2021	210,000
2022	210,000
2023	210,000
Total	\$1,040,000

The total amount of the capital program for the five-year period is estimated to be approximately \$1,040 million. It is expected that the total amount of the capital program for this period will be provided from Water and Sewer System revenues (including capacity charges) and no new debt. The projected total amount of the capital program may be affected by future environmental legislation and regulation. See "Regulation" above.

#### FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM

#### **Debt Relating to Water and Sewer System**

#### Water and Sewer System Bonds

As of September 30, 2018, \$1,282,875,000 in aggregate principal amount of bonds (the "Water and Sewer System Bonds") issued pursuant to the resolution of JEA adopted on February 18, 1997 and referred to therein as the "Water and Sewer System Revenue Bond Resolution" (as amended, restated and supplemented, the "Water and Sewer System Resolution") was outstanding. As of the date of this Annual Disclosure Report,

there is \$1,158,645,000 in aggregate principal amount of Water and Sewer System Bonds outstanding under the Water and Sewer System Resolution, consisting of (a) \$161,960,000 in aggregate principal amount of variable rate Water and Sewer System Bonds and (b) \$996,685,000 in aggregate principal amount of fixed rate Water and Sewer System Bonds.

Water and Sewer System Bonds may be issued for the purposes of (a) paying or providing for the payment of Costs (as defined in the Water and Sewer System Resolution) of the Water and Sewer System and (b) refunding any Water and Sewer System Bonds. See "SUMMARY OF CERTAIN PROVISIONS OF THE WATER AND SEWER SYSTEM RESOLUTION - Additional Water and Sewer System Bonds" in APPENDIX B attached hereto.

Pursuant to the Water and Sewer System Resolution and the laws of the State of Florida, the amount of Water and Sewer System Bonds that may be issued by JEA is not limited and is subject only to approval by the Council and satisfaction of the conditions set forth in the Water and Sewer System Resolution.

From time to time, JEA requests Council approval of the issuance of Water and Sewer System Bonds and Subordinated Indebtedness (as defined in the Water and Sewer System Resolution). Pursuant to previous Council approvals, JEA currently is authorized to issue additional Water and Sewer System Bonds and/or Subordinated Indebtedness for the purpose of paying or providing for the payment of Costs (as defined in the Water and Sewer System Resolution) of the Water and Sewer System in an aggregate principal amount of \$218,078,023. JEA expects that such authorization will be adequate to finance its Water and Sewer System capital program through the Fiscal Year ending September 30, 2023. See "WATER AND SEWER SYSTEM - WATER AND SEWER SYSTEM FUNCTIONS - Capital Program" herein.

JEA also has received approvals from the Council for the issuance of Water and Sewer System Bonds for the purpose of refunding outstanding Water and Sewer System Bonds and Subordinated Indebtedness. JEA may issue additional Water and Sewer System Bonds or Subordinated Water and Sewer System Bonds to refund outstanding Water and Sewer System Bonds and/or Subordinated Indebtedness from time to time as it deems economical or advantageous.

In the future, JEA will continue to seek authorization as needed from the Council to issue additional Water and Sewer System Bonds and/or Subordinated Indebtedness in order to enable it to finance its Water and Sewer System capital program.

A summary of certain provisions of the Water and Sewer System Resolution, including a description of the recent amendments thereto described below, is attached to this Annual Disclosure Report as APPENDIX B.

Liquidity support in connection with tenders for purchase of the Variable Rate Water and Sewer System Revenue Bonds, 2008 Series B (the "SBPA Supported Variable Rate Water and Sewer Bond") currently is provided by a bank pursuant to a standby bond purchase agreement between JEA and such bank. Credit and liquidity support for JEA's Variable Rate Water and Sewer System Revenue Bonds, 2008 Series A-2 (the "LOC Supported Variable Rate Water and Sewer System Bond" and, together with the SBPA Supported Variable Rate Water and Sewer System Bond, the "Senior Liquidity Supported Water and Sewer Bonds") currently is provided by a direct-pay letter of credit issued by a different bank. Any Senior Liquidity Supported Water and Sewer Bond that is purchased by the applicable bank pursuant to its (i) standby bond purchase agreement between JEA and such bank or (ii) letter of credit issued in connection with the reimbursement agreement between JEA and such bank, as applicable, and is not remarketed is required to be repaid as to principal in equal semiannual installments over a period of approximately five years from the date so purchased. In addition, any Senior Liquidity Supported Water and Sewer Bond that is purchased by the applicable bank pursuant to its standby bond purchase agreement or letter of credit reimbursement agreement, as applicable, will constitute an "Option Bond" within the meaning of the Water and Sewer System Resolution

and, as such, may be tendered or deemed tendered to JEA for payment upon the occurrence of certain "events of default" on the part of JEA under such standby bond purchase agreement or letter of credit reimbursement agreement, as applicable. Upon any such tender or deemed tender for purchase, the Senior Liquidity Supported Water and Sewer Bond so tendered or deemed tendered will be due and payable immediately. For a discussion of certain "ratings triggers" contained in such standby bond purchase agreement and such reimbursement agreement, see "OTHER FINANCIAL INFORMATION - Effect of JEA Credit Rating Changes" herein. As of the date of this Annual Disclosure Report, no Senior Liquidity Supported Water and Sewer Bonds are held by the banks providing such standby bond purchase agreement or such letter of credit. The standby bond purchase agreement and letter of credit are subject to periodic renewal at the discretion of the respective bank. The current expiration date for the standby bond purchase agreement is May 8, 2020, and the current expiration date for the letter of credit is December 1, 2023.

#### Amendments to the Water and Sewer System Resolution

In June 2013, JEA adopted Resolution No. 2013-10 ("Resolution 2013-10") which provides for the amendment of certain provisions of the Water and Sewer System Resolution and the First Supplemental Water and Sewer System Revenue Bond Resolution, adopted by JEA on August 19, 1997 (the "First Supplemental Resolution") so as to:

- (i) revise certain definitions in order to allow for the more efficient and advantageous investment of certain funds held under the Water and Sewer System Resolution; and
- (ii) revise certain provisions of the First Supplemental Resolution related to the use of a reserve fund credit instrument (as defined therein) to fund the Initial Subaccount in the Debt Service Reserve Account established thereby.

Such amendments became effective on May 2, 2018 following the issuance of the JEA Water and Sewer System Revenue Bonds, 2017 Series A on December 21, 2017, the mailing of notice to bondholders and satisfaction of the requirements of the Water and Sewer System Resolution and the First Supplemental Resolution. Certain of such amendments are included in the "SUMMARY OF CERTAIN PROVISIONS OF THE WATER AND SEWER SYSTEM RESOLUTION" attached hereto as APPENDIX B.

#### Subordinated Water and Sewer System Bonds

As of September 30, 2018, \$246,465,000 in aggregate principal amount of bonds (the "Subordinated Water and Sewer System Bonds") issued pursuant to the resolution of JEA adopted on May 15, 2003 and referred to therein as the "Water and Sewer System Subordinated Revenue Bond Resolution" (as supplemented, the "Subordinated Water and Sewer System Resolution") was outstanding. As of the date of this Annual Disclosure Report, there is \$224,020,000 in aggregate principal amount of Subordinated Water and Sewer System Bonds outstanding under the Subordinated Water and Sewer System Resolution, consisting of (a) \$105,335,000 in aggregate principal amount of variable rate Subordinated Water and Sewer System Bonds and (b) \$118,685,000 in aggregate principal amount of fixed rate Subordinated Water and Sewer System Bonds.

The Subordinated Water and Sewer System Bonds may be issued (a) for any lawful purpose of JEA relating to the Water and Sewer System or (b) to refund any of the Water and Sewer System Bonds or the Subordinated Water and Sewer System Bonds.

Pursuant to the Subordinated Water and Sewer System Resolution and the laws of the State of Florida, and in accordance with the Water and Sewer System Resolution, the amount of Subordinated Water and Sewer System Bonds that may be issued by JEA is not limited and is subject only to approval by the Council and satisfaction of the conditions set forth in the Subordinated Water and Sewer System Resolution. For a

discussion of the Council authorization currently in effect for the issuance of Water and Sewer System Bonds and/or Subordinated Water and Sewer System Bonds, see subsection "Water and Sewer System Bonds" above in this section.

A summary of certain provisions of the Subordinated Water and Sewer System Resolution is attached to this Annual Disclosure Report as APPENDIX C.

Liquidity support in connection with tenders for purchase of the Variable Rate Water and Sewer System Subordinated Revenue Bonds, 2008 Series A-1, 2008 Series A-2 and 2008 Series B-1 (the "Subordinated Liquidity Supported Water and Sewer Bonds") currently is provided by certain banks pursuant to standby bond purchase agreements between JEA and each such bank. Any Subordinated Liquidity Supported Water and Sewer Bond that is purchased by the applicable bank pursuant to its standby bond purchase agreement and is not remarketed is required to be repaid as to principal in equal semiannual installments over a period of approximately five years from the date so purchased. In addition, any Subordinated Liquidity Supported Water and Sewer Bond that is purchased by the applicable bank pursuant to its standby bond purchase agreement will constitute an "Option Subordinated Bond" within the meaning of the Subordinated Water and Sewer System Resolution and, as such, may be tendered or deemed tendered to JEA for payment upon the occurrence of certain "events of default" on the part of JEA under the standby bond purchase agreement. Upon any such tender or deemed tender for purchase, the Subordinated Liquidity Supported Water and Sewer Bond so tendered or deemed tendered will be due and payable immediately. For a discussion of certain "ratings triggers" contained in such standby bond purchase agreements, see "OTHER FINANCIAL INFORMATION - Effect of JEA Credit Rating Changes" herein. As of the date of this Annual Disclosure Report, no Subordinated Liquidity Supported Water and Sewer Bonds are held by the banks providing such standby bond purchase agreements. Such standby bond purchase agreements are subject to periodic renewal at the discretion of the respective bank. The current expiration dates for the standby bond purchase agreements range from March 8, 2020 to March 19, 2021.

#### Water and Sewer System Contract Debts

Contract Debts, a component of the Water and Sewer System's Operation and Maintenance Expenses, is defined by the Water and Sewer System Resolution to mean any obligations of JEA under any contract, lease, installment sale agreement, bulk purchase agreement or otherwise to make payments out of the Revenues of the Water and Sewer System for property, services or commodities whether or not the same are made available, furnished or received. JEA has not incurred any obligations constituting Contract Debts under the Water and Sewer System Resolution, but it may do so in the future. All Contract Debts will be payable from the Revenues of the Water and Sewer System prior to any payments from such Revenues for indebtedness not constituting Contract Debt issued for the Water and Sewer System, including the Water and Sewer System Bonds and Subordinated Indebtedness (including the Subordinated Water and Sewer System Bonds).

#### Water and Sewer System Support of the District Energy System Bonds

Effective as of October 1, 2004, JEA established the District Energy System, a separate system to provide chilled water services and other local district energy functions. JEA transferred its assets relating to chilled water production and distribution from the Electric System to the District Energy System. The Electric System received approximately \$30,000,000 from the District Energy System for the transferred assets. The District Energy System is operated as a separate system for accounting and financing purposes. See the financial statements of JEA attached hereto as APPENDIX A.

As of the date of this Annual Disclosure Report, there is \$34,825,000 in aggregate principal amount of District Energy System Bonds outstanding under the District Energy System Resolution.

Pursuant to Resolution No. 2013-2, adopted by JEA on March 19, 2013, revenues of the Water and Sewer System shall be deposited into a special subaccount in the Debt Service Reserve Account (the "2013 Series A Bonds Subaccount") established for the District Energy System Refunding Revenue Bonds, 2013 Series A (the "DES 2013 Series A Bonds") and pledged to pay debt service on the DES 2013 Series A Bonds in the event that revenues of the District Energy System are insufficient to pay debt service on such DES 2013 Series A Bonds.

#### Schedules of Debt Service Coverage

The following table sets forth Schedules of the Debt Service Coverage for the Water and Sewer System for the twelve months ended September 30, 2018 and September 30, 2017, and has been prepared in accordance with the requirements of the Resolution. Such information should be read in conjunction with JEA's audited financial statements for the Water and Sewer System and the notes thereto for the fiscal years ended September 30, 2018 and 2017, included as APPENDIX A to this Annual Disclosure Report.

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#### JEA Water and Sewer System Schedules of Debt Service Coverage (In Thousands)

Fiscal Year Ended September 30.

	September 30,		
	2018	2017	
Revenues:	_		
Water	\$171,216	\$181,313	
Water capacity fees	9,730	8,859	
Sewer	260,606	264,469	
Sewer capacity fees	18,268	15,916	
Investment income	7,097	6,793	
Other (1)	11,831	9,560	
Plus: amounts paid from the Rate Stabilization Fund into			
the Revenue Fund	16,128	26,842	
Less: amounts paid from the Revenue Fund into the Rate			
Stabilization Fund	(23,829)	(24,276)	
Total revenues	471,047	489,476	
Less: Operating and maintenance expenses <sup>(2)</sup>	160,122	152,007	
Net revenues	\$310,925	\$337,469	
Debt service on Water and Sewer System Bonds (prior to reduction of			
Build America Bonds subsidy)	\$ 95,818	\$ 97,669	
Less: Build America Bonds subsidy	(2,495)	(2,500)	
Debt service on Water and Sewer System Bonds	\$ 93,323	\$ 95,199	
Debt service coverage on Water and Sewer System Bonds <sup>(3)</sup>	3.33x	3.54x	
Net revenues (from above)	\$310,925	\$337,469	
Debt service on Water and Sewer System Bonds (from above) Plus: debt service on Subordinated Water and Sewer	\$ 93,323	\$ 95,199	
System Bonds	18,084	17,592	
Debt service on Water and Sewer System Bonds and			
Subordinated Water and Sewer System Bonds	\$111,407	\$112,791	
Debt service coverage on Water and Sewer System Bonds and			
Subordinated Water and Sewer System Bonds excluding capacity			
fees <sup>(4)</sup>	2.54x	2.77x	
Debt service coverage on Water and Sewer System Bonds and			
Subordinated Water and Sewer System Bonds including capacity			
fees <sup>(4)</sup>	2.79x	2.99x	

<sup>(1)</sup> Excludes the Build America Bonds subsidy.

#### Management's Discussion of Water and Sewer System Operations

**Revenues.** Water revenues decreased \$10.1 million, or 5.6 percent, for the Fiscal Year ended September 30, 2018 as compared to the Fiscal Year ended September 30, 2017, primarily related to a 2.8 percent decrease in consumption, which was partially offset by a 2.1 percent increase in customer accounts. Sewer revenues (including reuse) decreased \$3.9 million, or 1.5 percent, for the Fiscal Year ended September 30, 2018 as compared to the Fiscal Year ended September 30, 2017, primarily related to a 1.4 percent decrease in sewer sales, a 5.2 percent decrease in reuse sales which was partially offset by a 2.5 percent increase in

<sup>(2)</sup> Excludes depreciation and recognition of deferred costs and revenues, net.

<sup>(3)</sup> Net revenues divided by debt service on Water and Sewer System Bonds. Minimum annual coverage is 1.25x.

<sup>(4)</sup> Net revenues divided by debt service on Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds. Minimum annual coverage is either 1.0x debt service on Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds (excluding capacity fees) or the sum of 1.0x debt service on Water and Sewer System Bonds and 1.20x debt service on Subordinated Water and Sewer System Bonds (including capacity fees).

sewer accounts and a 22.4 percent increase in reuse accounts.

Water sales volume, measured in thousands of gallons (kgals), decreased 1,058,629 kgals, or 2.8 percent, to 36,186,559 kgals for the Fiscal Year ended September 30, 2018 from 37,245,188 kgals for the Fiscal Year ended September 30, 2017. Sewer sales volume decreased 372,148 kgals, or 1.4 percent, to 26,340,622 kgals for the Fiscal Year ended September 30, 2018 from 26,712,770 kgals for the Fiscal Year ended September 30, 2017. Reuse sales volume decreased 170,572 kgals, or 5.2 percent, to 3,119,739 kgals for the Fiscal Year ended September 30, 2018 from 3,290,311 kgals for the Fiscal Year ended September 30, 2017.

Amounts paid from the rate stabilization fund into the revenue fund decreased \$10.7 million, or 39.9 percent, primarily related to a withdrawal during the Fiscal Year ended September 30, 2017 from the debt management stabilization fund in order to legally defease certain Water and Sewer System Subordinated Revenue Bonds.

<u>Operating and Maintenance Expenses.</u> Operating and maintenance expenses increased \$8.1 million, or 5.3 percent, for the Fiscal Year ended September 30, 2018 as compared to the Fiscal Year ended September 30, 2017, primarily related to a \$4.7 million increase in professional services, industrial services and compensation, a \$2.9 million increase in interfund charges and a \$0.5 million net increase in miscellaneous other operating expenses.

<u>Net Revenues</u>. Net revenues available for debt service decreased \$26.5 million, or 7.9 percent, to \$311.0 million for the Fiscal Year ended September 30, 2018 from \$337.5 million for the Fiscal Year ended September 30, 2017. Total revenues decreased \$18.4 million, or 3.8 percent, and total operating expenses increased \$8.1 million, or 5.3 percent, for the Fiscal Year ended September 30, 2018 as compared to the Fiscal Year ended September 30, 2017, as described above.

<u>Debt Service on Water and Sewer System Bonds</u>. Debt service on Water and Sewer System Bonds for the Fiscal Year ended September 30, 2018 decreased \$1.9 million, or 2.0 percent, as compared to the Fiscal Year ended September 30, 2017, primarily related to lower interest as a result of the December 2017 bond refunding.

During the Fiscal Year ended September 30, 2018, JEA issued Water and Sewer System Bonds as summarized in the following table:

<u>Series</u>	<b>Purpose</b>	<b>Month Issued</b>	Par Amount <u>Issued</u>	Par Amount <u>Refunded</u>
2017 Series A	Refunding(1)	December 2017	\$378,220,000	\$394,335,000

<sup>(1)</sup> Fixed rate bonds issued to refund fixed rate bonds.

JEA did not issue any Water and Sewer System Bonds during the Fiscal Year ended September 30, 2017.

<u>Debt Service Coverage on Water and Sewer System Bonds</u>. The debt service coverage ratio on Water and Sewer System Bonds decreased to 3.33 times for the Fiscal Year ended September 30, 2018 as compared to the debt service coverage ratio of 3.54 times for the Fiscal Year ended September 30, 2017, as a result of the 7.9 percent decrease in net revenues available for debt service being proportionately greater than the 2.0 percent decrease in debt service on Water and Sewer System Bonds between such periods.

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<u>Debt Service on Subordinated Water and Sewer System Bonds</u>. Debt service on Subordinated Water and Sewer System Bonds increased \$0.5 million, or 2.8 percent, for the Fiscal Year ended September 30, 2018 as compared to the Fiscal Year ended September 30, 2017, primarily related to higher principal amortization.

During the Fiscal Year ended September 30, 2018, JEA issued Subordinated Water and Sewer System Bonds as summarized in the following table:

<u>Series</u>	Purpose	<b>Month Issued</b>	Par Amount <u>Issued</u>	Par Amount <u>Refunded</u>
2017 Series A	Refunding <sup>(1)</sup>	December 2017	\$58,940,000	\$65,970,000

<sup>(1)</sup> Fixed rate bonds issued to refund fixed rate bonds.

JEA did not issue any Subordinated Water and Sewer System Bonds during the Fiscal Year ended September 30, 2017.

<u>Debt Service Coverage on Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds including capacity fees</u>. The debt service coverage ratio on Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds decreased to 2.79 times for the Fiscal Year ended September 30, 2018 as compared to the debt service coverage ratio of 2.99 times for the Fiscal Year ended September 30, 2017, as a result of the 7.9 percent decrease in net revenues available for debt service being proportionately greater than the 1.2 percent decrease in debt service on Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds between such period.

#### **Liquidity Resources**

The Days of Cash on Hand for the Water and Sewer System at September 30, 2018 was 434 days, and the Days of Liquidity was 529 days. The Days of Cash on Hand for the Water and Sewer System at September 30, 2017 was 496 days, and the Days of Liquidity was 596 days. The Days of Cash on Hand computation is as follows:

(Cash and cash equivalents and Investments amounts under Current assets on the Combining Statement of Net Position + Renewal and Replacement Fund balance referenced in Note 4 of the JEA Financial Statements attached hereto as APPENDIX C) / ((Total operating expenses - Depreciation + Contributions to General Fund, City of Jacksonville, Florida) / 365 days).

The Days of Liquidity computation is as follows:

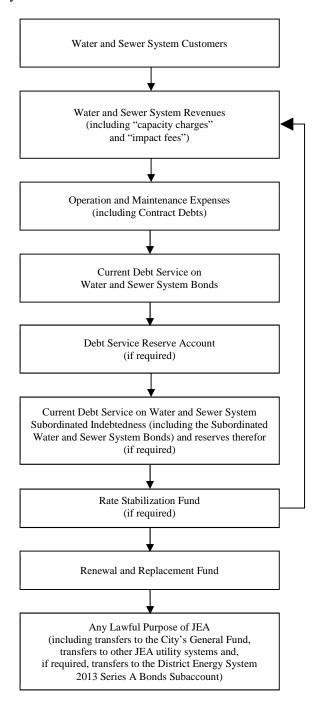
(Cash and cash equivalents and Investments amounts under Current assets on the Combining Statement of Net Position + Renewal and Replacement Fund balance referenced in Note 4 of the JEA Financial Statements attached hereto as APPENDIX C + allocated share of available Revolving Credit Facility\*) / ((Total operating expenses - Depreciation + Contributions to General Fund, City of Jacksonville, Florida) / 365 days).

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<sup>\*</sup> Allocated share of available Revolving Credit Facility at September 30, 2018 was approximately \$49.6 million and approximately \$51.3 million at September 30, 2017; however, total available balance of \$297 million could have been drawn.

#### APPLICATION OF WATER AND SEWER SYSTEM REVENUES

The following chart shows a summary of the major components of the application of revenues under the Water and Sewer System Resolution.



#### DISTRICT ENERGY SYSTEM

#### DISTRICT ENERGY FUNCTIONS

#### General

The District Energy System provides chilled water to customers for air-conditioning. The facilities for the chilled water business consist of chilled water plants to generate chilled water and underground piping to distribute the chilled water to buildings located within the respective districts served by the plants and certain ancillary equipment. JEA's first chilled water facility became fully operational in March 2003.

The establishment of the District Energy System was approved by the Jacksonville City Council in September 2004. Effective as of October 1, 2004, the District Energy System was established as a separate utility system for its local district energy facilities, including the chilled water activities, and any local district heating facilities JEA may develop in the future. Since its commencement of operations, JEA has added three new chilled water facilities.

#### **Chilled Water Facilities**

Chilled water systems air condition buildings by circulating cold water in a continuous flow to the building. A central chilled water plant provides chilled water to buildings through an underground loop, rather than the customer installing and operating its own chiller equipment. JEA has entered into agreements with the City to provide chilled water systems to the baseball park, the arena, the Duval County Courthouse, the library and other government buildings. JEA also has contracts with private entities to serve institutional buildings and residential condominiums.

JEA's first chilled water facility, the Hogan's Creek Plant, located on Hogan Street in downtown Jacksonville, became fully operational in March 2003. At this time, the plant is serving the Baseball Grounds of Jacksonville (310 ton contract demand) and the Jacksonville Veteran's Memorial Arena (2,350 ton contract demand). The facility includes three 2,100 ton chillers, two 1,700 ton cooling towers and a one million gallon chilled water storage tank for peak demand capacity.

A second chilled water facility located on Duval Street serves five City of Jacksonville buildings including the Court House, State Attorney's Office, Library, City Hall Annex and a City garage for a total contract demand of 5,870 tons. The plant also serves the JEA downtown complex with a demand of 700 tons. The facility includes three 2,400 ton chillers, one 800 ton standby chiller and a 7,200 ton cooling tower.

JEA's third chilled water facility is located at 2103 Boulevard Avenue in the Springfield neighborhood. The Springfield facility currently serves eight locations on the UF Health Jacksonville complex. The total contracted demand for the facility is 6,500 tons. The facility includes six 1,500 ton chillers, an 8,100 ton cooling tower and a 3,000 ton cooling tower. The second cooling tower was added in 2018.

A fourth chilled water facility is located on Riverplace Boulevard with two 400 ton air-cooled chillers. The total contracted demand is 594 tons at this facility, and there are no plans to pursue other customers for this facility.

#### **Customers and Sales**

The District Energy System currently has contracts to provide 17 locations with chilled water. Total District Energy System sales revenues for the Fiscal Year Ended September 30, 2018 were approximately \$8,756,000.

#### **Customer Billing Procedures**

Customers are billed on a cycle basis approximately once per month. If the customer has not paid a bill within 42 days after the initial bill date, JEA may discontinue service to that customer. Customers who meet JEA's credit criteria are not assessed a deposit. Customers who do not meet JEA's credit criteria, or do not maintain a good payment record, are assessed a deposit which may vary with consumption. A late payment fee of 1.5 percent is assessed to customers for past due balances in excess of 27 days.

#### **Rates**

District Energy System revenues are derived from two basic types of charges: (a) a demand charge based upon the customer's estimated expected yearly cooling load requirements and (b) a consumption charge based upon the actual amount of chilled water consumed by the customer. JEA has sole discretion to set rate levels and revenue requirements for the District Energy System.

Standard rates for chilled water services are based on the customer's demand and consumption of chilled water and a standard 2,400 Equivalent Full Load Hour ("EFLH") profile. EFLH is defined as the annual ton-hours of chilled water required divided by the chiller's design capacity in tons.

The following schedule reflects the rates for chilled water service:

	Contract Size	Charge	Rate Effective on December 1, 2016	Rate Effective on February 1, 2016	Rate Effective on October 1, 2015	Rate Effective on July 1, 2012
(4)	> 200 tons	Demand Charge	\$20.00/ ton	\$20.00/ ton	\$20.00/ ton	\$20.00/ ton
	2 \le 2,400 EFLH	Consumption Charge	\$0.10569/ ton-hour	\$0.10973/ ton-hour	\$0.11624/ ton-hour	\$0.11754/ ton-hour
0	> 200 tons	Demand Charge	\$20.00/ ton	\$20.00/ ton	\$20.00/ ton	\$20.00/ ton
	② > 2,400 EFLH	Consumption Charge	\$0.08869/ ton-hour	\$0.09273/ ton-hour	\$0.09924/ ton-hour	\$0.10054/ ton-hour
(4)	< 200 tons	Demand Charge	NONE	NONE	NONE	NONE
	② ≤ 2,400 EFLH	Consumption Charge	\$0.19569/ ton-hour	\$0.19973/ ton-hour	\$0.20624/ ton-hour	\$0.20754/ ton-hour
(	< 200 tons	Demand Charge	NONE	NONE	NONE	NONE
	2 > 2,400 EFLH	Consumption Charge	\$0.08869/ ton-hour	\$0.09273/ ton-hour	\$0.09924/ ton-hour	\$0.10054/ ton-hour

#### **Permits, Licenses and Approvals**

All permits, licenses and approvals required for the operation of all of the District Energy System facilities have been obtained, and all of the facilities are operating in compliance with such permits, licenses and approvals.

#### **Capital Program**

The District Energy System's capital program consists of capital requirements for renewal and replacement and improvements to existing facilities. The District Energy System's projected capital program for the five-year period ending September 30, 2023 is summarized below.

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# District Energy System Capital Program (000's omitted)

Fiscal Year Ending	A
September 30,	<u>Amount</u>
2019	\$ 3,070
2020	1,350
2021	1,780
2022	1,350
2023	1,350
Total	\$8,900

The total amount of the capital program for the Fiscal Years 2019 through 2023 is estimated to be approximately \$8.9 million, which includes approximately \$2.5 million for a new backup power generator at the Springfield facility. This facility primarily serves the UF Health Jacksonville medical campus. JEA expects the total amount required for the capital program will be derived from revenues and other available funds of the District Energy System.

#### FINANCIAL INFORMATION RELATING TO DISTRICT ENERGY SYSTEM

#### **Debt Relating to the District Energy System**

#### District Energy System Bonds

As of September 30, 2018, \$36,485,000 in aggregate principal amount of bonds (the "District Energy System Bonds") issued pursuant to the resolution of JEA adopted on June 15, 2004, as amended and supplemented (the "District Energy System Resolution") was outstanding. As of the date of this Annual Disclosure Report, there is \$34,825,000 in aggregate principal amount of District Energy System Bonds outstanding under the District Energy System Resolution.

District Energy System Bonds may be issued to finance any lawful purpose of JEA relating to the District Energy System. See "SUMMARY OF CERTAIN PROVISIONS OF THE DISTRICT ENERGY SYSTEM RESOLUTION - Additional Bonds" in APPENDIX D attached hereto.

Pursuant to the District Energy System Resolution and the laws of the State of Florida, the amount of District Energy System Bonds that may be issued by JEA is not limited and is subject only to approval by the Council and satisfaction of the conditions set forth in the District Energy System Resolution.

Pursuant to a previous Council approval, JEA currently is authorized to issue additional District Energy System Bonds for the purpose of financing the costs of additions, extensions and improvements to the District Energy System in such principal amount as shall provide JEA with "net proceeds" (defined as principal amount, less original issue discount, less underwriters' discount, less costs of issuance) of approximately \$54,321,245. JEA expects that such authorization will be adequate to enable JEA to maintain its District Energy System capital improvement program as projected through the Fiscal Year ending September 30, 2023. See "DISTRICT ENERGY SYSTEM - DISTRICT ENERGY SYSTEM FUNCTIONS - Capital Program" herein. In the future, JEA will continue to seek authorization as needed from the Council to issue additional District Energy System Bonds in order to enable it to finance its District Energy System capital program.

JEA also has received approvals from the Council for the issuance of District Energy System Bonds for the purpose of refunding District Energy System Bonds. JEA may issue additional District Energy System Bonds to refund outstanding District Energy System Bonds from time to time as it deems economical or advantageous.

A summary of certain provisions of the District Energy System Resolution is attached to this Annual Disclosure Report as APPENDIX D.

#### District Energy System Contract Debts

Contract Debts, a component of the District Energy System's Operation and Maintenance Expenses, is defined by the District Energy System Resolution to mean any obligations of JEA under a contract, lease, installment sale agreement, bulk purchase agreement or otherwise to make payments out of Revenues for property, services or commodities whether or not the same are made available, furnished or received. JEA has not incurred any obligations constituting Contract Debts under the District Energy System Resolution, but it may do so in the future. All Contract Debts will be payable from the Revenues of the District Energy System prior to any payments from such Revenues for indebtedness not constituting Contract Debt issued for the District Energy System, including the District Energy System Bonds.

#### **Schedules of Debt Service Coverage**

The following table sets forth Schedules of the Debt Service Coverage for the District Energy System for the years ended September 30, 2018 and September 30, 2017, respectively. Such Schedules of Debt Service Coverage were derived from supplemental information included with JEA's 2018 Financial Statements and certain other information available to JEA. Such Schedules of Debt Service Coverage should be read in conjunction with such financial statements and the notes thereto.

JEA did not issue any District Energy System Bonds during the Fiscal Year ended September 30, 2018.

Fiscal Vear ended

# JEA District Energy System Schedules of Debt Service Coverage (000's omitted)

_	September 30,		
	2018	2017	
Revenues:			
Services revenues	\$8,756	\$8,692	
Investment income	103	45	
Total revenues	8,859	8,737	
Less: Operating expenses <sup>(1)</sup>	4,603	4,570	
Net revenues	\$4,256	\$4,167	
Aggregate debt service	\$3,019	\$3,022	
Debt service coverage <sup>(2)(3)</sup>	1.41x	1.38x	

<sup>(1)</sup> Excludes depreciation.

#### **Management's Discussion of District Energy System Operations**

**Revenues.** Total revenues increased \$0.12 million, or 1.4 percent, to \$8.86 million for the Fiscal Year ended September 30, 2018 compared to the Fiscal Year ended September 30, 2017.

<sup>(2)</sup> On June 19, 2013, the closing date of the District Energy System Refunding Revenue Bonds, 2013 Series A, JEA covenanted to deposit into the 2013 Series A Bonds Subaccount from Available Water and Sewer Revenues an amount equal to the Aggregate DES Service Deficiency that exists with respect to the 2013 Series A Bonds, in the event that the amount on deposit in the Debt Service Account in the Debt Service Fund in accordance with the District Energy System Resolution is less than Accrued Aggregate Debt Service as of the last Business Day of the then current month.

<sup>(3)</sup> Net Revenues divided by aggregate debt service. Minimum annual coverage is 1.15x.

<u>Operating Expenses.</u> Operating expenses increased \$0.03 million, or 0.7 percent, to \$4.60 million for the Fiscal Year ended September 30, 2018 compared to the Fiscal Year ended September 30, 2017.

<u>Net Revenues</u>. Net revenues increased \$0.09 million, or 2.1 percent, to \$4.26 million for the Fiscal Year ended September 30, 2018 from \$4.17 million for the Fiscal Year ended September 30, 2017, primarily related to the increase in total revenues offset, in part, by the increase in operating expenses.

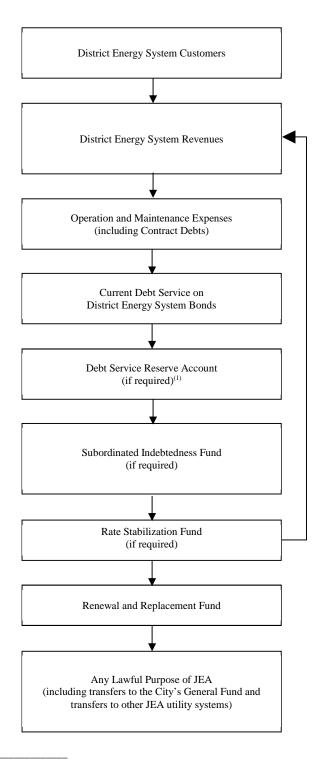
<u>Aggregate Debt Service on District Energy System Bonds.</u> Aggregate Debt Service on District Energy System Bonds for the Fiscal Year ended September 30, 2018 remained relatively unchanged as compared to the Fiscal Year ended September 30, 2017.

<u>Debt Service Coverage on District Energy System Bonds.</u> The debt service coverage ratio on District Energy System Bonds increased slightly to 1.41 times for the Fiscal Year ended September 30, 2018 as compared to the debt service coverage ratio of 1.38 times for the Fiscal Year ended September 30, 2017 as a result of the 2.1 percent increase in net revenues available for debt service and the relatively unchanged aggregate debt service on District Energy System Bonds between such periods.

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#### APPLICATION OF DISTRICT ENERGY SYSTEM REVENUES

The following chart shows a summary of the major components of the application of revenues under the District Energy System Resolution.



<sup>(1)</sup> Revenues of the Water and Sewer System shall be deposited into a special subaccount in the Debt Service Reserve Account (the "2013 Series A Bonds Subaccount") established for the DES 2013 Series A Bonds and pledged to pay debt service on the DES 2013 Series A Bonds in the event that revenues of the District Energy System are insufficient to pay debt service on such DES 2013 Series A Bonds.

#### OTHER FINANCIAL INFORMATION

#### General

JEA maintains separate accounting records for the Water and Sewer System and the District Energy System. For purposes of financial reporting, however, JEA prepares combined financial statements that include the Electric System, the Bulk Power Supply System, JEA's interest in the Power Park<sup>(1)</sup>, the Water and Sewer System and the District Energy System. Set forth in APPENDIX A hereto are (a) the financial statements of JEA for its Fiscal Year 2018 (which consist of the statement of net position of JEA as of September 30, 2018 and the related statement of revenues, expenses, and changes in net position and cash flows for the year then ended and the notes thereto; such financial statements are hereinafter referred to as "JEA's 2018 Financial Statements"), together with the report of Ernst & Young LLP, independent auditors, on such financial statements, (b) certain supplemental data as of September 30, 2018 and for the year then ended (which consist of the combining statement of net position, the combining statement of revenues, expenses, and changes in net position and the combining statement of cash flows) and (c) certain statements of bond compliance information (which consist of schedules of debt service coverage for the year ended September 30, 2018 for the Electric System, the Bulk Power Supply System, JEA's interest in the Power Park, the Water and Sewer System and the District Energy System), together with the report of Ernst & Young LLP, independent auditors, on such schedules. All such statements, information, data and schedules should be read in conjunction with the notes to JEA's 2018 Financial Statements, which are an integral part of the financial statements.

The assets reflected in the statement of net position included in JEA's 2018 Financial Statements include all of the assets of the Water and Sewer System, Electric System, the Bulk Power Supply System, JEA's interest in the Power Park and the District Energy System, and the liabilities reflected in such statement of net position include, among other things, the Water and Sewer System Bonds, the Subordinated Water and Sewer System Bonds, the Electric System Bonds, the Power Park Issue Three Bonds, the Additional Bulk Power Supply System Bonds and the District Energy System Bonds. The statement of revenues, expenses, and changes in net assets include all expenses (*e.g.*, interest charges, operating and maintenance expenses, fuel expenses) of the Water and Sewer System, the Electric System, the Bulk Power Supply System, JEA's interest in the Power Park and the District Energy System.

Except as described under the caption "INTRODUCTION - General" herein, for financing purposes, the debt of JEA relating to the Electric Utilities Functions, the debt of JEA relating to its Water and Sewer System and the debt of JEA relating to the District Energy System are payable from and secured by separate revenue sources (*i.e.*, (a) the debt of JEA relating to its Electric Utility Functions is payable from and secured by the revenues derived by the Electric System from the sale of electricity and related services; (b) the debt of JEA relating to the Water and Sewer System is payable from and secured by the revenues derived by the Water and Sewer System from the sale of water and the provision of wastewater treatment and related services; and (c) except as described under the caption "WATER AND SEWER SYSTEM - FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM FUNCTIONS - Debt Relating to Water and Sewer System Functions - Water and Sewer System Support of the District Energy System Bonds" herein, the debt of JEA relating to the District Energy System is payable from and secured by the revenues derived by the District Energy System from the sale of chilled water and related services). Accordingly, potential purchasers of the Water and Sewer System and District Energy System Bonds are advised that the information in JEA's 2018 Financial Statements relating to JEA's Electric System is not relevant to a decision to purchase the Water and Sewer System and District Energy System Bonds.

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<sup>(1)</sup> The Power Park ceased operations on January 5, 2018.

#### **Transfers to the City**

The Charter currently provides that, as consideration for the unique relationship between the City and JEA, there shall be assessed upon JEA in each Fiscal Year, for the uses and purposes of the City, from the revenues of the Electric System and Water and Sewer System operated by JEA available after the payment of all costs and expenses incurred by JEA in connection with the operation of the Electric System and the Water and Sewer System (including, without limitation, all costs of operation and maintenance, debt service on all obligations issued by JEA in connection with such Electric System and the Water and Sewer System and required reserves therefor and the annual deposit to the depreciation and reserve account required pursuant to terms of the Charter), an amount that is periodically negotiated by JEA and the City. The City's annual assessment of JEA does not include assessments pertaining to the District Energy System. The Charter provides that the Council may reconsider the assessment calculations every five years; however, pursuant to the Charter, the Council may also revise the assessments at any time by amending the Charter with a two-thirds vote of the Council. From time to time, proposals have been made, and may be made in the future, to increase the amount of the City's annual assessment on JEA.

Effective October 1, 2008, JEA is required to pay to the City a combined assessment for the Electric System and the Water and Sewer System and this combined assessment has been set forth in the Charter.

JEA and the City reached agreement on amendments ("2016 Amendments") to the Charter which affect the amount of the combined assessment that JEA is required to pay to the City. The 2016 Amendments were set forth in Ordinance 2015-764, were approved by the Council on March 8, 2016 and took effect on March 10, 2016. The 2016 Amendments set forth the combined assessment from fiscal year 2016-2017 through fiscal year 2020-2021. JEA and the City reached agreement on additional amendments ("2019 Amendments," and together with the 2016 Amendments, the "Charter Amendments") to the Charter set forth in Ordinance 2018-747, enacted by the Council on February 12, 2019, which set forth the combined assessment from fiscal year 2021-2022 through fiscal year 2022-2023. The Charter Amendments provide that effective October 1, 2016, the combined assessment for the Electric System and the Water and Sewer System will be equal, but not exceed the greater of (A) the sum of (i) the amount calculated by multiplying 7.468 mills by the gross kilowatt hours delivered by JEA to retail users of electricity in JEA's service area and to wholesale customers under firm contracts having an original term of more than one year (other than sales of energy to FPL from JEA's St. Johns River Power Park System) during the 12-month period ending on April 30 of the Fiscal Year immediately preceding the Fiscal Year for which such assessment is applicable, plus (ii) the amount calculated by multiplying 389.20 mills by the number of kgals (1000 gallons) potable water and sewer service, excluding reclaimed water service, provided to consumers during the 12-month period ending on April 30 of the Fiscal Year immediately preceding the Fiscal Year for which such assessment is applicable or (B) a minimum calculated amount which increases by 1% per year from fiscal year 2016-2017 through fiscal year 2020-2021 using the fiscal year 2015-16 combined assessment of \$114,187,538 as the base year. The amounts applicable to clause (B) above are: for fiscal year 2016-2017 - \$115,329,413; for fiscal year 2017-2018 -\$116,482,708; for fiscal year 2018-2019 - \$117,647,535; for fiscal year 2019-2020 - \$118,824,010; and for fiscal year 2020-2021 - \$120,012,250; for fiscal year 2021-2022 - \$121,212,373; and for fiscal year 2022-2023 - \$122,424,496. A "mill" is one one-thousandth of a U.S. Dollar. The Charter Amendments provide that the amended assessment calculations for the electric system and the water and sewer system shall be in effect until September 30, 2023 and that the Council may reconsider the assessment calculations after October 1, 2022 and changes, if any, shall become effective October 1, 2023. As provided in the Charter, the Council may change the assessment calculation by ordinance within the provisions of the relevant section of the Charter. The Charter Amendments contemplate that in the event the Council does not reconsider the assessment calculations, the assessments shall be calculated using the existing formulas specified in the Charter, including a minimum calculated amount in clause (B) therein, which increases by one percent per year for each fiscal year computed as provided in the Charter.

In addition to the changes to the annual assessment, the 2016 Amendments provide that JEA, pursuant to the terms of an Interagency Agreement with the City (the "Interagency Agreement"), agrees to provide total nitrogen water quality credit to the City to assist the City in meeting its Basin Management Action Plan load reduction goal ("BMAP Credit"). The 2016 Amendments provide that if JEA cannot provide the BMAP Credit pursuant to the terms of the Interagency Agreement, the Council and JEA shall work cooperatively to address the BMAP Credit shortfall or the Council may reconsider the assessment calculations. The 2019 Amendments provide that JEA, pursuant to amended terms of the Interagency Agreement, agrees to transfer additional future BMAP Credits to the City.

In recognition of the 2016 Amendments to the Charter as described above, JEA paid to the City an additional one-time contribution in the Fiscal Year ending September 30, 2016 of \$15,000,000 (the "2016 Additional Contribution"). The City has committed to use the 2016 Additional Contribution for City water and sewer infrastructure projects. Pursuant to the 2019 Amendments, JEA paid to the City an additional one-time contribution in the Fiscal Year ending September 30, 2019 of \$15,155,000 (the "2019 Additional Contribution"). The City intends to use \$15,000,000 of the 2019 Additional Contribution for City water and sewer infrastructure projects and \$155,000 for river level monitoring equipment.

The portion of the budgeted aggregate assessment calculated with respect to the Electric System has increased from approximately \$91,471,795 for the Fiscal Year ended September 30, 2018 to \$92,952,147 for the Fiscal Year ending September 30, 2019. While the Charter requires JEA to pay the JEA assessment to the City at such times as the City requests, but not in advance of collection, the Ordinance Code of the City requires JEA to pay the JEA assessment on a monthly basis. Pursuant to Section 21.07(f) of the Charter, although the calculation of the amounts assessed upon JEA pursuant to the Charter and the annual transfer of available revenues from JEA to the City pursuant to the Charter are based on formulas that are applied specifically to the respective utility systems operated by JEA, JEA may, in its discretion, determine how to allocate the aggregate assessment between the Electric System and the Water and Sewer System, and the aggregate assessment may be paid from any available revenues of JEA.

In addition, the Charter provides that the Council shall have the power to appropriate annually a portion of the available revenues of each utility system operated by JEA (other than electric, water and sewer systems) for the uses and purposes of the City in an amount to be based on a formula to be agreed upon by JEA and the Council.

The Charter imposes a monthly Franchise Fee which JEA was required to pay to the City commencing June 1, 2008 for revenues derived effective April 1, 2008 in an amount initially equal to three percent (and not to exceed six percent, with increases requiring a request by the Mayor of the City and a two-thirds supermajority vote by the Council) of the revenues of the Electric System derived within Duval County other than the beach communities and the Town of Baldwin and subject to a per customer maximum. The Charter authorizes JEA to pass through the amount of the Franchise Fee to the customers of JEA, which JEA does. As a result, the Franchise Fee has no effect on JEA's net revenues.

#### **Effect of JEA Credit Rating Changes**

#### General

JEA has entered into certain agreements that contain provisions giving counterparties certain rights and options in the event of a downgrade in JEA's credit ratings below specified levels, which provisions commonly are referred to as "ratings triggers."

The table below sets forth the current ratings and outlooks for JEA's Water and Sewer System Bonds and Subordinated Water and Sewer System Bonds, without giving effect to any third-party credit enhancement. Given JEA's current levels of ratings, JEA's management does not believe that the ratings triggers contained

in any of its existing agreements will have a material adverse effect on its results of operations or financial condition. However, JEA's ratings reflect the views of the rating agencies and not of JEA, and therefore JEA cannot give any assurance that its ratings will be maintained at current levels for any period of time.

	Fitch Ratings	Moody's	S&P
Outstanding Water and Sewer System Bonds	AA (stable)	A2 (negative)	AAA (stable)
Outstanding Subordinated Water and Sewer System Bonds	AA (stable)	A2 (negative)	AA+ (stable)

#### Liquidity Support for JEA's Variable Rate Bonds

In particular, JEA has entered into a credit agreement, standby bond purchase agreements and letter of credit reimbursement agreement with certain commercial banks in order to provide liquidity support in connection with tenders for purchase of the Senior Liquidity Supported Water and Sewer Bonds and the Subordinated Liquidity Supported Water and Sewer Bonds (collectively the "Liquidity Supported Bonds"). As of the date of this Annual Disclosure Report, there is \$137,110,000 in aggregate principal amount of Senior Liquidity Supported Water and Sewer Bonds outstanding and \$105,335,000 in aggregate principal amount of Subordinated Liquidity Supported Water and Sewer Bonds outstanding. The standby bond purchase agreements and reimbursement agreements, as applicable, relating to the Liquidity Supported Bonds provide that any of such Liquidity Supported Bonds that are purchased by the applicable bank pursuant to its standby bond purchase agreement or letter of credit, as applicable, may be tendered or deemed tendered to JEA for payment upon the occurrence of certain "events of default" with respect to JEA under such standby bond purchase agreement or such reimbursement agreement, as applicable. Upon any such tender or deemed tender for purchase, such Liquidity Supported Bonds so tendered or deemed tendered will be due and payable immediately.

In general, the credit agreement and each standby bond purchase agreement and reimbursement agreement, as applicable, provides that it is an event of default on the part of JEA thereunder if the long-term ratings on the Liquidity Supported Bonds to which the credit agreement or such standby bond purchase agreement or such reimbursement agreement, as applicable, relates, without giving effect to any third-party credit enhancement, fall below "BBB-" by Fitch Ratings, "Baa3" by Moody's Investors Service ("Moody's") and / or "BBB-" by Standard & Poor's, a business of Standard & Poor's Financial Services LLC, a limited liability company, organized and existing under the laws of the State of Delaware ("S&P"), or are suspended or withdrawn (generally for credit-related reasons).

#### **Interest Rate Swap Transactions**

From time to time, JEA enters into interest rate swap transactions pursuant to both its debt management policy (see "Debt Management Policy" below) and its investment policies (see "Investment Policies" below), which interest rate swap transactions may be for the account of the Water and Sewer System. JEA had interest rate swap transactions outstanding under interest rate swap master agreements with four different counterparties in an aggregate notional amount of \$522,470,000 as of September 30, 2018, of which \$115,660,000 were for the account of the Water and Sewer System. For additional information concerning those interest rate swap transactions, see (a) "Debt Management Policy" below, (b) "Investment Policies" below and (c) Notes 1(k) and 8 to JEA's 2018 Financial Statements set forth in APPENDIX A attached hereto.

Under each master agreement, the interest rate swap transactions entered into pursuant to that master agreement are subject to early termination upon the occurrence and continuance of certain "events of default" and upon the occurrence of certain "termination events." One of such "termination events" with respect to JEA is a suspension or withdrawal of certain credit ratings with respect to JEA or a downgrade of such ratings to below the levels set forth in the master agreement or in the confirmation related to a particular interest rate swap transaction. Upon any such early termination of an interest rate swap transaction, JEA may owe to the counterparty a termination payment, the amount of which could be substantial. The amount of any such

potential termination payment would be determined in the manner provided in the applicable master agreement and would be based primarily upon market interest rate levels and the remaining term of the interest rate swap transaction at the time of termination. In general, the ratings triggers on the part of JEA contained in the master agreements range from (x) below "BBB" by S&P and below "Baa2" by Moody's to (y) below "A-" by S&P and below "A3" by Moody's.

Additionally, the master agreement between JEA and Merrill Lynch Derivative Products AG ("MLDP") for the account of the Water and Sewer System contains an automatic transfer provision triggered by a certain rating downgrade or downgrades, as applicable, of JEA or Merrill Lynch Derivative Products AG. Under certain circumstances if the rating on JEA's senior lien Water and Sewer System Bonds or the long-term, unsecured, unsubordinated debt rating or financial program rating of Merrill Lynch Derivative Products AG were to fall below the double-A category, all rights and obligations of Merrill Lynch Derivative Products AG under the master agreement and all transactions under the master agreement would be automatically assigned and delegated to Merrill Lynch Capital Services, Inc. ("MLCS"). MLCS has entered into an agreement with JEA to cause a guarantee from Merrill Lynch & Co. to be delivered to JEA after the assignment occurs and such guarantee will guarantee the payments of MLCS under the master agreement to JEA. S&P downgraded MLDP to "A+" on August 5, 2013, triggering the assignment to MLCS and the Merrill Lynch & Co. guarantee described above.

As of September 30, 2018, JEA's estimated aggregate exposure under all of its then outstanding interest rate swap transactions (*i.e.*, the net amount of the termination payments that JEA would owe to its counterparties if all of the interest rate swap transactions were terminated) was \$86,356,000, of which \$16,253,000 was attributable to interest rate swap transactions entered into for the account of the Water and Sewer System. As of March 31, 2019, JEA's estimated aggregate exposure under all of its then outstanding interest rate swap transactions was \$112,315,000, of which \$22,544,000 was attributable to interest rate swap transactions entered into for the account of the Water and Sewer System.

In connection with the issuance or proposed issuance of certain of JEA's bonds, JEA has entered into various floating-to-fixed rate interest rate swap transactions for the account of the Water and Sewer System. These swap transactions are entered into with various providers and are otherwise described in the table below.

Related Bonds	<u>Counterparty</u>	Initial Notional <u>Amount</u>	Notional Amount as of <u>March 31, 2019</u>	Fixed Rate of <u>Interest</u>	Variable Rate <u>Index<sup>(1)</sup></u>	Termination <u>Date<sup>(2)</sup></u>
Water and Sewer System Revenue Bonds, 2006 Series B	Morgan Stanley Capital Services, Inc.	\$38,730,000	\$24,850,000	3.99- 4.09%	CPI Index	10/1/2019 to 10/1/2022
Variable Rate Water and Sewer System Revenue Bonds, 2008 Series B	Merrill Lynch Capital Services, Inc.	\$85,290,000	\$85,290,000	3.895%	BMA Municipal Swap Index	10/1/2041

<sup>(1)</sup> The BMA Municipal Swap Index is now known as the SIFMA Municipal Swap Index.

#### **Debt Management Policy**

JEA's debt management policy applies to all current and future debt and related hedging instruments issued by JEA. The policy is designed to provide both broad policy guidance and facilitate management, control and oversight of JEA's debt function, thus fostering ongoing access to the capital markets in order to fund future capital projects of JEA.

<sup>(2)</sup> Unless earlier terminated.

The counterparties with whom JEA may deal must meet the requirements for counterparties described under the caption "Investment Policies" below. The policy requires JEA staff to submit to the JEA Board an annual plan of finance, which will address, at a minimum, the amount of debt projected to be issued during the next Fiscal Year, whether such debt is senior or subordinated, whether such debt is fixed or variable, and whether any hedging instruments may be utilized. Under the policy, JEA's net variable rate debt will not exceed 30 percent of total debt and JEA's net variable rate debt plus net fixed-to-floating interest rate swaps will not exceed 55 percent of total debt. "Net variable rate debt" is actual variable rate debt minus net variable rate assets. "Net variable rate assets" is actual variable rate assets minus the notional amount of investment/asset-matched interest rate swaps. "Net fixed-to-floating interest rate swaps" is the aggregate notional amount of floating-to-fixed swaps maturing in 10 years or less minus the aggregate notional amount of floating-to-fixed swaps maturing in 10 years or less outstanding on the last day of each month. "Total debt" equals fixed rate debt plus variable rate debt. "Variable rate assets" are investments maturing in less than one year. "Variable rate debt" is actual variable rate debt outstanding less variable rate debt that is associated with a floating-to-fixed rate swap where the term of the swap matches the term of the variable rate debt. The percentages are to be computed monthly.

JEA's fixed rate debt, variable rate debt and debt-related hedging instruments are to be managed in conjunction with investment assets and investment-related hedging instruments to incorporate the natural occurrence of hedging impacts in those balance sheet categories. The purpose is to use each side of the balance sheet to mitigate or hedge cash flow risks posed by the other side of the balance sheet.

The policy creates procedures to be followed in conjunction with the issuance of fixed rate debt, variable rate debt and debt refundings. Beginning in the Fiscal Year ended September 30, 2010, deposits were made to the Rate Stabilization Fund for the Debt Management Strategy Reserve and reflect the difference in the actual interest rates for interest expense on the unhedged variable rate debt as compared to the budgeted assumptions for interest expense on the unhedged variable rate debt. At a minimum, 50 percent of the calculated reserve will be recorded and deposited each fiscal year. An additional amount, up to the full value of the calculated reserve (the remaining 50 percent), will be reviewed by the Debt and Investment Committee and recorded at their option. However, the amount deposited to the Rate Stabilization Fund (in addition to actual debt service costs for the fiscal year) cannot exceed the total amount of the budgeted debt service. The reserve will be calculated on a system by system basis; however, based on the calculation, any mandatory deposit will exclude the District Energy System. The reserve is capped at five percent of the par amount of the total outstanding variable rate debt. Withdrawals from the Debt Management Strategy Stabilization Fund for debt management strategy can be used for any lawful purpose including debt service, debt repayment, and capital outlay and must be approved in writing by the Managing Director and Chief Executive Officer. Under JEA's pricing policy, withdrawals from the Debt Management Strategy Stabilization Fund are limited to expenses related to market disruption in the capital markets, disruption in availability of credit or unanticipated credit expenses, or to fund variable interest costs in excess of budget. Any amounts withdrawn for these costs will subsequently be presented for approval by the Board.

The policy establishes a framework for JEA's utilization of hedging instruments including interest rate swaps and caps and collars. The utilization of hedging instruments offers JEA a cost effective alternative to traditional debt financing choices. JEA is authorized to enter into floating-to-fixed rate swaps, fixed-rate-to-floating rate swaps and basis swaps (*i.e.*, swaps which seek to manage the risk associated with the mismatch between two benchmarks used to set the indices utilized in an interest rate swap transaction). The percentage of variable rate exposure (the notional amount of net fixed-to-floating interest rate swaps and net variable rate debt outstanding) to total debt outstanding may not exceed 55 percent. The notional amount of interest rate swaps, caps, collars and related hedging instruments is limited to the amount approved by the JEA Board from time to time.

Interest rate caps and related hedging instruments are to be utilized to help JEA manage interest rate risk in its debt management program. Generally, a fixed-to-floating interest rate swap will have an associated interest rate cap for the same notional amount at a level no greater than 200 basis points above the interest rate swap fixed rate. It is also contemplated that an interest rate cap will not always have the same maturity as the interest swap with which it is associated. The average life of the aggregate of outstanding caps will not be less than 75 percent of the average life of the associated aggregate swaps.

The policy sets out various decision rules which govern the decision to execute various hedging instruments. Valuations are performed on a quarterly basis and adjustments to fair value are included in JEA's financial statements.

The policy calls for no more than \$500,000,000 of net interest rate swap and cap or other hedging instruments to be outstanding in the aggregate with any one provider or affiliate thereof. The aggregate amount of all "long dated" (greater than 10 years) transactions executed with financial institutions and all affiliates thereof, shall be limited to an amount based on the credit rating of the financial institution at the time of the entry into the long dated hedging transaction as shown below:

Rating Level	Notional Amount
AAA/Aaa by one or more rating agencies	\$400,000,000
AA-/Aa3 or better by at least two rating agencies	300,000,000
A/A2 or better by at least two rating agencies	200,000,000
Below A/A2 by at least two rating agencies	0

The ratings criteria shown above apply either to the counterparty to the long dated transaction or, if the payment obligation of such counterparty under the relevant swap agreement shall be guaranteed by an affiliate thereof, such affiliate. The overall maximum by definition of the above limits cannot exceed \$400,000,000 for long dated transactions.

These diversification requirements include all interest rate swap, cap and other hedging instruments JEA may utilize to manage interest rate risks including, but not limited to, debt management and 100 percent investment/asset-matched program. Interest rate swap and cap transactions are to be competitively bid (unless otherwise determined by the Managing Director and Chief Executive Officer) by at least three providers that have executed interest rate swap agreements with JEA.

Under the policy, an annual budgeted reserve contribution is to be made to a reserve fund. The contributions to the reserve fund will be funded in three equal installments of 1 percent of the notional amount beginning in the month the swap is executed. Once funded, the reserve fund shall at all times be not less than three percent of the notional amount of fixed-to-floating rate debt interest rate swaps outstanding, but can be used for any lawful purpose as approved by JEA's Managing Director and Chief Executive Officer.

The aggregate notional amount of all hedging instrument transactions entered into for the account of the Water and Sewer System outstanding at any one time, net of offsetting transactions, under all swap agreements is established at not to exceed (A) \$600,000,000 in the case of interest rate swaps, (B) \$250,000,000 in the case of basis swaps and (C) \$400,000,000 in the case of caps and collars. A transaction that reverses an original transaction in every respect thereby offsetting the cashflows perfectly is referred to herein as an "offsetting transaction." Generally, in the past JEA has elected to receive or pay an upfront cash payment to reverse the original swap transaction. The phrase "net of offsetting transactions" would relate to reversals that remain on JEA's books if JEA elected not to take/make an upfront cash payment.

#### **Investment Policies**

The goals of JEA's investment policy are to (i) provide safety of capital, (ii) provide sufficient liquidity to meet anticipated cash flow requirements, and (iii) maximize investment yields while complying with the first two goals. Sound investment management practices help maintain JEA's competitive position since investment income reduces utility rates. JEA's funds are invested only in securities of the type and maturity permitted by its bond resolutions, Florida statutes, its internal investment policy and federal income tax limitations. JEA does not speculate on the future movement of interest rates and is not permitted to utilize debt leverage in its investment portfolio. Debt leverage is the practice of borrowing funds solely for the purpose of reinvesting the proceeds in an attempt to earn more income than the cost of the debt.

JEA invests its funds pursuant to Section 218.415, Florida Statutes, its various bond resolutions and its JEA Board-approved investment policy. As of September 30, 2018, 50 percent of JEA's total investment portfolio (including funds held under the Water and Sewer System Resolution, the Subordinated Water and Sewer System Resolution, the District Energy System Resolution, the Bulk Power Supply System Resolution, the Electric System Resolution, the First Power Park Resolution and the Second Power Park Resolution) was invested in securities issued by the United States Government, federal agencies or state and local government entities and has a weighted average maturity of approximately 3.3 years. As of September 30, 2018, the remaining 50 percent of such investment portfolio was invested in commercial paper rated at least "A-1" and "P-1" by S&P and Moody's, respectively, having a weighted average maturity of less than 90 days, in money market mutual funds and in demand deposit bank accounts. JEA's funds that are invested in commercial paper, in money market mutual funds and in bank accounts are used primarily for operating expenses.

JEA has entered into securities lending agreements in the past wherein from time to time JEA loaned certain securities in exchange for eligible collateral consisting of United States Government and federal agency securities whose market values were at least 103 percent of the market values of the loaned securities which were re-priced daily. JEA earned a fee in connection with such securities lending agreements, which augmented its portfolio yield. Although JEA currently does not have any securities held pursuant to its securities lending program, JEA may enter into similar securities lending agreements in the future.

JEA previously implemented a strategy to lengthen synthetically the investment maturity of its short-term revolving funds by entering into 100 percent asset-matched interest rate swap transactions. Through the use of this strategy, JEA may lock-in a fixed rate of return for up to five years on those funds, such as debt service sinking funds, that it is permitted to invest only in short-term investment securities. As of September 30, 2018, JEA had, and as of the date of this Annual Disclosure Report, JEA has, no outstanding interest rate swap transactions for this purpose in the future.

The JEA Board has established limits on the notional amount of JEA's interest rate swap transactions and standards for the qualification of financial institutions with whom JEA may enter into interest rate swap transactions. The counterparties with whom JEA may deal must be rated (i) "AAA/Aaa" by one or more nationally recognized rating agencies at the time of execution, (ii) "AA-/Aa3" or better by at least two of such credit rating agencies at the time of execution, or (iii) if such counterparty is not rated "A/A2" or better at the time of execution, ("AA-/Aa3" or better for interest rate swap transactions entered into prior to 2014), provide for a guarantee by an affiliate of such counterparty rated at least "A/A2" or better at the time of execution where such affiliate agrees to unconditionally guarantee the payment obligations of such counterparty under the swap agreement. In addition, swap agreements generally will require the counterparty to enter into a collateral agreement to provide collateral when (a) the ratings of such counterparty (or its guarantor) fall below "AA-/Aa3" by two rating agencies and (b) a termination payment would be owed to JEA.

JEA's payment obligations under the interest rate swap transactions consist of periodic payments based upon fluctuations in interest rates and, in the event of a termination of a transaction prior to the stated term thereof, potential termination payments. The amounts of such potential termination payments are based primarily upon market interest rate levels and the remaining term of the transaction at the time of termination. JEA is authorized to enter into both (a) interest rate swap agreements the obligations of JEA under which are payable from available funds of the Electric System ("Electric System Swap Agreements") and (b) interest rate swap agreements the obligations of JEA under which are payable from available funds of the Water and Sewer System ("Water and Sewer System Swap Agreements").

In the case of interest rate swap transactions entered into pursuant to Water and Sewer System Swap Agreements, JEA's payment obligations thereunder are payable following the payment of the operation and maintenance expenses of the Water and Sewer System, including any Contract Debts of the Water and Sewer System, debt service on Water and Sewer System Bonds, debt service on any Subordinated Indebtedness of the Water and Sewer System (including Subordinated Water and Sewer System Bonds) and the deposits to the Renewal and Replacement Fund established by the Water and Sewer System Resolution.

Interest rate swap transactions for the account of the Water and Sewer System may be entered into pursuant to either Water and Sewer System Swap Agreements or Electric System Swap Agreements. In the case of interest rate swap transactions for the account of the Water and Sewer System that are entered into pursuant to Electric System Swap Agreements, JEA has established procedures pursuant to which (a) all amounts received by JEA pursuant to such interest rate swap transactions are transferred to the Revenue Fund established pursuant to the Water and Sewer System Resolution and (b) all payments required to be made by JEA pursuant to such interest rate swap transactions are paid for from Revenues of the Water and Sewer System; *provided*, *however*, that no such payments may be made from Revenues of the Water and Sewer System until payment (or provision for payment) has been made of the operation and maintenance expenses of the Water and Sewer System, including any Contract Debts of the Water and Sewer System, debt service for the Water and Sewer System Bonds, debt service for any Subordinated Indebtedness of the Water and Sewer System (including the Subordinated Water and Sewer System Bonds) and the deposits to the Renewal and Replacement Fund established by the Water and Sewer System Resolution.

For further information regarding this interest rate swap program, see Notes 1(k) and 8 to JEA's 2018 Financial Statements set forth in APPENDIX A attached hereto.

#### **Revolving Credit Facilities**

Effective December 17, 2015, JEA entered into a revolving credit agreement with JPMorgan Chase Bank, National Association ("JPMorgan") for a \$300,000,000 commitment (the "Revolving Credit Facility"). The Revolving Credit Facility was initially scheduled to expire on December 17, 2018. Effective May 24, 2018, JEA and JPMorgan amended the agreement to extend the expiration date to May 24, 2021, and effective November 1, 2018, the parties further amended the agreement to increase the maximum principal amount of the credit facility available for Electric System loans by \$200,000,000, for a total commitment equal to \$500,000,000. Subject to meeting various conditions, the Revolving Credit Facility is available to JEA to provide working capital and short-term and interim financing for capital projects in connection with any of its systems. Payment obligations allocable to the Electric System, Power Park (under the Second Power Park Resolution) and the Bulk Power System under the Revolving Credit Facility are payable from the respective revenues of the Electric System, Power Park (under the Second Power Park Resolution) and the Bulk Power Supply System, as applicable, but are subordinate to the payment of JEA's Electric System, Power Park and Bulk Power Supply System debt (including the Electric System Bonds, the Subordinated Electric System Bonds, the Power Park Issue Three Bonds, and the Additional Bulk Power Supply System Bonds). As of the date of this Annual Disclosure Report, JEA has \$5,000,000 in borrowings outstanding under the Revolving Credit Facility, which are for the account of the Water and Sewer System.

#### **Loans Among Utility Systems**

Pursuant to the Charter, JEA has the authority to lend money from one of its utility systems to another of its utility systems under terms and conditions as determined by JEA. As of the date of this Annual Disclosure Report, no loans among the systems are outstanding.

#### No Default Certificates

Section 714.2 of the Water and Sewer System Resolution and Section 7.07 of the Subordinated Water and Sewer Resolution require that JEA annually obtain a certificate of its independent firm of certified public accountants stating whether or not, to the knowledge of the signer, JEA is in default with respect to any of the covenants, agreements or conditions on its part contained in the Water and Sewer System Resolution and the Subordinated Water and Sewer System Resolution, respectively, and if so, the nature of such default. Section 713.2 of the District Energy System Resolution requires that JEA annually obtain a certificate of its independent firm of certified public accountants stating whether or not, to the knowledge of the signer, JEA is in default with respect to any of the covenants, agreements or conditions on its part contained in the District Energy System Resolution, and if so, the nature of such default. The actual certificates provided by such accountants state that nothing has come to such accountants' attention that caused such accountants to believe that JEA failed to comply with the terms, covenants, provisions or conditions of the applicable section(s) of the relevant resolutions, insofar as they relate to accounting matters (emphasis supplied). The accountants have advised JEA that the italicized qualifying language is required to be included by their professional standards (specifically, Statement on Auditing Standards No. 62). JEA does not believe that any other nationally-recognized accounting firm will provide certificates that strictly meet the requirements of the applicable section(s) of the relevant resolutions and that differ materially from the certificates provided by JEA's accountants.

Notwithstanding the failure of the accountants' certificates to strictly meet the requirements of the respective resolutions as described above, as of the date of this Annual Disclosure Report, JEA is not in default in the performance of any of the covenants, agreements or conditions contained in the Water and Sewer System Resolution, Subordinated Water and Sewer Resolution and the District Energy System Resolution.

#### LITIGATION

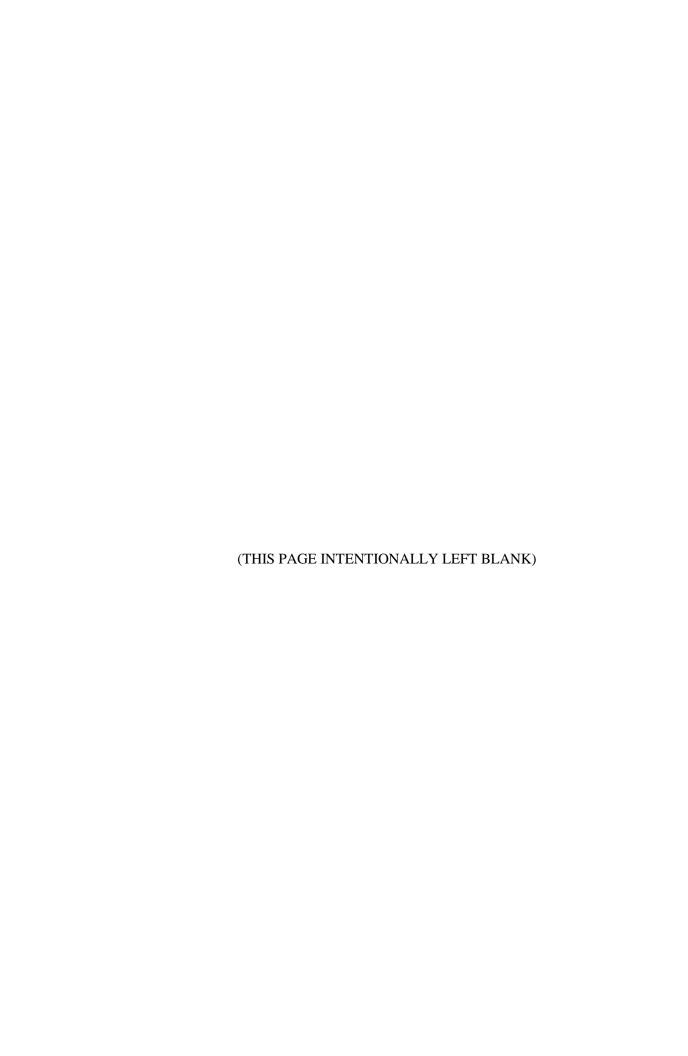
In the opinion of the Office of General Counsel of the City, there is no pending litigation or proceedings that may result in any material adverse change in the financial condition of JEA relating to the Water and Sewer System or the District Energy System other than as set forth in the financial statements of JEA in APPENDIX A of this Annual Disclosure Report and other than the matters set forth in this Annual Disclosure Report.

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### **AUTHORIZATION**

The dissemination and use of this Annual Disclosure Report have been duly authorized by the JEA Board.

JEA	
By:	/s/ April Green
	Chair
By:	/s/ Aaron F. Zahn
-	Managing Director and Chief Executive Officer





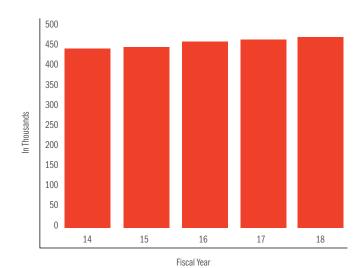
**OPERATING HIGHLIGHTS** 

# **ELECTRIC FINANCIAL AND OPERATING HIGHLIGHTS**

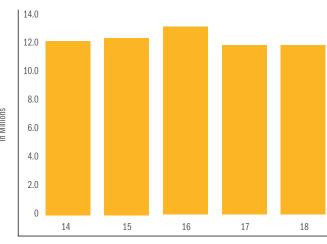
Years Ended September 30

						% Change
	2018	2017	2016	2015	2014	2018-2017
FINANCIAL HIGHLIGHTS						
Total operating revenues (thousands)	\$1,366,111	\$1,428,329	\$1,364,242	\$1,370,212	\$1,479,483	-4.36%
Fuel and purchased power expenses (thousands)	\$530,246	\$536,250	\$485,874	\$517,239	\$585,021	-1.12%
Total operating expenses (thousands)	\$1,102,133	\$1,088,386	\$1,032,774	\$1,061,853	\$1,196,160	1.26%
Debt service coverage:						
Senior and subordinated - Electric	2.30 x	2.53 x	2.89 x	2.63 x	2.41 x	-9.09%
Senior - Electric	6.55 x	7.53 x	6.59 x	5.80 x	5.40 x	-13.01%
Bulk Power Supply System	3.47 x	1.75 x	1.81 x	1.24 x	2.24 x	98.29%
St. Johns River Power Park 2nd Resolution	1.60 x	1.18 x	1.17 x	1.16 x	2.21 x	35.59%
OPERATING HIGHLIGHTS						
Sales (megawatt hours)	12,732,236	13,893,852	14,586,486	14,379,697	14,312,013	-8.36%
Peak demand - megawatts 60 minute net	3,080	2,682	2,674	2,863	2,823	14.84%
Total accounts - average number	466,411	458,953	451,788	443,705	434,917	1.63%
Sales per residential account (kilowatt hours)	13,205	12,672	13,433	13,468	13,301	4.21%
Average residential revenue per kilowatt hour	\$11.42	\$11.44	\$11.24	\$11.82	\$11.97	-0.17%
Power supply:						
Natural gas	48%	39%	32%	32%	27%	23.08%
Coal	22%	43%	42%	50%	57%	-48.84%
Purchases	18%	12%	11%	8%	5%	50.00%
Petroleum coke	12%	6%	15%	10%	10%	100.00%
Oil	0%	0%	0%	0%	1%	0.00%

### **Average Number of Electric Retail Accounts**



### **Retail Megawatt Hour Sales**



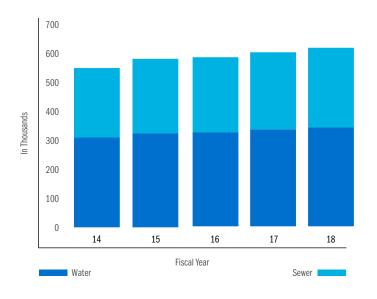
Fiscal Year

## WATER AND SEWER FINANCIAL AND OPERATING HIGHLIGHTS

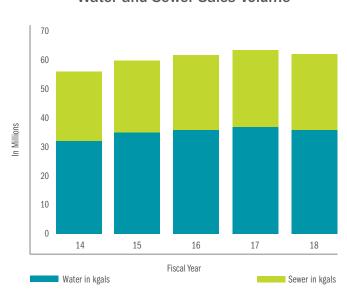
Years Ended September 30

						% Change
	2018	2017	2016	2015	2014	2018-2017
FINANCIAL HIGHLIGHTS						
Total operating revenues (thousands)	\$435,682	\$457,908	\$427,750	\$389,733	\$393,355	-4.85%
Operating expenses (thousands)	\$310,435	\$305,131	\$297,325	\$269,509	\$263,275	1.74%
Debt service coverage:						
Senior and subordinated	2.79 x	2.99 x	3.28 x	2.75 x	2.46 x	-6.69%
Senior	3.33 x	3.54 x	3.78 x	3.13 x	2.71 x	-5.93%
OPERATING HIGHLIGHTS						
WATER						
Total sales (kgals)	36,186,559	37,245,188	36,357,919	34,558,284	32,468,336	-2.84%
Total accounts - average number	348,159	341,016	333,139	325,352	318,708	2.09%
Average sales per residential account (kgals)	59.33	63.21	62.78	61.32	59.84	-6.14%
Average residential revenue per kgal	\$5.43	\$5.48	\$5.26	\$5.30	\$5.35	-0.91%
SEWER						
Total sales (kgals)	26,340,622	26,712,770	25,817,658	24,922,141	23,526,976	-1.39%
Total accounts - average number	270,871	264,336	257,719	250,974	244,836	2.47%
Average sales per residential account (kgals)	57.91	61.84	60.96	59.75	58.40	-6.36%
Average residential revenue per kgal	\$9.52	\$9.46	\$9.26	\$9.33	\$9.46	0.63%
REUSE						
Total sales (kgals)	3,119,739	3,290,311	2,644,046	1,783,730	1,300,838	-5.18%
Total accounts - average number	11,498	9,391	7,498	5,891	4,501	22.44%

### **Average Number of Water and Sewer Accounts**



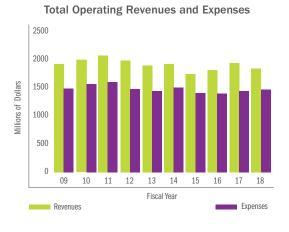
#### Water and Sewer Sales Volume

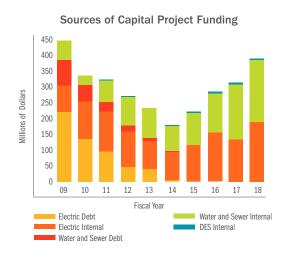


## **FINANCIAL SUMMARY**

Combined Electric System, Bulk Power Supply System, St Johns River Power Park System, Water and Sewer and District Energy System (in thousands of dollars)

	2018-17	2017-16	2016-15	2015-14	2014-13
Operating revenues:					
Electric	\$1,267,202	\$1,382,206	\$1,321,713	\$1,324,883	\$1,431,167
Water and sewer	423,480	448,057	417,404	379,789	383,643
District energy system	8,348	8,185	8,337	8,778	8,682
Other, net	90,952	36,729	34,298	35,930	38,389
Total operating revenues	1,789,982	1,875,177	1,781,752	1,749,380	1,861,881
Operating expenses:					
Fuel and purchased power	530,246	536,250	485,874	517,239	585,021
Maintenance and other operating expense	429,989	392,142	380,219	374,166	364,764
Depreciation	360,609	386,699	382,432	366,486	375,505
State utility and franchise taxes	71,307	69,683	71,244	72,510	72,221
Recognition of deferred costs and revenues, net	6,856	(4,075)	(1,527)	(11,168)	49,271
Total operating expenses	1,399,007	1,380,699	1,318,242	1,319,233	1,446,782
Operating income	390,975	494,478	463,510	430,147	415,099
Nonoperating revenues (expenses):					
Interest on debt	(166,508)	(182,992)	(184,457)	(198,199)	(223,736)
Investment income	11,826	10,576	14,225	12,904	20,546
Allowance for funds used during construction	11,764	11,774	9,407	5,723	3,894
Other nonoperating income, net	9,857	5,918	8,765	11,833	7,280
Earnings from The Energy Authority	4,074	6,335	6,136	1,461	3,567
Loss on sale of asset	-	-	-	(199)	-
Other interest, net	(1,825)	(451)	(403)	(68)	(38)
Total nonoperating expenses, net	(130,812)	(148,840)	(146,327)	(166,545)	(188,487)
Income before contributions and special item	260,163	345,638	317,183	263,602	226,612
Contributions (to) from:					
General fund, City of Jacksonville	(116,620)	(115,823)	(129,187)	(111,688)	(109,188)
Capital contributions:					
Developers and other	82,157	66,875	53,652	52,709	38,845
Reduction of plant cost through contributions	(54,114)	(42,069)	(31,632)	(33,105)	-
Total contributions	(88,577)	(91,017)	(107,167)	(92,084)	(70,343)
Special item	(45,099)	-	-	151,490	-
Change in net position	126,487	254,621	210,016	323,008	156,269
Net position - beginning of year, originally reported	2,628,822	2,376,925	2,166,909	1,843,901	2,039,737
Effect of change in accounting	-	(2,724)	-	-	(352,105)
Net position - beginning of year, as restated	2,628,822	2,374,201	2,166,909	1,843,901	1,687,632
Net position - end of year	\$2,755,309	\$2,628,822	\$2,376,925	\$2,166,909	\$1,843,901

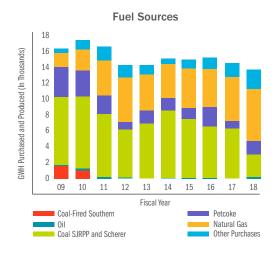


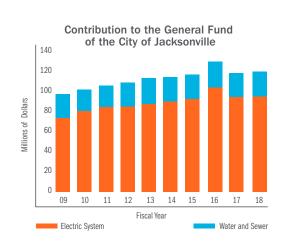


# FINANCIAL SUMMARY, CONTINUED

Combined Electric System, Bulk Power Supply System, St Johns River Power Park System, Water and Sewer and District Energy System (in thousands of dollars)

	2013-12	2012-11	2011-10	2010-09	2009-08
Operating revenues:					
Electric	\$1,383,696	\$1,473,134	\$1,624,473	\$1,548,248	\$1,525,966
Water and sewer	381,677	385,631	358,176	303,241	249,813
District energy system	8,471	8,571	8,067	7,595	6,914
Other, net	38,975	41,046	48,842	50,692	48,687
Total operating revenues	1,812,819	1,908,382	2,039,558	1,909,776	1,831,380
Operating expenses:					
Fuel and purchased power	539,646	548,030	733,296	741,374	719,296
Maintenance and other operating expense	371,041	366,751	334,066	322,672	295,480
Depreciation	378,067	379,570	351,931	353,606	344,158
State utility and franchise taxes	70,237	72,925	78,787	73,120	72,127
Recognition of deferred costs and revenues, net	64,305	59,153	27,014	22,149	33,108
Total operating expenses	1,423,296	1,426,429	1,525,094	1,512,921	1,464,169
Operating income	389,523	481,953	514,464	396,855	367,211
Nonoperating revenues (expenses):					
Interest on debt	(235,228)	(248,681)	(289,320)	(285,669)	(264,701)
Investment income (loss)	(13,240)	8,804	11,908	(3,604)	23,463
Allowance for funds used during construction	3,986	3,365	5,387	9,713	12,708
Other nonoperating income, net	7,530	16,420	7,698	3,832	-
Earnings from The Energy Authority	4,325	6,328	12,265	6,103	4,088
Water & Sewer Expansion Authority	-	-	(485)	(719)	(864)
Loss on sale of asset	-	-	-	-	(986)
Other interest, net	(134)	(23)	(109)	(54)	(72)
Total nonoperating expenses, net	(232,761)	(213,787)	(252,656)	(270,398)	(226,364)
Income before contributions and special item	156,762	268,166	261,808	126,457	140,847
Contributions (to) from:					
General fund, City of Jacksonville	(106,687)	(104,188)	(101,688)	(99,187)	(96,687)
Capital contributions:					
Developers and other	29,292	18,774	23,539	19,883	38,071
Water & Sewer Expansion Authority	-	-	11,465	-	-
City of Jacksonville Better Jacksonville Plan	-	-	-	-	1,516
Total contributions	(77,395)	(85,414)	(66,684)	(79,304)	(57,100)
Change in net position	79,367	182,752	195,124	47,153	83,747
Net position - beginning of year, originally reported	1,991,311	1,808,559	1,613,435	1,566,282	1,482,535
Effect of change in accounting	(30,941)	-	-	-	-
Net position - beginning of year, as restated	1,960,370	1,808,559	1,613,435	1,566,282	1,482,535
Net position - end of year					





## **OPERATING SUMMARY: ELECTRIC SYSTEM**

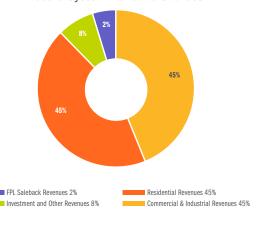
**Electric System, Bulk Power System and St Johns River Power Park** 

	2018-17	2017-16	2016-15	2015-14	2014-13
Electric revenues (000's omitted):					
Residential	\$618,171	\$584,663	\$599,009	\$619,897	\$608,983
Commercial and industrial	594,395	587,972	597,796	627,547	632,121
Public street lighting	12,873	13,069	13,488	11,982	13,943
Sales for resale	5,474	21,813	31,210	32,424	34,700
Florida Power & Light saleback	30,767	128,737	130,053	128,475	159,747
Total	1,261,680	1,336,254	1,371,556	1,420,325	1,449,494
Sales (megawatt hours):					
Residential	5,414,721	5,108,945	5,328,245	5,243,002	5,086,866
Commercial and industrial	6,851,803	6,725,201	6,847,583	6,767,836	6,636,445
Public street lighting	59,176	65,721	80,108	89,376	111,325
Sales for resale					
Territorial	38,640	150,268	305,315	333,994	337,353
Off-system	35,429	150,635	169,037	83,367	136,342
Florida Power & Light saleback	332,467	1,693,082	1,856,198	1,862,122	2,003,682
Total	12,732,236	13,893,852	14,586,486	14,379,697	14,312,013
Average number of accounts:					
Residential	410,060	403,164	396,664	389,287	382,438
Commercial and industrial	52,573	52,060	51,472	50,867	48,999
Public street lighting	3,777	3,727	3,649	3,549	3,477
Sales for resale (1)	1	2	3	2	3
Total	466,411	458,953	451,788	443,705	434,917
System installed capacity - MW (2)	3,084	3,722	3,722	3,759	3,759
Peak demand - MW (60 minute net)	3,080	2,682	2,674	2,863	2,823
System load factor - %	48%	53%	56%	51%	51%
Residential averages - annual:					
Revenue per account - \$	1,507.51	1,450.19	1,510.12	1,592.39	1,592.37
kWh per account	13,205	12,672	13,433	13,468	13,301
Revenue per kWh - ¢	11.42	11.44	11.24	11.82	11.97
All other retail - annual:					
Revenue per account - \$	10,776.72	10,773.85	11,089.86	11,752.59	12,311.61
kWh per account	122,644	121,729	125,682	126,015	128,588
Revenue per kWh - ¢	8.79	8.85	8.82	9.33	9.57
Heating-cooling degree days	4,256	3,737	4,117	4,159	3,998

<sup>(1)</sup> Includes Florida Power and Light, but does not include the average number of off-system non-firm sales customers.

<sup>(2)</sup> Includes JEA's 50% share of the SJRPP's two coal-fired generating units (638 net megawatts each) and JEA's 23.64% share of Scherer's 846 net megawatt coal-fired generating Unit 4. System installed capacity is reported based on winter capacity.





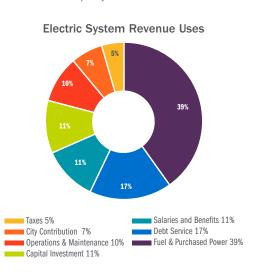
# **OPERATING SUMMARY: ELECTRIC SYSTEM, CONTINUED**

Electric System, Bulk Power System and St Johns River Power Park

	2013-12	2012-11	2011-10	2010-09	2009-08
Electric revenues (000's omitted):					
Residential	\$580,893	\$601,581	\$686,706	\$659,829	\$645,725
Commercial and industrial	617,962	670,983	704,976	647,316	678,218
Public street lighting	14,661	15,311	15,347	14,203	14,440
Sales for resale	29,989	37,153	41,155	53,990	52,941
Florida Power & Light saleback	158,031	166,873	196,353	190,293	157,898
Total	1,401,536	1,491,901	1,644,537	1,565,631	1,549,222
Sales (megawatt hours):					
Residential	4,877,264	4,806,144	5,444,926	5,707,670	5,300,203
Commercial and industrial	6,599,249	6,670,200	6,908,240	6,932,123	6,849,291
Public street lighting	123,177	122,614	122,402	121,413	120,191
Sales for resale	- ,	,-	, -	, -	,
Territorial	329,922	374,116	394,548	418,867	406,051
Off-system	42,286	74,852	99,953	391,559	579,730
Florida Power & Light saleback	1,810,651	1,806,781	2,492,559	2,950,244	2,659,565
Total	13,782,549	13,854,707	15,462,628	16,521,876	15,915,031
Average number of accounts:					
Residential	375,600	371,658	369,566	368,682	367,864
Commercial and industrial	47,709	47,230	46,710	46,325	45,810
Public street lighting	3,460	3,424	3,424	3,495	3,550
Sales for resale (1)	3	3	3	3	3
Total	426,772	422,315	419,703	418,505	417,227
System installed capacity - MW (2)	3,759	3,759	3,759	3,376	3,376
Peak demand - MW (60 minute net)	2,596	2,665	3,062	3,224	3,064
System load factor - %	54%	53%	50%	49%	49%
Residential averages - annual:					
Revenue per account - \$	1,546.57	1,618.64	1,858.14	1,789.70	1,755.34
kWh per account	12,985	12,932	14,733	15,481	14,408
Revenue per kWh - ¢	11.91	12.52	12.61	11.56	12.42
All other retail - annual:					
Revenue per account - \$	12,363.40	13,548.66	14,367.95	13,278.18	14,032.78
kWh per account	131,377	134,102	140,237	141,580	141,197
Revenue per kWh - ¢	9.41	10.10	10.25	9.38	9.94
Heating-cooling degree days	3,830	3,618	4,345	4,705	4,094

<sup>(1)</sup> Includes Florida Power and Light, but does not include the average number of off-system non-firm sales customers.

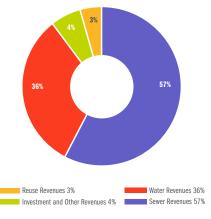
<sup>(2)</sup> Includes JEA's 50% share of the SJRPP's two coal-fired generating units (638 net megawatts each) and JEA's 23.64% share of Scherer's 846 net megawatt coal-fired generating Unit 4. System installed capacity is reported based on winter capacity.



# **OPERATING SUMMARY: WATER AND SEWER SYSTEM**

		2018-17	2017-16	2016-15	2015-14	2014-13
WATER	Water revenues (000's omitted):					
	Residential	\$91,954	\$96,615	\$89,946	\$86,215	\$83,014
	Commercial and industrial	47,494	47,969	46,212	45,078	43,647
	Irrigation	32,004	36,836	34,846	32,681	30,088
	Total	171,452	181,420	171,004	163,974	156,749
	Water sales (kgals):					
	Residential	16,932,812	17,624,952	17,086,586	16,271,698	15,507,752
	Commercial and industrial	14,023,130	13,402,094	13,343,376	12,870,984	12,131,400
	Irrigation	5,230,617	6,218,142	5,927,957	5,415,602	4,829,184
	Total	36,186,559	37,245,188	36,357,919	34,558,284	32,468,336
	Average number of accounts:					
	Residential	285,404	278,838	272,157	265,373	259,159
	Commercial and industrial	25,702	25,423	24,698	23,951	23,722
	Irrigation	37,053	36,755	36,284	36,028	35,827
	Total	348,159	341,016	333,139	325,352	318,708
	Residential averages - annual:					
	Revenue per account - \$	322.19	346.49	330.49	324.88	320.32
	kgals per account	59.33	63.21	62.78	61.32	59.84
	Revenue per kgal - \$	5.43	5.48	5.26	5.30	5.35
SEWER	Sewer revenues (000's omitted):					
	Residential	\$139,174	\$143,967	\$135,288	\$129,976	\$125,526
	Commercial and industrial	108,126	107,446	103,731	101,910	97,339
	Total	247,300	251,413	239,019	231,886	222,865
	Volume (kgals):					
	Residential	14,623,682	15,225,124	14,614,026	13,934,981	13,269,638
	Commercial and industrial	11,716,940	11,487,646	11,203,632	10,987,160	10,257,338
	Total	26,340,622	26,712,770	25,817,658	24,922,141	23,526,976
	Average number of accounts:					
	Residential	252,531	246,187	239,738	233,203	227,216
	Commercial and industrial	18,340	18,149	17,981	17,771	17,620
	Total	270,871	264,336	257,719	250,974	244,836
	Residential averages - annual:					
	Revenue per account - \$	551.12	584.79	564.32	557.35	552.45
	kgals per account	57.91	61.84	60.96	59.75	58.40
	Revenue per kgal - \$	9.52	9.46	9.26	9.33	9.46
REUSE	Reuse revenues (000's omitted):	\$13,659	\$13,216	\$10,267	\$7,378	\$5,533
	Reuse sales (kgals):	3,119,739	3,290,311	2,644,046	1,783,730	1,300,838
	Average number of accounts:	11,498	9,391	7,498	5,891	4,501
RAINFALL	Inches	57.41	72.89	31.38	49.43	51.17
	Days	120	98	98	114	114

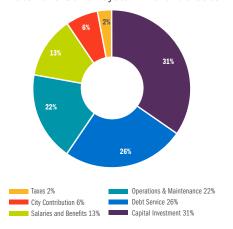
#### Water and Sewer System Revenue Sources



# OPERATING SUMMARY: WATER AND SEWER SYSTEM, CONTINUED

	Days	121	N/A	N/A	N/A	N/A
RAINFALL	Inches	45.54	55.24	42.18	40.53	53.67
	Average number of accounts:	3,143	2,241	1,666	1,201	837
	Reuse sales (kgals):	1,109,653	1,330,359	1,551,175	989,010	805,925
REUSE	Reuse revenues (000's omitted):	\$4,551	\$3,936	\$3,622	\$2,093	\$1,156
	Revenue per kgal - \$	9.27	8.99	7.44	6.69	5.92
	kgals per account	60.59	64.56	72.10	69.22	67.47
	Revenue per account - \$	561.90	580.59	536.35	463.05	399.36
	Residential averages - annual:					
	Total	239,283	235,615	233,592	231,735	230,358
	Commercial and industrial	17,462	17,351	17,269	17,229	17,617
	Residential	221,821	218,264	216,323	214,506	212,741
	Average number of accounts:	20,020,011	21,100,011	20,010,110	20,120,012	2.,.0.,000
	Total	23,623,974	24,490,071	25,919,479	25,126,672	24,767,666
	Commercial and industrial	10,184,193	10,398,369	10,321,967	10,279,241	10,413,889
	Residential	13,439,781	14,091,702	15,597,512	14,847,431	14,353,777
	Volume (kgals):	220,031	220,334	131,031	110,100	143,310
	Total	220,651	220,954	197,657	170,158	143,978
	Commercial and industrial	96,009	94,232	81,633	70,831	59,017
SEWER	Sewer revenues (000's omitted): Residential	\$124,642	\$126,722	\$116,024	\$99,327	\$84,961
CEWED		0.20	0.00			0.00
	Revenue per kgal - \$	5.20	5.03	4.43	4.00	3.38
	kgals per account	62.06	66.30	74.36	71.12	71.35
	Revenue per account - \$	322.60	333.29	329.27	284.30	241.36
	Residential averages - annual:	312,314	505,221	301,303	300,040	303,010
	Total	312,914	309,221	307,385	306,046	305,076
	Irrigation	35,765	35,652	35,559	35,441	35,340
	Commercial and industrial	23,487	23,365	23,221	22,996	23,460
	Average number of accounts:  Residential	253,662	250,204	248,605	247,609	246,276
	Total	33,087,804	35,345,044	38,982,907	36,750,266	36,845,945
	Irrigation	5,568,772	6,621,039	8,225,409	7,049,874	7,089,431
	Commercial and industrial	11,777,128	12,134,488	12,271,645	12,091,091	12,184,482
	Residential	15,741,904	16,589,517	18,485,853	17,609,301	17,572,032
	Water sales (kgals):					
	Total	157,437	161,821	158,090	132,144	106,112
	Irrigation	32,796	34,802	35,932	26,876	19,080
	Commercial and industrial	42,809	43,629	40,299	34,872	27,591
	Residential	\$81,832	\$83,390	\$81,859	\$70,396	\$59,441
WATER	Water revenues (000's omitted):					
		2013-12	2012-11	2011-10	2010-09	2009-08

#### Water and Sewer System Revenue Uses



JEA FINANCIAL INFORMATION

# FINANCIAL STATEMENTS, SUPPLEMENTARY INFORMATION, AND BOND COMPLIANCE INFORMATION

JEA

Years Ended September 30, 2018 and 2017 With Report of Independent Auditors

Ernst & Young LLP





# Financial Statements, Supplementary Information, and Bond Compliance Information

# Years Ended September 30, 2018 and 2017

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# Report of Independent Auditors

The Board of Directors JEA Jacksonville, Florida

### Report on the Financial Statements

We have audited the accompanying financial statements of JEA, a component unit of the City of Jacksonville, as of and for the years ended September 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise JEA's basic 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 conformity with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of 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 and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of 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 respective financial position of JEA as of September 30, 2018 and 2017, and the respective changes in its financial position and cash flows thereof for the years then ended in conformity with U.S. generally accepted accounting principles.



# Adoption of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions and GASB Statement No. 83, Certain Asset Retirement Obligations

As discussed in Footnote 1 to the financial statements, JEA changed its method of accounting for postemployment benefits other than pensions and certain asset retirement obligations as a result of the adoption of Governmental Accounting Standards Board (GASB) Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions, effective October 1, 2016 and GASB Statement No. 83, Certain Asset Retirement Obligations, effective October 1, 2017, respectively. Our opinion is not modified with respect to these matters.

#### Other Matters

### Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis, the Schedule of JEA's Proportionate Share of the Net Pension Liability and Schedule of JEA Contributions, SJRPP Plan – Schedule of Changes in Net Pension Liability and Related Ratios, SJRPP Pension Plan – Schedule of Contributions, OPEB Plan – Schedule of Changes in Net OPEB Liability and Related Ratios and OPEB Plan – Schedule of Contributions, as listed in the table of contents 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 which 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, 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.

# Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The combining statements of net position, revenues, expenses and changes in net position and cash flows, as listed in the table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the 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. In our opinion, the combining statements of net position, revenues, expenses and changes in net position and cash flows, as listed in the table of contents are fairly stated, in all material respects, in relation to the financial statements as a whole.



# Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we also have issued our report dated December 3, 2018 on our consideration of JEA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of JEA's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering JEA's internal control over financial reporting and compliance.

Ernst + Young LLP

December 3, 2018

# Management's Discussion and Analysis

#### Introduction

JEA is a municipal utility operating in Jacksonville, Florida (Duval County) and parts of three adjacent counties. The operation is composed of three enterprise funds – the Electric Enterprise Fund, the Water and Sewer Fund, and the District Energy System (DES). The Electric Enterprise Fund is comprised of the JEA Electric System, Bulk Power Supply System (Scherer), and St. Johns River Power Park System (SJRPP). The Electric Enterprise Fund, Water and Sewer Fund, and DES are presented on a combined basis in the accompanying statements of net position, statements of revenues, expenses and changes in net position, and statements of cash flows.

#### **Overview of the Combined Financial Statements**

This discussion and analysis serves as an introduction to JEA's basic financial statements. The information presented here should be read in conjunction with the financial statements and accompanying notes.

The basic financial statements are presented on a comparative basis for the fiscal years ended September 30, 2018 and 2017. The statements of net position present JEA's assets, deferred outflows of resources, liabilities, and deferred inflows of resources, with the residual reported as net position. Revenue and expense information is presented in the accompanying statements of revenues, expenses, and changes in net position. The accompanying statements of cash flows present JEA's sources and uses of cash and cash equivalents and are presented using the direct method. This method provides broad categories of cash receipts and cash disbursements pertaining to cash provided by or used in operations, investing, and financing activities.

The notes to the financial statements are an integral part of JEA's basic financial statements and contain information on accounting principles and additional information on certain components of these statements.

The following tables summarize the financial condition and operations of JEA for the 2018 and 2017 fiscal years:

# **Condensed Statements of Net Position**

	2018		2017*		2016	
		(In	(In millions)			
Assets and deferred outflows of resources						
Current assets	\$ 874	\$	902	\$	917	
Other noncurrent assets	1,677		1,624		1,552	
Net capital assets	5,380		5,814		5,875	
Deferred outflows of resources	 435		438		462	
Total assets and deferred outflows of resources	\$ 8,366	\$	8,778	\$	8,806	
Liabilities and deferred inflows of resources						
Current liabilities	\$ 207	\$	189	\$	168	
Current liabilities payable from restricted assets	367		449		389	
Net pension liability	544		554		493	
Other noncurrent liabilities	91		90		47	
Long-term debt	4,053		4,410		4,791	
Deferred inflows of resources	348		457		541	
Net position						
Net investment in capital assets	1,857		1,622		1,420	
Restricted	542		614		612	
Unrestricted	357		393		345	
Total liabilities, deferred inflows of resources, and net position	\$ 8,366	\$	8,778	\$	8,806	

# Condensed Statements of Revenues, Expenses, and Changes in Net Position

	2018	2	2017*	2016
		(In I	millions)	
Operating revenues	\$ 1,790	\$	1,875 \$	1,782
Operating expenses	(1,399)		(1,380)	(1,319)
Operating income	391		495	463
Nonoperating expenses, net	(131)		(149)	(146)
Contributions	(89)		(91)	(107)
Special Item	(45)		_	_
Change in net position	126		255	210
Net position – beginning of the year	2,629		2,377	2,167
Effect of adoption of GASB Statement No. 75	-		(3)	_
Net position – beginning of the year, restated	2,629		2,374	2,167
Net position – end of the year	\$ 2,755	\$	2,629 \$	2,377

<sup>\*</sup>Restated for implementation of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions

Financial Analysis of JEA for fiscal years 2018 and 2017

# Operating Revenues

### 2018 Compared to 2017

### Electric Enterprise

Total operating revenues decreased approximately \$62 million (4.4%) compared to fiscal year 2017. Electric revenues decreased \$114 million and other operating revenues increased by \$52 million. The \$114 million decrease in electric revenues was due to a \$97 million decrease in sales to FPL as a result of the shutdown of SJRPP in January 2018, and a \$40 million decrease in transfers from stabilization funds. See note 2, Regulatory Deferrals, for additional information. The decrease was partially offset by \$23 million increase in territorial sales. Territorial MWh sales were up 314,205 megawatt hours (MWh) (2.6%), resulting in a 1.0% increase in average MWhs per customer, driven by a 13.9% increase in degree days. SJRPP Sales to FPL decreased by 1,360,616 MWh and off-system sales decreased by 115,206 MWh, which brought the change to a net decrease in MWh sales of 1,161,617 MWh (8.4%). The increase in other operating revenues was driven by the FPL shutdown payment. See note 3, St. Johns River Power Park Decommissioning, for further details.

#### Water and Sewer

Total operating revenues decreased approximately \$22 million (4.9%) compared to fiscal year 2017. Water revenues decreased \$10 million (5.5%) due to a 2.8% decrease in consumption, which was partially offset by a 2.1% increase in customer accounts. Water consumption decreased 1,058,629 kgals to 36,186,559 kgals. Sewer revenues decreased approximately \$4 million (1.6%) primarily related to a 1.4% decrease in sales, which was partially offset by a 2.5% increase in sewer accounts. Sewer sales decreased 372,148 kgals to 26,340,622 kgals. The water and sewer revenue decreases were driven by a 22.4% increase in rain days. Reuse revenues increased approximately \$1 million (3.4%), primarily related to a 22.4% increase in reuse accounts, which was partially offset by a 5.2% decrease in sales. Reuse sales decreased 170,572 kgals to 3,119,739 kgals. Water and sewer revenues were impacted by an \$11 million net decrease in transfers from stabilization funds. See note 2, Regulatory Deferrals, for additional information. Other operating revenues increased by \$2 million due to additional waste disposal revenues.

#### District Energy System

Operating revenues remained flat when compared to fiscal year 2017 at \$9 million.

### 2017 Compared to 2016

# Electric Enterprise

Total operating revenues increased approximately \$64 million (4.7%) compared to fiscal year 2016. Electric revenues increased \$61 million and other operating revenues increased by \$3 million. The increase in electric revenues was due to an increase in transfers from stabilization funds related to fuel and debt management of \$96 million, which was partially offset by a \$35 million decrease in sales. See note 2, Regulatory Deferrals, for additional information. Territorial MWh sales were down 511,116 megawatt hours (MWh) (4.1%), resulting in a 5.6% decrease in average MWhs per customer. SJRPP Sales to FPL decreased by 163,116 MWh and off-system sales decreased by 18,402 MWh, which brought the total decrease in MWh sales to 692,634 MWh (4.7%).

#### Water and Sewer

Total operating revenues increased approximately \$30 million (7.1%) compared to fiscal year 2016. Water revenues increased \$10 million (6.1%) due to a 2.4% increase in consumption and a 2.4% increase in customer accounts. Water consumption increased 887,269 kgals to 37,245,188 kgals. Sewer revenues increased approximately \$12 million (5.2%) primarily related to a 3.5% increase in sales and a 2.6% increase in sewer accounts. Sewer sales increased 895,112 kgals to 26,712,770 kgals. Reuse revenues increased approximately \$3 million (28.7%), primarily related to a 24.4% increase in sales and a 25.2% increase in reuse accounts. Reuse sales increased 646,265 kgals to 3,290,311 kgals. Water and sewer revenues were impacted by a \$5 million net increase in transfers, primarily related to a withdrawal from the debt management stabilization fund for a debt defeasance. See note 2, Regulatory Deferrals, for additional information.

# District Energy System

DES operating revenues remained flat when compared to fiscal year 2016 at \$9 million.

### Operating Expenses

# 2018 Compared to 2017

#### Electric Enterprise

Total operating expenses increased approximately \$14 million (1.3%), compared to fiscal year 2017.

Fuel and purchased power expense decreased approximately \$6 million (1.1%), compared to fiscal year 2017. Costs decreased by \$19 million while MWh generated and purchased increased by \$13 million. As commodity prices have fluctuated over these periods, the mix between generation and purchased power has shifted as JEA has taken advantage of the most economical sources of power. In addition, the shutdown of the SJRPP power plant has decreased power production sourced by coal significantly. Total MWh power volumes increased 1.6% compared to fiscal year 2017 to 12,874,102 MWh, with an increase of 41.6% for MWh purchased and a decrease of 4.5% for MWh generated. Detailed below is JEA's power supply mix.

	FY 2018	FY 2017
Natural gas	48%	39%
Coal	22%	43%
Purchases	18%	12%
Petroleum coke	12%	6%
Total	100%	100%

Operating expenses, other than fuel and purchased power, increased approximately \$20 million, compared to fiscal year 2017.

Maintenance and other operating expenses increased \$30 million. The drivers for the increase were a \$19 million increase in Scherer capital improvements and operating costs, \$14 million in SJRPP renewal and replacement expenses, and \$5 million increase in maintenance costs. These increases were offset by an \$8 million reduction in SJRPP operating expenses due to the plant shutdown.

Depreciation expense decreased \$28 million due to a decrease in the depreciable base, driven by the impairment of the SJRPP capital assets due to the shutdown of the SJRPP plant. State utility and franchise taxes increased \$2 million due to higher electric revenue taxable sales. Recognition of deferred costs and revenues, net increased \$16 million as a result of higher deferred cost amortization, primarily related to the reduced depreciation for SJRPP capital assets subsequent to the impairment. See note 3, St. Johns River Power Park Decommissioning, for additional details.

#### Water and Sewer

Operating expenses increased \$5 million (1.7%), compared to fiscal year 2017. Maintenance and other expenses increased \$8 million due to a \$5 million increase in professional services, industrial services, and compensation and a \$3 million increase in interfund charges. Depreciation expense increased \$2 million due to an increase in the depreciable base. Recognition of deferred costs and revenues, net decreased \$5 million due to a decrease in environmental projects paid from the rate stabilization fund.

# District Energy System

Operating expenses remained flat when compared to fiscal year 2017 at \$7 million.

#### 2017 Compared to 2016

### Electric Enterprise

Total operating expenses increased approximately \$56 million (5.4%), compared to fiscal year 2016.

Fuel and purchased power expense increased approximately \$51 million (10.4%), compared to fiscal year 2016, primarily due to higher solid fuels, natural gas and purchased power costs. The increase in commodity costs was partially offset by a decrease in total MWH generated and purchased. Generation cost increased by \$62 million, purchased power cost increased by \$12 million, while MWh generated and purchased decreased by \$23 million. As commodity prices have fluctuated over these periods, the mix between generation and purchased power has shifted as JEA has taken advantage of the most economical sources of power. Total MWh power volumes decreased 4.4% compared to fiscal year 2016 to 12,667,351 MWh, with a decrease of 5.6% for MWh generated and an increase of 3.7% for MWh purchased. Detailed below is JEA's power supply mix.

	FY 2017	FY 2016
Coal	43%	42%
Natural gas	39%	32%
Petroleum coke	6%	15%
Purchases	12%	11%
Total	100%	100%

Operating expenses, other than fuel and purchased power, increased approximately \$5 million, compared to fiscal year 2016. Maintenance and other operating expenses increased \$3 million. The drivers for the increase were a \$9 million increase in compensation and benefits costs and a \$3 million increase related to insurance costs. These increases were offset by a decrease of \$9 million in maintenance expenses due to a prior year major outage at Brandy Branch not repeated in the current year and reduced maintenance expenses at SJRPP and Scherer. Depreciation expense increased \$5 million due to an increase in the depreciable base. State utility and franchise taxes decreased \$2 million due to lower electric revenue sales. Recognition of deferred costs and revenues, net decreased \$1 million as a result of lower deferred cost amortization.

#### Water and Sewer

Operating expenses increased \$8 million (2.6%), compared to fiscal year 2016. Maintenance and other expenses increased \$10 million due to a \$5 million increase in compensation and benefits costs, \$4 million increase in interfund charges, and a \$1 million net increase in miscellaneous other operating expenses. Recognition of deferred costs and revenues, net decreased \$2 million due to a decrease in environmental projects paid from the rate stabilization fund.

#### District Energy System

DES operating expenses remained flat when compared to fiscal year 2016 at \$7 million.

# Nonoperating Revenues and Expenses

# 2018 Compared to 2017

There was a decrease of approximately \$18 million (12.1%) in total nonoperating expenses, net over the prior year. Detailed below are the drivers.

	FY	FY 2018	
	(in m	(in millions)	
Changes in nonoperating expenses, net			
Decrease in interest on debt	\$	16	
Investment gains – fair value adjustments		4	
Decrease in investment income		(3)	
Decrease in The Energy Authority earnings		(2)	
Gain on sale of assets		2	
Decrease in other nonoperating expenses - timber		2	
Increase in other interest expense		(1)	
Total change in nonoperating expenses, net	\$	18	

# 2017 Compared to 2016

There was an increase of approximately \$3 million (1.7%) in total nonoperating expenses, net over the prior year. Detailed below are the drivers.

	 FY 2017 (in millions)	
Changes in nonoperating expenses, net		
Investment losses – fair value adjustments	\$ (9)	
Increase in investment income	5	
Decrease in other nonoperating income – timber	(3)	
Increase in allowance for funds used during construction	2	
Decrease in interest on debt	2	
Total change in nonoperating expenses, net	\$ (3)	

#### Capital Assets and Debt Administration for Fiscal Years 2018 and 2017

# Capital Assets

As of September 30, 2018, JEA had approximately \$5,380 million in capital assets, net of accumulated depreciation. This included \$2,662 million in electric plant, \$2,683 million in water and sewer plant, and \$35 million in chilled water plant. During fiscal year 2018, capital additions were \$387 million, which included \$183 million in electric plant, \$203 million in water and sewer plant, and \$1 million in chilled water plant. Also during fiscal year 2018, a \$451 million write down was recorded to the Electric Enterprise capital accounts due to the shutdown of the SJRPP power plant. More detailed information is presented in note 3, St. Johns River Power Park Decommissioning, to the financial statements. As of September 30, 2017, JEA had approximately \$5,814 million in capital assets, net of accumulated depreciation. This included \$3,162 million in electric plant, \$2,616 million in water and sewer plant, and \$36 million in chilled water plant. During fiscal year 2017, capital additions were \$327 million, which included \$145 million in electric plant, \$180 million in water and sewer plant, and \$2 million in chilled water plant. More detailed information about JEA's capital asset activity is presented in note 6, Capital Assets, to the financial statements.

With the adoption of the depreciation ratemaking policy in 2014, the depreciation of contributed assets are not included in rates charged to customers, because it has already been recovered with the contribution. In accordance with GASB 62, the contributed assets will be expensed in capital contributions as a reduction of plant cost through contributions. During fiscal year 2018, \$2 million of contributed capital related to the Electric System and \$52 million related to Water and Sewer System was recorded as a reduction of plant cost through contributions. During fiscal year 2017, \$1 million of contributed capital related to the Electric System and \$41 million related to Water and Sewer System was recorded as a reduction of plant cost through contributions.

JEA has ongoing capital improvement programs for the Electric Enterprise Fund and the Water and Sewer Fund. The capital programs consist of: (a) the Electric Enterprise Fund capital requirements for improvements to existing generating facilities that are determined to be necessary as a result of JEA's annual resource planning process; (b) the Electric Enterprise Fund's capital requirements for transmission and distribution facilities and other capital items; and (c) the Water and Sewer Fund capital requirements that are determined to be necessary as a result of the annual resource planning process. The cost of the capital improvement program is planned to be provided from revenues generated from operations and existing construction fund balances.

Scherer is subject to a joint ownership agreement. JEA's share of the estimated capital expenditures relating to this plant is \$10 million and is included in the Electric Enterprise Fund amount above.

#### **Debt Administration**

Debt outstanding at September 30, 2018, was \$3,999 million, a decrease of approximately \$402 million from the prior fiscal year. This decrease was due to defeasance of principal of \$994 million and regular principal payments of \$229 million, being partially offset by new debt issued of \$821 million.

Debt outstanding at September 30, 2017, was \$4,401 million, a decrease of approximately \$251 million from the prior fiscal year. This decrease was due to regular principal payments of \$182 million and defeasance of principal of \$159 million, being partially offset by new debt issued of \$90 million.

JEA's debt ratings on its long-term debt per Fitch and Moody's Investors Service remained unchanged from fiscal year 2017. On September 28, 2018, Standard & Poor's downgraded its long-term ratings on the Electric System senior, SJRPP, and Scherer bonds from AA- to A+ and the Electric System subordinated bonds from A+ to A. All ratings as of September 2018 and 2017 are as follows:

			2018					2017		
		Water and			District		Water and			District
	Electric	Sewer			Energy	Electric	Sewer			Energy
	System	System	SJRPP	Scherer	System	System	System	SJRPP	Scherer	System
Senior debt										
Moody's Investors Service	Aa2	Aa2	Aa2	Aa2	Aa3	Aa2	Aa2	Aa2	Aa2	Aa3
Standard & Poor's	A+	AAA	A+	A+	AA+	AA-	AAA	AA-	AA-	AA+
Fitch	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
Subordinated debt										
Moody's Investors Service	Aa3	Aa2	*	*	*	Aa3	Aa2	*	*	*
Standard & Poor's	Α	AA+	*	*	*	A+	AA+	*	*	*
Fitch	AA	AA	*	*	*	AA	AA	*	*	*

<sup>\*</sup> There are no subordinated bonds related to this system.

# Currently Known Facts Expected to have a Significant Effect on Financial Position and/or Changes in Operations

### Setting of Rates

The setting of rates is the responsibility of the Board. Base rate changes are implemented after a public rate hearing and Board approval. Fuel rate changes are implemented solely with Board approval.

In October 2017, the Board approved a new rate rider called SolarMax for customers purchasing a minimum of 7,000,000 kWh of annual solar purchase power, effective November 1, 2017. The Board also approved a wastewater rate for Leachate waste disposed at a JEA sewage treatment plant at a charge of \$5.16 per 100 gallons.

JEA has an ongoing plan to review, update and, where possible, expand its rate options to provide customers more rate choices for their utility services. As part of this initiative, the Board approved, at its August 2018 meeting, an extension of the Economic Stimulus Rider from September 30, 2018 to September 30, 2021 that provides a financial incentive for new commercial or industrial customers to locate within the JEA service area.

# Bond Ratings

Moody's Investors Services lowered certain JEA bond ratings subsequent to the end of fiscal year 2018. As a result of the ratings change, commitment fees related to Electric System variable rate demand obligations and the interest rate related to the variable rate direct purchased bonds changed. For further details, see note 18, Subsequent Events.

# Requests for Information

The financial report is designed to provide a general overview of JEA's finances for all those with an interest in JEA's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Controller, JEA, 21 West Church Street, Jacksonville, Florida, 32202.

# **Audited Financial Statements**

JEA

# Statements of Net Position (In Thousands)

	Sept	ember
	2018	2017*
Assets		_
Current assets:		
Cash and cash equivalents	\$ 441,206	\$ 489,559
Investments	85,310	25,122
Accounts and interest receivable, net of allowance (\$1,830 for 2018 and \$2,101 for 2017)	251,148	245,444
Inventories:		
Fuel	36,871	72,772
Materials and supplies	59,204	69,721
Total current assets	873,739	902,618
Noncurrent assets:		
Restricted assets:		
Cash and cash equivalents	114,576	124,475
Investments	731,627	936,708
Accounts and interest receivable	62	984
Total restricted assets	846,265	1,062,167
Costs to be recovered from future revenues	808,096	541,021
Investment in The Energy Authority	6,811	6,283
Other assets	15,875	14,511
Total noncurrent assets	1,677,047	1,623,982
Net capital assets	5,380,259	5,813,799
Total assets	7,931,045	8,340,399
Deferred outflows of resources		
Unrealized pension contributions and losses	171,367	173,578
Unamortized deferred losses on refundings	143,722	133,356
Accumulated decrease in fair value of hedging derivatives	86,356	125,269
Unrealized asset retirement obligation	29,173	_
Unrealized OPEB contributions and losses	4,078	5,240
Total deferred outflows of resources	434,696	437,443
Total assets and deferred outflows of resources	\$ 8,365,741	\$ 8,777,842

<sup>\*</sup>Restated for implementation of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions

# Statements of Net Position (continued) (In Thousands)

	September		
	2018	2017*	
Liabilities			
Current liabilities:			
Accounts and accrued expenses payable	\$ 147,361	\$ 131,892	
Customer deposits	59,883	57,278	
Total current liabilities	207,244	189,170	
Current liabilities payable from restricted assets:			
Debt due within one year	185,790	229,095	
Renewal and replacement reserve	54,370	82,577	
Interest payable	73,737	82,221	
Construction contracts and accounts payable	53,369	54,961	
Total current liabilities payable from restricted assets	367,266	448,854	
Noncurrent liabilities:			
Net pension liability	544,203	554,337	
Asset retirement obligation	22,526	_	
Net OPEB liability	18,835	39,508	
Other liabilities	49,227	50,022	
Total other noncurrent liabilities	634,791	643,867	
Long-term debt			
Debt payable, less current portion	3,813,680	4,172,160	
Unamortized premium, net	152,891	112,475	
Fair value of debt management strategy instruments	86,356	125,269	
Total long-term debt	4,052,927	4,409,904	
Total liabilities	5,262,228	5,691,795	
Deferred inflows of resources			
Revenues to be used for future costs	286,832	444,606	
Unrealized pension gains	50,124	11,960	
Unrealized OPEB gains	8,712	659	
Accumulated increase in fair value of hedging derivatives	2,536		
Total deferred inflows of resources	348,204	457,225	
Net position			
Net investment in capital assets	1,856,725	1,622,160	
Restricted for:			
Debt service	187,374	234,268	
Other purposes	354,663	379,186	
Unrestricted	356,547	393,208	
Total net position	2,755,309	2,628,822	
Total liabilities, deferred inflows of resources, and net position	\$ 8,365,741	\$ 8,777,842	

<sup>\*</sup>Restated for implementation of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions

JEA

# Statements of Revenues, Expenses, and Changes in Net Position (In Thousands)

	Sept	ember
	2018	2017*
Operating revenues		
Electric	\$ 1,267,202	\$ 1,382,206
Water and sewer	423,480	448,057
District energy system	8,348	8,185
Other	90,952	36,729
Total operating revenues	1,789,982	1,875,177
Operating expenses		
Operations and maintenance:		
Fuel	421,052	458,794
Purchased power	109,194	77,456
Maintenance and other operating expenses	429,989	392,142
Depreciation	360,609	386,699
State utility and franchise taxes	71,307	69,683
Recognition of deferred costs and revenues, net	6,856	(4,075)
Total operating expenses	1,399,007	1,380,699
Operating income	390,975	494,478
Nonoperating revenues (expenses)		
Interest on debt	(166,508)	(182,992)
Investment income	11,826	10,576
Allowance for funds used during construction	11,764	11,774
Other nonoperating income, net	9,857	5,918
Earnings from The Energy Authority	4,074	6,335
Other interest, net	(1,825)	
Total nonoperating expenses, net	(130,812)	
Income before contributions	260,163	345,638
Contributions (to) from		
General Fund, City of Jacksonville, Florida	(116,620)	
Developers and other	82,157	66,875
Reduction of plant cost through contributions	(54,114)	
Total contributions, net	(88,577)	(91,017)
Special items	(45,099)	-
Change in net position	126,487	254,621
Net position, beginning of year	2,628,822	2,376,925
Effect of adoption of GASB Statement No. 75	-	(2,724)
Net position, beginning of year, as restated	2,628,822	2,374,201
Net position, end of year	\$ 2,755,309	\$ 2,628,822

<sup>\*</sup>Restated for implementation of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions

JEA

# Statements of Cash Flows (In Thousands)

		September	
		2018	2017
Operating activities			
Receipts from customers	\$	1,740,598 \$	1,758,515
Payments to suppliers		(790,962)	(738,231)
Payments to employees		(267,569)	(249,193)
Other operating activities		93,902	4,541
Net cash provided by operating activities		775,969	775,632
Noncapital and related financing activities			
Contribution to General Fund, City of Jacksonville, Florida		(116,569)	(115,694)
Net cash used in noncapital and related financing activities		(116,569)	(115,694)
Capital and related financing activities			
Defeasance of debt		(993,690)	(159,345)
Proceeds from issuance of debt		821,000	90,405
Acquisition and construction of capital assets		(384,577)	(308,133)
Repayment of debt principal		(229,095)	(181,525)
Interest paid on debt		(182,849)	(193,483)
Capital contributions		28,043	24,805
Other capital financing activities		63,197	2,528
Net cash used in capital and related financing activities		(877,971)	(724,748)
Investing activities			
Purchase of investments		(1,037,966)	(1,803,447)
Proceeds from sale and maturity of investments		1,179,471	1,861,596
Investment income		15,301	17,593
Distributions from The Energy Authority		3,513	6,182
Net cash provided by investing activities		160,319	81,924
Net change in cash and cash equivalents		(58,252)	17,114
Cash and cash equivalents at beginning of year		614,034	596,920
Cash and cash equivalents at end of year	\$	555,782 \$	614,034
Reconciliation of operating income to net cash provided by operating activities			
Operating income	\$	390,975 \$	494,478
Adjustments:			
Depreciation and amortization		361,889	388,040
Recognition of deferred costs and revenues, net		6,856	(4,075)
Other nonoperating income, net		1,073	(1,072)
Changes in noncash assets and noncash liabilities:		00.400	(4.4.405)
Accounts receivable		26,486	(14,185)
Accounts receivable, restricted		16	32
Inventories		46,419	(24,692)
Other assets		6,421	(27,625)
Accounts and accrued expenses payable		979	23,262
Current liabilities payable from restricted assets		(49,998)	4,409
Other noncurrent liabilities and deferred inflows		(15,147)	(62,940)
Net cash provided by operating activities	\$	775,969 \$	775,632
Noncash activity	_		
Contribution of capital assets from developers	\$	54,114 \$	42,069
Unrealized losses on fair value of investments, net	\$	(3,386) \$	(7,710)

# Notes to Financial Statements (Dollars in Thousands)

Years Ended September 30, 2018 and 2017

## 1. Summary of Significant Accounting Policies and Practices

# (a) Reporting Entity

JEA is currently organized into three enterprise funds – the Electric Enterprise Fund, the Water and Sewer Fund, and the District Energy System (DES). The Electric Enterprise Fund is comprised of the Electric System; the Bulk Power Supply System (Scherer), which consists of Scherer Unit 4, a coal-fired, 846-megawatt generating unit operated by Georgia Power Company (Georgia Power) and owned by JEA (23.64% ownership interest) and Florida Power & Light Company (FPL) (76.36% ownership interest); and St. Johns River Power Park System (SJRPP), which is jointly owned and operated by JEA (80% ownership interest) and FPL (20% ownership interest). The Water and Sewer Fund consists of water and sewer system activities. The DES consists of chilled water activities. These financial statements include JEA's ownership interests in Scherer and SJRPP. Separate accounting records are currently maintained for each system. The following information relates to JEA's ownership interests in respective plants as of September 30, 2018 and 2017:

	2018		2017	
Bulk Power Supply System:				
Inventories	\$	7,463	\$ 7,042	
Costs to be recovered from future revenues		6,155	11,686	
Capital assets, net		135,595	143,981	
Debt due within one year		5,710	5,205	
Long-term debt		94,602	100,465	
Revenues to be used for future costs		37,560	41,438	
SJRPP:				
Inventories		1,680	53,977	
Other current assets		68,672	63,040	
Capital assets, net		10,144	474,437	
Restricted assets		97,490	272,823	
Costs to be recovered from future revenues		261,277	4,042	
Long-term debt		281,359	420,060	
Other liabilities		110,152	184,464	

The Electric Enterprise Fund, Water and Sewer Fund, and the DES are governed by the JEA Board of Directors (Board). The Board is responsible for setting rates based on operating and maintenance expenses and depreciation of the respective operations. The operations of the Bulk Power Supply System and SJRPP are subject to joint ownership agreements, and rates are established on a cost-of-service basis, including operating and maintenance expenses and debt service. See note 1(s), Setting of rates.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

### (b) Basis of Accounting

JEA is presenting financial statements combined for the Electric Enterprise Fund, the Water and Sewer Fund, and the District Energy System. JEA uses the accrual basis of accounting for its operations and the uniform system of accounts prescribed by the Federal Energy Regulatory Commission for the Electric Enterprise Fund and the National Association of Regulatory Utility Commissioners for the Water and Sewer Fund.

The financial statements have been prepared in conformity with the Governmental Accounting Standards Board (GASB) codification, which defines JEA as a component unit of the City of Jacksonville, Florida (City). Accordingly, the financial statements of JEA are included in the Comprehensive Annual Financial Report of the City.

JEA presents its financial statements in accordance with the GASB pronouncements that establish standards for external financial reporting for all state and local governmental entities that include a statement of net position, a statement of revenues, expenses, and changes in net position, and a statement of cash flows. It requires the classification of net position into three components – net investment in capital assets, restricted, and unrestricted. These classifications are defined as follows:

- Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by the
  outstanding balances of any debt that is attributable to those assets and increased/reduced by costs to be
  recovered from future revenues or revenues to be used for future costs.
- Restricted consists of assets that have constraints placed upon their use through external constraints imposed
  either by creditors (such as through debt covenants) or through laws, regulations, or constraints imposed by
  law through constitutional provisions or enabling legislation, reduced by any liabilities to be paid from these
  assets.
- Unrestricted consists of net position that does not meet the definition of restricted or net investment in capital assets.

JEA's bond resolutions specify the flow of funds from revenues and specify the requirements for the use of certain restricted and unrestricted assets.

### (c) Revenues

Operating revenues are defined as revenues generated from the sale of primary products or services through normal business operations. Nonoperating revenues include investment income and earnings from investments recorded on the equity method.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

Operating revenues reported in the accompanying statements of revenues, expenses, and changes in net position are shown net of discounts, estimated allowances for bad debts, and amounts transferred to stabilization funds. Discounts and allowances totaled \$32,441 in fiscal year 2018 and \$31,664 in 2017. JEA withdrew the net amount of \$15,813 in fiscal year 2018 and \$65,791 in 2017 from stabilization funds. Electric Enterprise and Water and Sewer Fund revenues are recorded as earned. JEA earned 7.1% of its electric revenue from electricity sold to FPL in fiscal year 2018 and 9.2% in 2017. Operating revenues include amounts estimated for unbilled services provided during the reporting period of \$82,576 in 2018 and \$73,244 in 2017.

### (d) Capital Assets

Utility plant represents four classes of capital assets – real property, tangible property, tangible personal property, and intangible property. All capital assets are recorded at historical cost and must have a useful life greater than one year. The costs of capital asset additions and replacements are capitalized. The costs of capital projects include direct labor and benefits of JEA employees working on capital projects and an allocation of overhead from certain JEA departments. Maintenance and replacements of minor items are charged to operating expenses. The cost of depreciable plant retired is removed from the capital asset accounts, and such cost plus removal expense less salvage value is charged to accumulated depreciation.

SJRPP and Scherer are required by its bond resolutions to deposit certain amounts in a renewal and replacement fund. These amounts are then required to be expended on capital expenditures to maintain and improve the system or applied to other designated uses as specifically allowed under the bond resolutions. The Electric Fund records the amounts deposited in the fund as a purchased power expense when deposited. The purchase of capital assets funded from the renewal and replacement fund is not capitalized by SJRPP or Scherer.

# (e) Allowance for Funds Used During Construction

An allowance for funds used during construction (AFUDC) is included in construction work-in-progress and as a reduction of interest expense. JEA capitalizes interest on construction projects financed with revenue bonds and renewal and replacement funds. The average AFUDC rate for the debt of each system is listed in the table below.

Average AFUDC Rate (%)	2018	2017
Electric Enterprise Fund	4.3%	4.2%
Water and Sewer Fund	4.3%	4.2%
District Energy System	3.7%	3.6%

The amount capitalized is the interest cost of the debt less any interest earned on investment of debt proceeds from the date of the borrowing until the assets are placed in service. Total interest incurred was \$166,508 for fiscal year 2018 and \$182,992 for 2017, of which \$11,764 was capitalized in fiscal year 2018 and \$11,774 in 2017. There was no investment income on bond proceeds in either year that reduced the amount of interest expense.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

### (f) Depreciation

Depreciation of capital assets is computed on a straight-line basis at rates based upon the estimated service lives of the various property classes. Depreciation begins on the date the assets are placed in service. Generally, recurring renewal and replacement capital additions are placed in service at the end of each fiscal year. The depreciation rates are based on depreciation studies performed by an outside consultant that are updated periodically, most recently in fiscal year 2011. The effective rate of depreciation based upon the average depreciable plant in service balance was 3.2% and 3.5% for fiscal years 2018 and 2017, respectively. The average depreciable life in years of the depreciable capital assets for each system is listed in the table below.

Average Depreciable Life (Years)	2018	2017
Electric Enterprise Fund	23.9	24.1
Water and Sewer Fund	27.6	27.7
District Energy System	23.7	24.0

# (g) Amortization

Amortization of bond discounts and premiums is computed on a straight-line basis, which approximates the effective-interest method over the remaining term of the outstanding bonds.

### (h) Losses on Refundings

Losses on refundings of JEA revenue bonds are deferred and amortized as a component of interest on debt using the straight-line method over the remaining life of the old debt or the new debt, whichever is shorter. Unamortized deferred losses on refundings are reported as deferred outflows of resources on the accompanying statements of net position. Whereas JEA has incurred accounting losses on refundings, calculated as the difference between the net carrying value of the refunded and the refunding bonds, JEA has over time realized economic gains calculated as the present value difference in the future debt service on the refunded and refunding bonds.

### (i) Investments

Investments are presented at fair value or cost, which is further explained in note 14, Fair Value Measurements. Realized and unrealized gains and losses for all investments are included in investment income on the statements of revenues, expenses, and changes in net position. The investment in The Energy Authority (TEA) is recorded on the equity method (see note 7, Investment in The Energy Authority, for additional information).

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

### (j) Cash and Cash Equivalents

For purposes of reporting cash flows, cash and cash equivalents include cash on hand, bank demand accounts, money market mutual funds, and short-term liquid investments purchased with an original maturity of 90 days or less.

#### (k) Interest Rate Swap Agreements

JEA's risk management policies allow for the use of interest rate swaps to manage financial exposures, but prohibit the use of these instruments for speculative or trading purposes. JEA utilizes interest rate swaps to manage the interest rate risk associated with various assets and liabilities. Interest rate swaps are used in the area of debt management to take advantage of favorable market interest rates. Interest rate swaps are authorized under the policy to be used in the area of investment management to increase the yield on revolving short-term investments.

JEA applies GASB Statement No. 53, Accounting and Financial Reporting for Derivative Instruments, where applicable for effective hedging instruments. For effective hedging instruments, the changes in fair value are recorded on the statements of net position as deferred outflows and inflows of resources. For ineffective hedging instruments or investment derivatives, the changes in fair value are recorded on the statements of revenues, expenses, and changes in net position as an adjustment to investment income.

Under JEA's interest rate swap programs, JEA either pays a variable rate of interest, which is based on various indices, and receives a fixed rate of interest for a specified period of time (unless earlier terminated) or JEA pays a fixed rate of interest and receives a variable rate of interest, which is based on various indices for a specified period of time (unless earlier terminated). These indices are affected by changes in the market. The net amounts received or paid under the swap agreements are recorded as either an adjustment to investment income (asset management) or interest on debt (debt management) in the statements of revenues, expenses, and changes in net position. No money is initially exchanged when JEA enters into a new interest rate swap transaction.

During fiscal years 2018 and 2017, JEA did not have any interest rate swaps outstanding under JEA's asset management interest rate swap program. See the Debt Management Strategy section in note 8, Long-Term Debt, for more information on JEA's debt management interest rate swap program.

### (I) Inventory

Inventories are maintained for fuel and materials and supplies. Fuel inventories are maintained at levels sufficient to meet generation requirements. Inventories are valued at average cost, with obsolete items being expensed when identified.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 1. Summary of Significant Accounting Policies and Practices (continued)

### (m) Energy Market Risk Management Program

The energy market risk management program is intended to help manage the risk of changes in the market prices of fuel consumed by JEA for electric generation. JEA executes over-the-counter forward purchase and sale contracts and swaps. For effective derivative transactions, hedge accounting is applied in accordance with GASB Statement No. 53 and the fair market value changes are recorded on the accompanying statements of net position as either a deferred outflow of resources or a deferred inflow of resources until such time that the transactions end. The related settled gains and losses from these transactions are recognized as fuel expenses on the accompanying statements of revenues, expenses, and changes in net position.

# (n) Capital Contributions

Capital contributions represent contributions of cash and capital assets from the City, developers, customers, and other third parties. Capital contributions are recorded in the accompanying statement of revenues, expenses, and changes in net position at the time of receipt. Assets received are recorded as contributions from developers and others at acquisition cost. Corresponding expenses of \$54,114 and \$42,069 were recorded in fiscal years 2018 and 2017 to recognize the costs of the assets since it will not be included in revenue requirements charged to customers in the future.

#### (o) Pension

For purposes of measuring the net liability, deferred outflows of resources and deferred inflows of resources related to pensions, pension expense and fiduciary net position; JEA's portion of the City of Jacksonville General Employees' Retirement Plan (GERP) and St. Johns River Power Park System Employees' Retirement Plan (SJRPP Plan) have been determined on the same basis as reported in the GERP and SJRPP Plan financial statements. Employer contributions made subsequent to the measurement date and before the fiscal year end are recorded as a deferred outflow of resources.

Basis of Accounting – The pension trust financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contribution, benefit payments and refunds are recognized when due and payable in accordance with the terms of the plans. Florida law and the Florida Division of Retirement require plan contributions be made annually in amounts determined by an actuarial valuation stated as a percent of covered payroll or in dollars. The Florida Division of Retirement reviews and approves the GERP actuarial report to ensure compliance with actuarial standards. The SJRPP Plan is governed by a five-member Pension Committee to ensure compliance with actuarial standards.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

Method Used to Value Investments – Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. The fair value of real estate investments in GERP is based on independent appraisals or estimates of fair value as provided by third-party fund managers. Investments that do not have an established market are reported at estimated fair value as provided by third-party fund managers. Investments are managed by third-party money managers while cash and securities are generally held by the independent custodians.

### (p) Compensated Absences

JEA employees accumulate earned personal leave benefits (compensated absences) at various rates within limits specified in collective bargaining agreements and other employment plans. Accrued leave may be taken at any time when authorized. In addition, employees may elect to sell back any leave accrued during the fiscal year. Leave accrued over the maximum allowed leave balances is paid to the employee after the end of the fiscal year.

Upon termination from employment, employees are paid for their unused leave balances. In accordance with GASB Statement No. 16, *Accounting for Compensated Absences* (GASB No. 16), the amount reflected as the current portion is estimated based upon historical trends of retirements and attrition.

This liability reflects amounts attributable to employee services already rendered, cumulative, probable for payment, and reasonably estimated in conformity with GASB No. 16.

Compensated absences liabilities are accrued when incurred in the financial statements in conformity with generally accepted accounting principles (GAAP). The compensated absences liability is determined based on current rates of pay.

The compensated absence liability as of September 30, 2018, was \$30,854. Of this amount, \$1,423 was included in accounts and accrued expenses payable on the accompanying statements of net position. The remaining balance of \$29,431 was included in other liabilities on the accompanying statements of net position. During fiscal year 2018, annual leave earned totaled \$21,983 and annual leave taken totaled \$22,788. The compensated absence liability as of September 30, 2017, was \$31,798. Of this amount, \$3,527 was included in accounts and accrued expenses payable on the accompanying statements of net position. The remaining balance of \$28,271 was included in other liabilities on the accompanying statements of net position. During fiscal year 2017, annual leave earned totaled \$21,856 and annual leave taken totaled \$19,757.

# (q) Pollution Remediation Obligations

JEA applies GASB Statement No. 49, Accounting and Financial Reporting for Pollution Remediation Obligations. See note 15, Commitments and Contingent Liabilities, for further discussion.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

### (r) Asset Retirement Obligations

JEA applies GASB Statement No. 83, *Certain Asset Retirement Obligations*. See note 3, St. Johns River Power Park Decommissioning, for further discussion.

### (s) Costs to Be Recovered from Future Revenues/Revenues to Be Used for Future Costs

JEA records certain assets and liabilities (or deferred inflows) that result from the effects of the ratemaking process that would not be recorded under GAAP for nonregulated entities. Currently, the electric utility industry is predominantly regulated on a basis designed to recover the cost of providing electric power to its customers. If cost-based regulation were to be discontinued in the electric industry for any reason, market prices for electricity could be reduced or increased and utilities might be required to reduce their statements of net position amounts to reflect market conditions.

Discontinuance of cost-based regulation could also require affected utilities to write off their associated regulatory assets and liabilities. Management cannot predict the potential impact, if any, of the change in the regulatory environment on JEA's future financial position and results of operations.

### (t) Setting of Rates

The setting of rates is the responsibility of the Board. Base rate changes are implemented after a public rate hearing and Board approval. Fuel rate changes are implemented solely with Board approval.

In October 2017, the Board approved a new rate rider called SolarMax for customers purchasing a minimum of 7,000,000 kWh of annual solar purchase power, effective November 1, 2017. The Board also approved a wastewater rate for Leachate waste disposed at a JEA sewage treatment plant at a charge of \$5.16 per 100 callons.

JEA has an ongoing plan to review, update and, where possible, expand its rate options to provide customers more rate choices for their utility services. As part of this initiative, the Board approved, at its August 2018 meeting, an extension of the Economic Stimulus Rider from September 30, 2018 to September 30, 2021 that provides a financial incentive for new commercial or industrial customers to locate within the JEA service area.

## (u) Reclassifications

Certain 2017 amounts have been reclassified to conform to the 2018 presentation.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 1. Summary of Significant Accounting Policies and Practices (continued)

#### (v) Pervasiveness of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and deferred outflows of resources, liabilities and deferred inflows of resources, and disclosure of contingent assets 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.

### (w) Newly Adopted Standards for Fiscal Year 2018

In June 2015, GASB issued Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pension (OPEB). This statement replaces the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB. This statement establishes standards for measuring and recognizing liabilities, deferred outflows and deferred inflows of resources and expenses for governments that provide OPEB benefits. Note disclosure and required supplementary information requirements are also addressed. For comparative purposes, the statement of net position and statement of revenues, expenses, and changes in net position for the year ended September 30, 2017 were restated for this change. See the chart below for details of the restatement.

	Originally Reported October 1, 2016	GASB 75	As Restated October 1, 2016	
Statement of Net Position		07.02.10		
Assets				
Costs to be recovered from future revenues	\$ 463,610	\$ 39,337	\$ 502,947	
Other assets	17,931	(2,724)	15,207	
Deferred outflows of resources Unrealized OPEB contributions	-	5,061	5,061	
Noncurrent liabilities		44,000	44.000	
Net OPEB liability	_	44,398	44,398	
Net position	2,376,925	(2,724)	2,374,201	
Statement of Revenues, Expenses, and Change in Net Position				
Adjustment to beginning net position Effect of adoption of GASB Statement No. 75	_	(2,724)	(2,724)	

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 1. Summary of Significant Accounting Policies and Practices (continued)

In March 2016, GASB issued Statement 81, Irrevocable Split-Interest Agreements. This statement requires that a government that receives resources related to an irrevocable split-interest agreement recognize assets, liabilities, and deferred inflows of resources at the inception of the agreement. In addition, this statement requires a government recognize assets representing its beneficial interest in irrevocable split-interest agreements that are administered by a third party, if the government controls the beneficial interests. The implementation of this statement did not have an impact on JEA's financial statements.

In November 2016, GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. This statement addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. This statement is effective for JEA in fiscal year 2019. However, JEA early adopted this statement in fiscal year 2018 in association with its accounting for the shutdown and dismantlement of St. Johns River Power Park. See note 3, SJRPP for details.

In March 2017, GASB issued Statement No. 85, *Omnibus 2017*. The objective of this statement is to address practice issues that have been identified during implementation and application of certain GASB statements. It addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and pensions and other postemployment benefits. The implementation of this statement did not have an impact on JEA's financial statements.

In May 2017, GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. The primary objective of this statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources—resources other than the proceeds of refunding debt—are placed in an irrevocable trust for the sole purpose of extinguishing debt. This statement also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. The implementation of this statement did not have an impact on JEA's financial statements.

#### (x) Recently Issued Accounting Pronouncements Not Yet Effective

In January 2017, GASB issued Statement No. 84, Fiduciary Activities. This statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. This statement is effective for JEA in fiscal year 2020. The impact on JEA's financial reporting will be the reporting of its pension and other postemployment benefit plans in fiduciary fund financial statements.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 1. Summary of Significant Accounting Policies and Practices (continued)

In June 2017, GASB issued Statement No. 87, Leases. The objective of this statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. This statement is effective for JEA in fiscal year 2021. The impact on JEA's financial reporting has not been determined.

In April 2018, GASB issued Statement No. 88, Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements. The objective of this Statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. This Statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. For notes to financial statements related to debt, this Statement also requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt. This statement is effective for JEA in fiscal year 2019. The impact on JEA's financial statements will be additional disclosures within the financial statement footnotes.

In June 2018, GASB issued Statement No. 89, Accounting for Interest Cost Incurred before the End of a Construction Period. The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. However, GASB allows those entities meeting the criteria for regulated operations, and electing to apply the related provisions of Statement 62, to continue to capitalize qualifying interest cost as a regulatory asset. This statement is effective for JEA in fiscal year 2021. The impact on JEA's financial reporting has not been determined.

In August 2018, GASB issues Statement No. 90, Majority Equity Interests—an amendment of GASB Statements No. 14 and No. 61. The objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. This statement is effective for JEA in fiscal year 2020. The implementation of this statement is not expected to have an impact on JEA's financial statements.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 2. Regulatory Deferrals

Based on regulatory action taken by the Board and in accordance with the Regulated Operations section within GASB Statement 62, JEA has recorded the following regulatory assets and liabilities that will be included in the ratemaking process and recognized as expenses and revenues, respectively, in future periods. These amounts are shown under other noncurrent assets or deferred inflows of resources on the accompanying statements of net position.

### **Regulatory Assets**

The following is a summary of JEA's regulatory assets at September 30:

			2017	
Regulatory Asset	2018		Restated	
Unfunded pension costs	\$ 433,583	\$	392,719	
SJRPP and Bulk Power cost to be recovered	267,432		14,940	
Water environmental projects	59,859		68,409	
Unfunded OPEB costs	23,469		34,927	
Storm costs to be recovered	18,966		27,999	
Debt issue cost	4,787		2,027	
Total regulatory assets	\$ 808,096	\$	541,021	

Unfunded Pension Costs – Accrued pension represents a regulatory asset related to unrecognized actuarial gains and losses, unrecognized prior service cost, and unrecognized transition obligation. In fiscal year 2018, the asset consisted of amounts attributable to JEA's portion of the GERP. For the SJRPP pension plan, JEA made excess contributions during fiscal year 2018 that resulted in a regulatory liability. See excess pension contributions in the Regulatory Liabilities section of this footnote. In fiscal year 2017, the balance includes amounts attributable to JEA's portion of the GERP and amounts related to the SJRPP Plan. The regulatory asset is amortized with the recognition of actuarial gains and losses, prior service cost, and transition obligations to net periodic benefit costs for pension.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 2. Regulatory Deferrals (continued)

SJRPP and Bulk Power costs to be recovered - SJRPP deferred debt-related costs of \$261,277 at September 30, 2018 and \$3,254 at September 30, 2017 are the result of differences between expenses in determining rates and those used in financial reporting. During fiscal year 2018, operations of SJRPP, as generating facility, ceased and the majority of the assets are being dismantled. A write down of \$451,037 of undepreciated book value of the assets was recognized during fiscal year 2018 and \$128,280 of bonds were defeased as a result of the shutdown of SJRPP. After shutdown, SJRPP has remaining plant in service assets of \$3,484 and outstanding debt of \$280,605. The details relating to the shutdown of SJRPP are further discussed in note 3, St. Johns River Power Park Decommissioning. The JEA board approved the deferral of this regulatory asset. SJRPP has a contract with the JEA Electric System to recover these costs from future revenues that will coincide with retirement of long-term debt. The amount recovered each year will be the difference between debt principal maturities (adjusted for the effects of premiums, discounts, and amortization of gains and losses) and straight-line depreciation and results in recognition of deferred costs on the accompanying statements of revenues, expenses, and changes in net position. The Bulk Power Supply System deferred debt-related costs were \$6,155 at September 30, 2018 and \$11,686 at September 30, 2017. The amount recovered each year will be the difference between debt principal maturities (adjusted for the effects of premiums, discounts, and amortization of gains and losses) and straight-line depreciation. The Bulk Power Supply System will recover these costs from future revenues that will coincide with the retirement of long-term debt.

Water Environmental Projects – In August 2015, the Board approved the recovery of previously approved environmental capital projects that had not been collected through the environmental surcharge over a ten-year period beginning October 1, 2015. The amount approved for recovery and transferred out of capital assets was \$101,277 of which \$59,859 remained unrecovered as of September 30, 2018 and \$68,409 remained unrecovered as of September 30, 2017. This deferral is being amortized over ten years.

Unfunded OPEB Costs – Accrued OPEB represents a regulatory asset related to unrecognized actuarial gains and losses, unrecognized prior service cost, and unrecognized transition obligation attributable to JEA's other postemployment benefit plan. The regulatory asset is amortized with the recognition of actuarial gains and losses, prior service cost, and transition obligations to net periodic benefit costs for OPEB. The Board approved the recovery of the unfunded amounts in future revenue requirements with the adoption of GASB 75 in fiscal year 2018. In addition, the Board approved the deferral of the difference between the annual contributions (funding) and OPEB expense.

**Storm costs to be recovered** – This amount represents storm costs that are expected to be recovered from insurance and the Federal Emergency Management Agency (FEMA). See note 16, Storm Costs, for further details.

**Debt issue costs** – With the application of regulatory accounting in fiscal year 2015, the Board approved deferral of the issue costs on all new debt issues with the amounts being amortized over the life of the bonds, as they are included in revenue requirements. These costs are incurred in connection with the issuance of debt obligations and are mainly underwriter fees and legal costs. Unrecovered costs remaining at the end of the fiscal year were \$4,787 in fiscal year 2018 and \$2,027 in 2017.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 2. Regulatory Deferrals (continued)

#### **Regulatory Liabilities**

The following is a summary of JEA's regulatory liabilities at September 30:

Regulatory Liabilities	2018	2017
Fuel stabilization	\$ 74,376	\$ 131,715
Environmental	55,077	41,630
Nonfuel purchase power	53,493	25,189
Debt management stabilization	44,093	44,093
SJRPP and Bulk Power revenues to be used for future costs	37,560	189,070
Excess pension contributions	10,624	_
Self-insurance medical reserve	8,139	9,214
Customer benefit stabilization	3,470	3,695
Total regulatory liabilities	\$ 286,832	\$ 444,606

Fuel stabilization — This account represents the difference between the fuel costs incurred and fuel charge revenues collected from customers, inclusive of accrued utility revenue and fuel costs. During fiscal year 2018, a net of \$57,339 of costs were incurred in excess of the revenues collected and was recognized as a reduction of the regulatory liability. During fiscal year 2017, a net of \$48,400 of costs were incurred in excess of the revenues collected and was recognized as a reduction of the regulatory liability.

Environmental — The Board has authorized an environmental surcharge that is applied to all electric customer kilowatthour and water customer kilogallon sales. Electric costs included in the surcharge include all costs of environmental remediation and compliance with new and existing environmental regulations, excluding the amount already collected in the Environmental Liability Reserve. Water costs included in the surcharge include operating and capital costs of environmentally driven or regulatory required projects approved by the Board to be included in the surcharge. Any amounts under or over-collected are recorded as a regulatory asset or liability. During fiscal year 2018, \$31,401 was collected through the surcharge with \$8,551 of recovery of previously approved environmental capital projects, \$6,169 of capital projects, and \$3,234 of operations and maintenance costs being incurred with the remaining \$13,447 recognized as a regulatory liability. During fiscal year 2017, \$31,659 was collected through the surcharge with \$11,286 of capital projects, \$8,551 of recovery of previously approved environmental capital projects, and \$1,866 of operations and maintenance costs being incurred with the remaining \$9,956 recognized as a regulatory liability.

Nonfuel purchased power – JEA entered into a power purchase agreement related to the Alvin W. Vogtle Nuclear Plant in Burke County, Georgia (Plant Vogtle). This agreement is discussed in further detail in note 10, Fuel Purchase and Purchased Power Commitments. Related to that agreement, the JEA Board approved a nonfuel purchased power stabilization fund to balance the timing of the payments for Plant Vogtle's debt service with the anticipated in service date. It may be used for other purposes with the Board's approval. The amounts included in the fund are to be used for Plant Vogtle or refunded to customers if not needed. During fiscal year 2018, \$40,000 was deposited into the stabilization fund to fund the additional debt service payments as a result of the new anticipated in service dates.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 2. Regulatory Deferrals (continued)

**Debt management stabilization** — The Board has authorized the use of a debt management stabilization fund. Amounts are included in the fund based on differences between budgeted and actual debt cost up to an established maximum reserve fund. The reserve is available to support JEA during times of financial market crisis. Withdrawals from the debt management stabilization fund for debt management strategy can be made for expenses related to market disruption in the capital markets, disruption in availability of credit, or unanticipated credit expenses. The reserve can also be used to reduce short-term variable interest expense in excess of the amounts included in the budget. The Board evaluates during the budget approval process and periodically throughout the year the amounts in the reserve that will be included in JEA's annual revenue requirements. As a result, \$44,093 collected in the past for the debt management stabilization fund was recorded as a regulatory liability at September 30, 2018 and 2017, respectively. During fiscal year 2018, no additional amounts were deposited or withdrawn from the stabilization fund. During fiscal year 2017, \$18,323 was withdrawn and used to defease bonds.

SJRPP and Bulk Power revenues to be used for future costs – As a result of the shutdown of SJRPP, the deferred debt-related revenues of \$144,933 at the shutdown date in January 2018 was adjusted. Through the regulatory approval by the board, a regulatory asset was recorded. See SJRPP and Bulk Power costs to be recovered in this note for further details. SJRPP had deferred debt-related revenues of \$147,632 at September 30, 2017 as the result of differences between revenues in determining rates and those used in financial reporting. Bulk Power Supply System early debt principal in excess of straight-line depreciation of \$37,560 at September 30, 2018 and \$41,438 at September 30, 2017 is included in deferred inflows of resources on the accompanying statements of net position.

**Excess pension contributions** – Excess pensions contributions represents a regulatory liability related to unrecognized actuarial gains and losses, unrecognized prior service cost, and unrecognized transition obligation attributable to the SJRPP Plan. The regulatory liability is amortized with the recognition of actuarial gains and losses, prior service cost, and transition obligations to net periodic benefit costs for pension.

**Self-insurance medical reserve**— The Board has established, from operating revenues, an internally designated "Health Self-Insurance Fund" to cover reserve requirements for its self-insurance health program over medical and prescription benefits. The Board, as part of the budget process, will approve amounts to be collected in rates that include both the current anticipated cost less amounts approved to be contributed by employees as well as amounts to maintain an adequate reserve for future costs.

Under the self-insurance program, JEA is liable for all claims. JEA retains an additional stop-loss policy for claims in excess of \$250 per employee, with an aggregate limit of 125.0% of claims. There have been no significant reductions in coverage from the prior year. The health insurance benefits program is administered through a third-party insurance company and, as such, the administrator is responsible for processing the claims in accordance with the benefit specifications with JEA reimbursing the insurance company for its payouts. Liabilities associated with the health care program are determined based on an actuarial study and include claims that have been incurred but not reported.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 2. Regulatory Deferrals (continued)

The changes in the self-insurance medical reserve for the years ended September 30, 2018 and 2017 are as follows:

	20	)18	2017
Beginning balance	\$	9,214 \$	11,178
Contributions		29,561	29,615
Incurred claims		(30,636)	(31,579)
Ending balance	\$	8,139 \$	9,214

**Customer benefit stabilization** — The pricing policy adopted by the Board includes a demand side management surcharge. The costs approved for recovery through the surcharge included programs for the electrification, direct load control, demand side management, residential low-income efficiency programs, and customer utility optimization education programs.

## 3. St. Johns River Power Park Decommissioning

JEA and FPL entered into an Agreement for Joint Ownership, Construction and Operation of SJRPP Coal Units #1 and #2 (JOA) dated as of April 2, 1982. JEA owns 80% and FPL owns 20% of SJRPP. A Purchased Power Agreement (PPA) in the JOA assigned 37.5% of JEA's 80% generation to FPL, which effectively provided 50% of the generation to both owners of SJRPP. The JOA ends on April 2, 2022. JEA and FPL reached an agreement to close SJRPP, including early termination of the PPA. On May 16, 2017, JEA's board of directors approved the Asset Transfer and Contract Termination Agreement, which outlined the terms of the retirement, decommissioning, and dismantling of the plant. The week following, FPL approved the contract and filed a petition with the Florida Public Service Commission (FPSC) for approval to shut down SJRPP. The final order was approved by FPSC in October 2017.

Shutdown occurred on January 5, 2018. On that date, FPL paid JEA \$90,400, made up of FPL's cash reserves at SJRPP and a shutdown cash payment of \$51,869 as a result of the early termination of the PPA. The payment was recorded as other operating revenue and the expenses related to the shutdown were charged to maintenance and other operating expenses on the statement of revenues, expenses, and changes in net position.

In addition, on that date, FPL paid JEA the FPL Debt Service Reserves, which JEA then paid to an escrow account to consummate the bond defeasance of \$128,280 of Issue Two debt. On January 5, 2018, JEA defeased all of the SJRPP System Revenue Issue Two debt and, on March 21, 2018, JEA satisfied and discharged the First Power Park Resolution.

As part of the agreement, JEA assumed all payment obligations and other liabilities related to separation benefits for the qualifying SJRPP employees and any amounts required to be deposited into the SJRPP Pension Fund. JEA paid a total of \$8,974 in separation benefits for SJRPP employees.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 3. St. Johns River Power Park Decommissioning (continued)

FPL conveyed their 20% interest in SJRPP's fuel inventory to JEA. The fuel inventory received, totaling \$4,595, was recorded at fair value. The remaining coal at SJRPP was transferred and consumed at JEA Northside Units 1 and 2. These transactions were recorded at the book value of the coal as the coal was transferred. Based on a physical inventory, the book balance of coal inventory at September 30, 2018 was written down by \$11,484 to reflect the remaining coal at SJRPP of \$1,015.

FPL received a credit for their estimated share of the material and supplies inventory balance at shutdown, pending sale of the inventory. After the sales period passed, FPL paid a shutdown payment adjustment for their share of 20% of the loss on the remaining materials and supplies inventory. JEA is in the process of liquidating the material and supplies inventory. However, the remaining materials and supplies was written down to fair value. As a result, an adjustment of \$22,444 was recorded to adjust the remaining balance down to \$665.

As part of the agreement, the parties agreed that all operation of SJRPP as a generating facility would cease at shutdown. As such, the majority of the plant assets will be dismantled. As a result of the shutdown of SJRPP and in accordance with GASB 42, *Accounting and Financial Reporting for Impairment of Capital Assets*, an impairment loss of \$451,037 was recorded, as a special item, on the un-depreciated book value of the assets that are being dismantled. In conjunction with the recording of the impairment loss related to SJRPP decommissioning, it was determined that there were certain items included in the regulatory asset balance that were longer going to be recovered through the ratemaking process, primarily those costs deferred related to debt issues that were defeased. As a result, an additional adjustment of \$45,099 to regulatory balances was included in the statement of revenues, expenses and changes in net position in the current period, as a special item. The remaining regulatory balance will be amortized over the life of the remaining debt outstanding related to Issue Three debt. See note 2, Regulatory Deferrals, for additional information related to SJRPP's regulatory deferrals.

FPL conveyed their 20% undivided ownership of plant in service assets to JEA. The retained plant in service assets were recorded at fair value. At the end of fiscal year 2018, JEA had remaining plant in service assets of \$3,484. In addition, FPL will convey their 20% undivided ownership interest in the SJRPP site to JEA upon completion of dismantlement and environmental remediation.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 3. St. Johns River Power Park Decommissioning (continued)

Under a service management agreement, FPL will pay 20% of the dismantlement and remediation costs incurred. Dismantlement and remediation is expected to be complete by April 2020. Monitoring of the site will continue for ten years subsequent to the completion date. JEA's share of the estimated cost for dismantlement and remediation is approximately \$43,204. As discussed in note 1, Summary of Significant Accounting Policies and Practices, JEA early adopted Statement No. 83, Certain Retirement Obligations in association with its accounting for the asset retirement obligations (ARO) related to dismantlement and remediation at SJRPP. The current portion of the remaining liability, \$6,647, is recorded in accounts and accrued expenses payable and the long-term portion, \$22,526, is a separate line item, asset retirement obligation, on the statement of net position. These amounts are offset by the separate line item, unrealized asset retirement obligation, in deferred outflows of resources, totaling \$29,173. Currently, JEA does not possess sufficient information to reasonably estimate the amounts of additional liabilities, if any, on the site until completion of future environmental studies. In addition, conditions that are currently unknown could result in additional exposure, the amount and materiality of which cannot presently be reasonably estimated. Based upon information currently available, however, JEA believes its ARO accurately reflects the estimated cost of remedial actions currently required.

#### 4. Restricted Assets

Restricted assets were held in the following funds at September 30, 2018 and 2017:

		•	Septer	mber 30, 2018	3		
			W	ater and			
	Electric	SJRPP		Sewer		DES	Total
Renewal and Replacement Fund	\$ 189,929	\$ 52,610	\$	141,423	\$	1,078	\$ 385,040
Sinking Fund	167,483	7,446		81,242		2,340	258,511
Debt Service Reserve Fund	65,433	11,354		102,850		_	179,637
Revenue Fund	_	26,014		_		_	26,014
Adjustment to fair value of investments	(3,302)	66		(1,347)		_	(4,583)
Environmental Fund	_	_		1,159		_	1,159
Construction Fund	203	_		284		_	487
Total	\$ 419,746	\$ 97,490	\$	325,611	\$	3,418	\$ 846,265
					-		 

		8	Septer	mber 30, 201	7		
			W	ater and			
	 Electric	 SJRPP		Sewer		DES	Total
Renewal and Replacement Fund	\$ 201,388	\$ 82,577	\$	150,331	\$	899	\$ 435,195
Sinking Fund	174,529	51,280		82,208		2,331	310,348
Debt Service Reserve Fund	65,433	141,145		107,488		_	314,066
Revenue Fund	_	1,903		_		_	1,903
Adjustment to fair value of investments	750	(4,082)		2,133		_	(1,199)
Environmental Fund	_	_		1,839		_	1,839
Construction Fund	 			15			15
Total	\$ 442,100	\$ 272,823	\$	344,014	\$	3,230	\$ 1,062,167

The Electric System, SJRPP System, Bulk Power Supply, Water and Sewer System, and the DES are permitted to invest restricted funds in specified types of investments in accordance with their bond resolutions and the investment policy.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 4. Restricted Assets (continued)

The requirements of the respective bond resolutions for contributions to the respective systems' renewal and replacement funds are as follows:

Electric System: An amount equal to the greater of 10% of the prior year defined net

revenues or 5% of the prior year defined gross revenues.

SJRPP System: An amount equal to 12.5% of aggregate debt service, as defined, on bonds

issued under the First SJRPP Bond Resolution. An amount equal to 12.5% of aggregate debt service, as defined, on bonds issued under the Second SJRPP Bond Resolution. However, no such deposit is required under the Second SJRPP Bond Resolution as long as the First SJRPP Bond Resolution has not been discharged. On January 5, 2018, JEA defeased all the SJRPP System Revenue Issue Two bonds in their entirety and on March 21, 2018, JEA satisfied and discharged the First Power Park Resolution; therefore, the deposits required under the Second SJRPP Bond

Resolution began in fiscal year 2018.

Bulk Power Supply System: An amount equal to 12.5% of aggregate debt service, as defined.

Water and Sewer System: An amount equal to the greater of 10% of the prior year defined annual

net revenues or 5% of the prior year defined gross revenues.

DES: An amount equal to the greater of 10% of the prior year defined annual

net revenues or 5% of the prior year defined revenues.

#### 5. Cash and Investments

JEA maintains cash and investment pools that are utilized by all funds except for the bond funds. Included in the JEA cash balances are amounts on deposit with JEA's commercial bank, as well as amounts held in various money market funds as authorized in the JEA Investment Policy. The commercial bank balances are covered by federal depository insurance or collateralized subject to the Florida Security for Public Deposits Act of Chapter 280, Florida Statutes. Amounts subject to Chapter 280, Florida Statutes, are collateralized by securities deposited by JEA's commercial bank under certain pledging formulas with the State Treasurer or other qualified custodians.

JEA follows GASB Statement No. 31, Accounting and Financial Reporting for Certain Investments and for External Investment Pools, which requires the adjustments of the carrying value of investments to fair value to be presented as a component of investment income. Investments are presented at fair value or cost, which is further explained in note 14, Fair Value Measurements.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 5. Cash and Investments (continued)

At September 30, 2018 and 2017, the fair value of all securities, regardless of statement of net position classification as cash equivalent or investment, was as follows:

	2018	2017
Securities:		
U.S. Treasury and government agency securities	\$ 462,897	\$ 538,887
State and local government securities	223,845	323,507
Commercial paper	133,074	170,829
Local government investment pool	194,786	138,207
Money market mutual funds	23,208	51,460
Total securities, at fair value	\$ 1,037,810	\$ 1,222,890

These securities are held in the following accounts:

	2018	2017
Current assets:		
Cash and cash equivalents	\$ 441,206	\$ 489,559
Investments	85,310	25,122
Restricted assets:		
Cash and cash equivalents	114,576	124,475
Investments	731,627	936,708
Total cash and investments	1,372,719	1,575,864
Plus: interest due on securifies	2,878	2,967
Less: cash on deposit	(337,787)	(355,941)
Total securities, at fair value	\$ 1,037,810	\$ 1,222,890

JEA is authorized to invest in securities as described in its investment policy and in each bond resolution. As of September 30, 2018, JEA's investments in securities and their maturities are categorized below in accordance with GASB Statement No. 40, Deposit and Investment Risk Disclosures — an amendment of GASB Statement No. 3. It is assumed that callable investments will not be called. Puttable securities are presented as investments with a maturity of less than one year.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 5. Cash and Investments (continued)

The maturity distribution of the investments held at September 30, 2018 is listed below.

Type of Investments	Le	ess than One Year	(	One to Five Years	-	ive to Ten Years	T	Ten to wenty Years		Total
			_						_	
U.S. Treasury and government agency securities	\$	245,490	\$	193,550	\$	12,956	\$	10,901	\$	462,897
State and local government securities		48,852		86,537		8,821		79,635		223,845
Commercial paper		133,074		_		_		_		133,074
Local government investment pools		194,786		_		_		_		194,786
Money market mutual funds		23,208		_		_		_		23,208
Total securities, at fair value	\$	645,410	\$	280,087	\$	21,777	\$	90,536	\$	1,037,810

Interest Rate Risk—As a means of limiting its exposure to fair value losses arising from rising interest rates, JEA's investment policy requires the investment portfolio to be structured in such a manner as to provide sufficient liquidity to pay obligations as they come due. To the extent possible, investment maturities are matched with known cash needs and anticipated cash flow requirements. Additionally, maturity limitations for investments related to the issuance of debt are outlined in the bond resolution relating to those bond issues. JEA's investment policy also limits investments in commercial paper to maturities of less than nine months.

Credit Risk – JEA's investment policy is consistent with the requirements for investments of state and local governments contained in the Florida Statutes and its objectives are to seek reasonable income, preserve capital, and avoid speculative investments. Consistent with JEA's investment policy and bond resolutions: (1) the U.S. government agency securities held in the portfolio are issued or quaranteed by agencies created pursuant to an Act of Congress as an agency or instrumentality of the United States of America; (2) the state and local government securities are rated by two nationally recognized rating agencies and are rated at least AA- by Standard & Poor's, Aa3 by Moody's Investors Services, or AA- by Fitch Ratings; and (3) the money market mutual funds are rated AAA by Standard & Poor's or Aaa by Moody's Investors Services. JEA's investment policy limits investments in commercial paper to the highest whole rating category issued by at least two nationally recognized rating agencies, and the issuer must be a Fortune 500 company, a Fortune Global 500 company with significant operations in the U.S., or the governments of Canada or Canadian provinces and the ratings outlook must be positive or stable at the time of the investment. As of September 30, 2018, JEA's investments in commercial paper are rated at least A-1 by Standard & Poor's and P-1 by Moody's Investors Services. In addition, JEA's investment policy limits the commercial paper investment in any one issuer to \$12,500. Additionally, JEA's investment policy limits investments in commercial paper to 25% of the total cash and investment portfolio regardless of statement of net position classification as cash equivalent or investment. As of September 30, 2018, JEA had 12.8% of its investments in commercial paper.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 5. Cash and Investments (continued)

**Custodial Credit Risk** – For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, JEA will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. All of JEA's investments are held by JEA or by an agent in JEA's name.

Concentration of Credit Risk — As of September 30, 2018, investments in any one issuer representing 5% or more of JEA's investments included \$235,878 (22.7%) invested in issues of the Federal Home Loan Bank, \$170,424 (16.4%) held in U.S. Treasury securities, and \$56,595 (5.5%) invested in issues of the Federal Farm Credit Bank. JEA's investment policy limits the maximum holding of any one U.S. government agency issuer to 35% of total cash and investments regardless of statement of net position classification as cash equivalent or investment. Other than investments in U.S. Treasury securities or U.S. Treasury money market funds, JEA's investment policy limits the percentage of the total cash and investment portfolio (regardless of statement of net position classification as cash equivalent or investment) that may be held in various security types. As of September 30, 2018, investments in all security types were within the allowable policy limits.

JEA

Notes to Financial Statements (continued)

(Dollars in Thousands)

6. Capital Assets

Capital asset activity for the year ended September 30, 2018 is as follows:

	Balance stember 30, 2017	A	dditions	ı	Retirements	ransfers/ justments	Balance ptember 30, 2018
Electric Enterprise Fund:							
Generation assets	\$ 3,685,363	\$	_	\$	(5,686)	\$ 20,237	\$ 3,699,914
Transmission assets	571,810		_		(175)	22,223	593,858
Distribution assets	1,927,058		_		(5,881)	78,899	2,000,076
Other assets	459,240		-		(1,754)	(8,609)	448,877
Total capital assets	6,643,471		-		(13,496)	112,750	6,742,725
Less: accumulated depreciation and amortization	(3,718,060)		(680,606)		13,496	_	(4,385,170)
Land	130,246		-		(197)	237	130,286
Construction work-in-process	106,012		183,278		_	(114,763)	174,527
Net capital assets	3,161,669		(497,328)		(197)	(1,776)	2,662,368
Water and Sewer Fund:							
Pumping assets	509,490		_		(9,533)	25,691	525,648
Treatment assets	627,165		_		(7,037)	26,141	646,269
Transmission and distribution assets	1,182,420		_		(312)	24,772	1,206,880
Collection assets	1,485,168		_		(427)	23,857	1,508,598
Reclaimed water assets	138,535		_		(730)	(271)	137,534
General and other assets	397,765		_		(1,512)	10,812	407,065
Total capital assets	4,340,543		_		(19,551)	111,002	4,431,994
Less: accumulated depreciation	(1,991,742)		(140,025)		19,551	4,189	(2,108,027)
Land	61,259		_		(11)	(33)	61,215
Construction work-in-process	205,890		202,761		`_′	(110,969)	297,682
Net capital assets	2,615,950		62,736		(11)	4,189	2,682,864
District Energy System:							
Chilled water plant assets	55,240		_		(940)	2,076	56,376
Total capital assets	55,240				(940)	2,076	56,376
Less: accumulated depreciation	(24,091)		(2,403)		940	_,0.0	(25,554)
Land	3,051		(=, .5 <b>e</b> )		_	_	3,051
Construction work-in process	1,980		1,250		_	(2,076)	1,154
Net capital assets	36,180		(1,153)		-	-	35,027
Total	\$ 5,813,799	\$	(435,745)	\$	(208)	\$ 2,413	\$ 5,380,259

JEA

Notes to Financial Statements (continued)

(Dollars in Thousands)

# 6. Capital Assets (continued)

Capital asset activity for the year ended September 30, 2017 is as follows:

	Balance otember 30, 2016	A	dditions	R	etirements	ansfers/ ustments	Balance otember 30, 2017
Electric Enterprise Fund:							
Generation assets	\$ 3,679,557	\$	_	\$	(41,299)	\$ 47,105	\$ 3,685,363
Transmission assets	547,705		_		(1,563)	25,668	571,810
Distribution assets	1,822,944		_		(5,011)	109,125	1,927,058
Other assets	436,508		_		(3,238)	25,970	459,240
Total capital assets	6,486,714		_		(51,111)	207,868	6,643,471
Less: accumulated depreciation and amortization	(3,525,733)		(243,438)		51,111	_	(3,718,060)
Land	127,895		_		(30)	2,381	130,246
Construction work-in-process	181,247		144,855		-	(220,090)	106,012
Net capital assets	3,270,123		(98,583)		(30)	(9,841)	3,161,669
Water and Sewer Fund:							
Pumping assets	501,502		_		(9,152)	17,140	509,490
Treatment assets	606,217		_		(6,434)	27,382	627,165
Transmission and distribution assets	1,161,588		_		(314)	21,146	1,182,420
Collection assets	1,468,752		_		(530)	16,946	1,485,168
Reclaimed water assets	131,557		_		(91)	7,069	138,535
General and other assets	382,964		-		(3,408)	18,209	397,765
Total capital assets	4,252,580		_		(19,929)	107,892	4,340,543
Less: accumulated depreciation	(1,879,932)		(135,928)		19,929	4,189	(1,991,742)
Land	59,714		-		(830)	2,375	61,259
Construction work-in-process	135,881		180,276		_	(110,267)	205,890
Net capital assets	2,568,243		44,348		(830)	4,189	2,615,950
District Energy System:							
Chilled water plant assets	53,648		_		(88)	1,680	55,240
Total capital assets	53,648		_		(88)	1,680	55,240
Less: accumulated depreciation	(21,815)		(2,364)		88	_	(24,091)
Land	3,051		_		_	_	3,051
Construction work-in process	 1,675		1,985		_	 (1,680)	 1,980
Net capital assets	36,559		(379)		_	_	36,180
Total	\$ 5,874,925	\$	(54,614)	\$	(860)	\$ (5,652)	\$ 5,813,799

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 7. Investment in The Energy Authority

JEA is a member of TEA, a municipal power marketing and risk management joint venture, headquartered in Jacksonville, Florida. TEA currently has eight members, and JEA's ownership interest in TEA is 16.7%. TEA provides wholesale power marketing and resource management services to members (including JEA) and nonmembers and allocates transaction savings and operating expenses pursuant to a settlement agreement. TEA also assists members (including JEA) and nonmembers with natural gas procurement and related gas hedging activities. JEA's earnings from TEA were \$4,074 in fiscal year 2018 and \$6,335 in 2017 for all power marketing activities. JEA's distributions from TEA were \$3,513 in fiscal year 2018 and \$6,182 in 2017. The investment in TEA was \$6,811 at September 30, 2018 and \$6,283 at September 30, 2017 and is included in noncurrent assets on the accompanying statement of net position.

The following is a summary of the unaudited financial information of TEA for the nine months ended September 30, 2018 and 2017. TEA issues separate audited financial statements on a calendar-year basis.

	Unau	dited	t
	2018		2017
Condensed statement of net position:			
Current assets	\$ 165,904	\$	177,777
Noncurrent assets	21,510		15,622
Total assets	\$ 187,414	\$	193,399
Current liabilities	\$ 146,768	\$	155,313
Noncurrent liabilities	15		394
Members' capital	40,631		37,692
Total liabilities and members' capital	\$ 187,414	\$	193,399
Condensed statement of operations:			
Operating revenues	\$ 1,334,738	\$	1,153,933
Operating expenses	1,252,868		1,092,748
Operating income	\$ 81,870	\$	61,185
Net income	\$ 81,975	\$	61,223

As of September 30, 2018, JEA is obligated to guaranty, directly or indirectly, TEA's electric trading activities in an amount up to \$28,929 and TEA's natural gas procurement and trading activities up to \$31,000, in either case, plus attorney's fees that any party claiming and prevailing under the guaranty might incur and be entitled to recover under its contract with TEA. JEA has approved up to \$60,000 (plus attorney fees) for TEA's natural gas procurement and trading activities.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 7. Investment in The Energy Authority (continued)

Generally, JEA's guaranty obligations for electric trading would arise if TEA did not make the contractually required payment for energy, capacity, or transmission that was delivered or made available, or if TEA failed to deliver or provide energy, capacity, or transmission as required under a contract. Generally, JEA's guaranty obligations for natural gas procurement and trading would arise if TEA did not make the contractually required payment for natural gas or transportation that was delivered or purchased or if TEA failed to deliver natural gas or transportation as required under a contract.

Upon JEA's making any payments under its electric guaranty, it has certain contribution rights with the other members of TEA in order that payments made under the TEA member guaranties would be equalized ratably, based upon each member's equity ownership interest in TEA. Upon JEA's making any payments under its natural gas guaranty, it has certain contribution rights with the other members of TEA in order that payments under the TEA member guaranties would be equalized ratably in proportion to their respective amounts of guaranties, as adjusted by the actual natural gas member volumes and prices for the calendar year. After such contributions have been effected, JEA would only have recourse against TEA to recover amounts paid under the guaranty.

The term of these guaranties is generally indefinite, but JEA has the ability to terminate its guaranty obligations by causing to be provided advance notice to the beneficiaries thereof. Such termination of its guaranty obligations only applies to TEA transactions not yet entered into at the time the termination takes effect. Such termination would be because of JEA's withdrawal from membership in TEA, or such termination could cause JEA's membership in TEA to be terminated.

Under a separate agreement, TEA contracted with Southern Power Company ("Southern"), on JEA's behalf, for the purchase and sale of capacity and energy from Southern's Wansley plant located in Heard County, GA, covering the term from January 1, 2018 to December 31, 2019. In turn, JEA has guaranteed the payment obligations in the agreement up to \$9,000 as well as all reasonable fees and expenses of Southern's counsel in any way relating to the enforcement of Southern's rights under the agreement.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt

The Electric System, Bulk Power Supply System, SJRPP System, Water and Sewer System, and DES revenue bonds (JEA Revenue Bonds) are each governed by one or more bond resolutions. The Electric System bonds are governed by both a senior and a subordinated bond resolution; the Bulk Power Supply System bonds are governed by a single bond resolution; the Water and Sewer System bonds are governed by both a senior and a subordinated bond resolution; the SJRPP System bonds are governed by the First and Second Power Park Resolutions; and the DES bonds are governed by a single bond resolution. In accordance with the bond resolutions of each system, principal and interest on the bonds are payable from and secured by a pledge of the net revenues of the respective system. In general, the bond resolutions require JEA to make monthly deposits into the separate debt service sinking funds for each System in an amount equal to approximately one-twelfth of the aggregate amount of principal and interest due and payable on the bonds within the bond year. Interest on the fixed rate bonds is payable semiannually on April 1 and October 1, and principal is payable on October 1.

In accordance with the requirements of the SJRPP First Power Park Resolution and the Agreement for Joint Ownership and Construction and Operation of SJRPP Coal Units #1 and #2 between JEA and FPL, FPL is responsible for paying its share of the debt service on bonds issued under the First Power Park Resolution. The various bond resolutions provide for certain other covenants, the most significant of which (1) requires JEA to establish rates for each system such that net revenues with respect to that system are sufficient to exceed (by a certain percentage) the debt service for that system during the fiscal year and any additional amount required to make all reserve or other payments required to be made in such fiscal year by the resolution of that system and (2) restricts JEA from issuing additional parity bonds unless certain conditions are met.

On January 5, 2018, JEA defeased all the SJRPP System Revenue Issue Two bonds in their entirety and on March 21, 2018, JEA satisfied and discharged the First Power Park Resolution.

JEA

Notes to Financial Statements (continued)

(Dollars in Thousands)

Below is the schedule of outstanding indebtedness for the fiscal years 2018 and 2017.

	Interest	Payment		Septen	nber	30
Long-Term Debt	Rates <sup>(1)</sup>	Dates	2	2018		2017
Electric System Senior Revenue Bonds:						
Series Three 2004A	5.000%	2039	\$	5	\$	5
Series Three 2005B	4.750%	2033		100		100
Series Three 2008A <sup>(2)</sup>	Variable	2027-2036		51,680		51,680
Series Three 2008B-1 <sup>(3)</sup>	Variable	2018-2040		60,020		60,395
Series Three 2008B-2 <sup>(2)</sup>	Variable	2025-2040		41,900		41,900
Series Three 2008B-3 <sup>(2)</sup>	Variable	2024-2036		37,000		37,000
Series Three 2008B-4 <sup>(3)</sup>	Variable	2018–2036		49,410		49,810
Series Three 2008C-1 <sup>(2)</sup>	Variable	2024-2034		44,145		44,145
Series Three 2008C-2 <sup>(2)</sup>	Variable	2024–2034		43,900		43,900
Series Three 2008C-3 <sup>(2)</sup>	Variable	2030-2038		25,000		25,000
Series Three 2008D-1 <sup>(3)</sup>	Variable	2018-2036		108,900		111,420
Series Three 2009C	N/A	N/A		-		3,355
Series Three 2009D <sup>(6)</sup>	6.056%	2033-2044		45,955		45,955
Series Three 2010A	4.000%	2018–2019		10,065		14,980
Series Three 2010C	4.125-4.500%	2026-2031		1,950		8,975
Series Three 2010D	4.250-5.000%	2018–2038		7,210		79,470
Series Three 2010E <sup>(6)</sup>	5.350-5.482%	2028-2040		34,255		34,255
Series Three 2012A	4.000-4.500%	2023–2033		16,995		60,750
Series Three 2012B	2.000-5.000%	2019–2039		85,615		128,250
Series Three 2013A	3.000-5.000%	2018-2026		74,865		93,815
Series Three 2013B	3.000-5.000%	2026-2038		7,500		7,500
Series Three 2013C	4.000-5.000%	2018–2030		19,335		28,685
Series Three 2014A	3.400-5.000%	2018–2034		12,870		32,305
Series Three 2015A	2.750-5.000%	2018-2041		69,975		79,495
Series Three 2015B	3.375-5.000%	2018-2031		23,900		36,005
Series Three 2017A	5.000%	2019		18,670		18,670
Series Three 2017B	3.375-5.000%	2026-2039		198,095		
Total Electric System Senior Revenue Bonds			1,	089,315	,	1,137,820

JEA

Notes to Financial Statements (continued)

(Dollars in Thousands)

	Interest	Payment	Septen	nber	30
Long-Term Debt	Rates <sup>(1)</sup>	Dates	2018		2017
Electric System Subordinated Revenue Bonds:					
2000 Series A <sup>(2)</sup>	Variable	2021-2035	\$ 30,965	\$	30,965
2000 Series F-1 <sup>(2)</sup>	Variable	2026-2030	37,200		37,200
2000 Series F-2 <sup>(2)</sup>	Variable	2026-2030	24,800		24,800
2008 Series D <sup>(2)</sup>	Variable	2024-2038	39,455		39,455
2009 Series A	N/A	N/A	_		21,140
2009 Series D	5.000%	2018	11,660		23,925
2009 Series E	4.000%	2018	295		2,215
2009 Series F <sup>(6)</sup>	4.800-6.406%	2018-2034	63,670		64,670
2009 Series G	4.000-5.000%	2018-2019	16,090		16,090
2010 Series A	N/A	N/A	_		710
2010 Series B	4.000-5.000%	2018-2024	4,605		7,535
2010 Series C	N/A	N/A	_		4,385
2010 Series D <sup>(6)</sup>	4.000-5.582%	2018-2027	44,125		45,575
2012 Series A	3.250-5.000%	2018-2033	62,440		88,500
2012 Series B	3.250-5.000%	2018-2037	52,995		93,750
2013 Series A	3.000-5.000%	2018-2030	44,585		54,110
2013 Series B	3.000-5.000%	2018-2026	21,275		25,385
2013 Series C	1.375-5.000%	2018-2038	78,330		80,390
2013 Series D	4.000-5.250%	2018-2035	88,660		124,025
2014 Series A	4.000-5.000%	2018-2039	121,320		206,105
2017 Series A	3.000-5.000%	2018-2019	31,790		71,735
2017 Series B	3.375-5.000%	2018-2034	 185,745		
Total Electric System Subordinated Revenue Bor	nds		960,005		1,062,665

JEA

Notes to Financial Statements (continued)

(Dollars in Thousands)

	Interest	Payment		Septer	nber	30
Long-Term Debt	Rates <sup>(1)</sup>	Dates		2018		2017
Bulk Power Supply System Revenue Bonds:						
Series 2010A <sup>(6)</sup>	4.600-5.920%	2018–2030	\$	37,400	\$	39,875
Series 2014A	2.000-5.000%	2018–2038		63,320		66,050
Total Bulk Power System Revenue Bonds			_	100,720		105,925
SJRPP System Revenue Bonds:						
Issue Two, Series Seventeen	NA	NA		_		100
Issue Two, Series Eighteen	NA	NA		_		50
Issue Two, Series Nineteen	NA	NA		_		100
Issue Two, Series Twenty	NA	NA		_		100
Issue Two, Series Twenty-One	NA	NA		_		5
Issue Two, Series Twenty-Two	NA	NA		_		5
Issue Two, Series Twenty-Three	NA	NA		_		64,910
Issue Two, Series Twenty-Four	NA	NA		_		29,625
Issue Two, Series Twenty-Five	NA	NA		_		45
Issue Two, Series Twenty-Six	NA	NA		_		65,970
Issue Two, Series Twenty-Seven	NA	NA		_		7,025
Issue Three, Series One <sup>(5)</sup>	4.500%	2037		100		100
Issue Three, Series Two <sup>(5)</sup>	5.000%	2034-2037		29,370		29,370
Issue Three, Series Four <sup>(5)(6)</sup>	4.500-5.450%	2018-2028		22,410		24,085
Issue Three, Series Six <sup>(5)</sup>	2375-5.000%	2019-2037		91,330		91,330
Issue Three, Series Seven <sup>(5)</sup>	2000-5.000%	2019-2033		79,500		79,500
Issue Three, Series Eight <sup>(5)</sup>	2000-5.000%	2019-2039		57,895		57,895
Total SJRPP System Revenue Bonds				280,605		450,215

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Notes to Financial Statements (continued)

(Dollars in Thousands)

	Interest	Payment		Septen	nber	· 30
Long-Term Debt	Rates <sup>(1)</sup>	Dates	:	2018		2017
Water and Sewer System Senior Revenue Bo	nds:					
2006 Series B <sup>(4)</sup>	Variable	2018-2022	\$	30,370	\$	34,625
2008 Series A-2 <sup>(2)</sup>	Variable	2028-2042		51,820		51,820
2008 Series B <sup>(2)</sup>	Variable	2023-2041		85,290		85,290
2009 Series B	3.750-5.000%	2018-2019		18,295		25,565
2010 Series A <sup>(6)</sup>	6.210-6.310%	2026-2044		83,115		83,115
2010 Series B	4.700-5.700%	2018-2025		13,840		15,570
2010 Series C	5.000%	2020		3,000		9,545
2010 Series D	4.000-5.000%	2018-2039		42,525		101,850
2010 Series E	4.000-5.000%	2021-2039		11,865		60,990
2010 Series F <sup>(6)</sup>	3.750-5.887%	2018-2040		44,275		45,520
2012 Series A	3.000-5.000%	2019-2041		162,430		317,935
2012 Series B	2.000-5.000%	2018-2037		76,380		130,085
2013 Series A	4.500-5.000%	2018-2027		63,660		89,740
2013 Series B	N/A	N/A		_		3,830
2014 Series A	2.000-5.000%	2018-2040		217,790		284,595
2017 Series A	3.125-5.000%	2020-2041		378,220		_
Total Water and Sewer System Senior Revenu	ue Bonds		1,	,282,875		1,340,075
W. 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Б					
Water and Sewer System Subordinated Rever						
Subordinated 2008 Series A-1 <sup>(2)</sup>	Variable	2018–2038		50,950		52,950
Subordinated 2008 Series A-2 <sup>(2)</sup>	Variable	2030–2038		25,600		25,600
Subordinated 2008 Series B-1 <sup>(2)</sup>	Variable	2030-2036		30,885		30,885
Subordinated 2010 Series A	5.000%	2018-2022		8,275		13,150
Subordinated 2010 Series B	3.000-5.000%	2020-2025		3,255		12,770
Subordinated 2012 Series A	3.000%	2021		1,440		20,320
Subordinated 2012 Series B	3.250-5.000%	2030-2043		29,685		35,505
Subordinated 2013 Series A	2.125-5.000%	2018-2029		37,435		72,250
Subordinated 2017 Series A	2.750-5.000%	2021–2034		58,940		
Total Water and Sewer System Subordinated	Revenue Bonds			246,465		263,430

# Notes to Financial Statements (continued) (Dollars in Thousands)

	Interest	Payment	Se	oer 30	
Long-Term Debt	Rates <sup>(1)</sup>	Dates	2018		2017
Water and Sewer System Other Subordinated Deb	ot				
Revolving Credit Agreement <sup>(7)</sup>	Variable	2021	\$ 3,0	00 3	\$ 3,000
Total Water and Sewer System Other Subordinate	3,0	00	3,000		
District Energy System: 2013 Series A Total District Energy System	1.725-4.538%	2018–2034	36,4 36,4		38,125 38,125
Total Debt Principal Outstanding Less: Debt Due Within One Year Total Long-Term Debt			3,999,4 (185,7 \$ 3,813,6	90)	4,401,255 (229,095) \$ 4,172,160

- (1) Interest rates apply only to bonds outstanding at September 30, 2018. Interest on the outstanding variable rate debt is based on either the daily mode, weekly mode, or the flexible mode, which resets in time increments ranging from 1 to 270 days. In addition, JEA has executed fixed-payer weekly mode interest rate swaps to effectively fix a portion of its net payments relative to certain variable rate bonds. The terms of the interest rate swaps are approximately equal to that of the fixed-payer bonds. See the Debt Management Strategy section of this note for more information related to the interest rate swap agreements outstanding at September 30, 2018 and 2017.
- <sup>(2)</sup> Variable rate demand obligations interest rates ranged from 1.53% to 1.68% at September 30, 2018.
- (3) Variable rate direct purchased bonds indexed to SIFMA interest rates were 1.96% at September 30, 2018.
- (4) Variable rate bonds indexed to the Consumer Price Index (CPI bonds) interest rates ranged from 3.02% to 3.07% at September 30, 2018.
- (5) SJRPP System Issue Three Bonds were issued under the Second Power Park Resolution, whereby JEA is responsible for 100% of the related debt service payments. Whereas the SJRPP System Issue Two Bonds issued under the First Power Park Resolution, JEA is responsible for approximately 62.5% of the related debt service payments and FPL the remainder. On January 5, 2018, JEA defeased all the SJRPP System Issue Two Bonds in their entirety and on March 21, 2018, JEA satisfied and discharged the First Power Park Resolution.
- (6) Federally Taxable Issuer Subsidy Build America Bonds where JEA expects to receive a cash subsidy payment from the United States Department of the Treasury for an amount up to 35% of the related interest.
- (7) Revolving Credit Agreement interest rates were 3.39% at September 30, 2018.

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# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

Long-term debt activity (excluding short-term bank borrowings) for the year ended September 30, 2018 was as follows:

	Debt Payable		Payable		Par Amount		ar Amount of Debt	S	cheduled Debt		Debt Payable		rrent Portion Debt Payable
	Sep	otember 30,	30, of Debt		of Debt Refunded or		Principal		otember 30,	Se	ptember 30,		
System		2017	Issued	Defeased		<b>Payments</b>		2018		2018			
Electric	\$	2,200,485	\$ 383,840	\$	(405,105)	\$	(129,900)	\$	2,049,320	\$	124,980		
Bulk Power Supply		105,925	_		-		(5,205)		100,720		5,710		
SJRPP		450,215	_		(128,280)		(41,330)		280,605		1,720		
Water and Sewer		1,603,505	437,160		(460,305)		(51,020)		1,529,340		51,720		
DES		38,125	-		-		(1,640)		36,485		1,660		
Total	\$	4,398,255	\$ 821,000	\$	(993,690)	\$	(229,095)	\$	3,996,470	\$	185,790		

Long-term debt activity (excluding short-term bank borrowings) for the year ended September 30, 2017 was as follows:

		Debt Payable	A	Par mount		of Debt	S	cheduled Debt		Debt Payable		rrent Portion Debt Payable		
	Sep	otember 30,	c			of Debt Refunded or		funded or	Principal		September 30		Se	ptember 30,
System		2016		Issued		Defeased		<b>Payments</b>		2017		2017		
Electric	\$	2,359,485	\$	90,405	\$	(153,210)	\$	(96,195)	\$	2,200,485	\$	129,900		
Bulk Power Supply		111,970		_		-		(6,045)		105,925		5,205		
SJRPP		494,000		_		_		(43,785)		450,215		41,330		
Water and Sewer		1,643,515		_		(6,135)		(33,875)		1,603,505		51,020		
DES		39,750		_		-		(1,625)		38,125		1,640		
Total	\$	4,648,720	\$	90,405	\$	(159,345)	\$	(181,525)	\$	4,398,255	\$	229,095		

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

The debt service to maturity on the outstanding debt (excluding short-term bank borrowings) as of September 30, 2018 is summarized as follows:

Fiscal Year Ending	Electric System				<b>Bulk Power Supply System</b>				SJRPP			
September 30	Principal		Interest		Principal		Interest		Principal		Interest	
2018	\$ 124,980	\$	34,676	\$	5,710	\$	2,116	\$	1,720	\$	5,603	
2019	116,230		72,122		6,150		3,959		13,780		11,128	
2020	60,790		66,757		6,975		3,716		13,340		10,444	
2021	59,140		63,939		7,080		3,498		14,175		9,894	
2022	58,135		61,381		7,270		3,274		15,285		9,310	
2023-2027	412,705		267,922		24,955		12,689		85,040		37,109	
2028-2032	527,685		180,414		22,750		6,749		77,645		21,324	
2033-2037	535,695		86,762		15,305		2,895		52,060		8,990	
2038-2042	144,750		14,698		4,525		187		7,560		456	
2043-2047	9,210		842		_		_		_		_	
Total	\$ 2,049,320	\$	849,513	\$	100,720	\$	39,083	\$	280,605	\$	114,258	

Fiscal Year Ending	1	Water and Sewer System			District Energy System				Total Deb		
September 30	F	Principal		Interest		Principal		Interest	•	Se	ervice <sup>(1)(2)(3)</sup>
2018	\$	51,720	\$	29,521	\$	1,660	\$	680	•	\$	258,386
2019		54,705		59,741		1,690		1,330			340,835
2020		56,340		57,535		1,725		1,296			278,918
2021		58,950		55,404		1,770		1,254			275,104
2022		59,550		52,973		1,815		1,206			270,199
2023-2027		294,405		225,940		10,005		5,102			1,375,872
2028-2032		295,730		159,214		12,165		2,943			1,306,619
2033-2037		356,835		96,163		5,655		388			1,160,748
2038-2042		285,850		30,530		_		_			488,556
2043-2047		15,255		1,274		_		_			26,581
Total	\$	1,529,340	\$	768,295	\$	36,485	\$	14,199	•	\$	5,781,818

<sup>(1)</sup> Includes debt service accrued from October 1 through September 30 of the corresponding fiscal year, except for fiscal year 2018, which excludes payments made during the fiscal year.

<sup>(2)</sup> Interest requirement for the variable rate debt was determined by using the interest rates that were in effect at the financial statement date of September 30, 2018.

<sup>(3)</sup> Interest in the above table reflects total interest on the Federally Taxable – Issuer Subsidy – Build America Bonds and does not reflect the impact of the 35% cash subsidy payments that JEA expects to receive in the future from the United States Department of the Treasury.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

JEA, at its option, may redeem specific outstanding fixed rate JEA Revenue Bonds prior to maturity, as discussed in the official statements covering their issuance. A summary of the redemption provisions is as follows:

		<b>Bulk Power</b>		Water and	District
	Electric System	Supply System	SJRPP	Sewer System	Energy Svstem
Earliest fiscal year for redemption	2019	2019	2019	2019	2023
Redemption price	100%	100%	100%	100%	100%

JEA debt issued during fiscal year 2018 is summarized as follows:

Svstem	Debt Issued	Purpose	Priority of Lien	Month of Issue	f Par Amount Issued		Par Amount Refunded		ounting n/(Loss)
							_		
Electric	Series Three 2017B	Refunding <sup>(1)</sup>	Senior	Dec 2017	\$	198,095	\$	210,030	\$ (6,413)
Electric	2017 Series B	Refunding <sup>(2)</sup>	Subordinated	Dec 2017		185,745		195,075	(8,407)
Water and Sewer	2017 Series A	Refunding <sup>(3)</sup>	Senior	Dec 2017		378,220		394,335	(11,076)
Water and Sewer	2017 Series A	Refunding <sup>(4)</sup>	Subordinated	Dec 2017		58,940		65,970	(1,915)
					\$ 821,000 \$		\$	865,410	\$ (27,811)

- (1) Fixed rate bonds issued to refund fixed rate bonds with new debt service of \$324,904 compared to prior debt service of \$346,747 and \$17,425 of net present value economic savings.
- (2) Fixed rate bonds issued to refund fixed rate bonds with new debt service of \$291,178 compared to prior debt service of \$304,128 and \$12,314 of net present value economic savings.
- (3) Fixed rate bonds issued to refund fixed rate bonds with new debt service of \$588,806 compared to prior debt service of \$635,880 and \$33,648 of net present value economic savings.
- (4) Fixed rate bonds issued to refund fixed rate bonds with new debt service of \$86,518 compared to prior debt service of \$93,337 and \$5,283 of net present value economic savings.

The JEA Board has authorized the issuance of additional refunding bonds within certain parameters for the Electric System, SJRPP, and Water and Sewer System. The following table summarizes the maximum amounts that could be issued:

		Author	n		
System		Senior	Sub	ordinated	Expiration
Electric	\$	672,905	\$	447,255	December 31, 2018
SJRPP Issue Three		80,000		_	December 31, 2018
Water and Sewer		424,780		206,060	December 31, 2018

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

## Variable Rate Demand Obligations (VRDOs) - Liquidity Support

For the Electric System and the Water and Sewer System VRDOs appearing in the schedule of outstanding indebtedness, and except for the obligations noted in the following paragraphs, liquidity support is provided in connection with tenders for purchase with various liquidity providers pursuant to standby bond purchase agreements (SBPA) relating to that series of obligation. The purchase price of the obligations tendered or deemed tendered for purchase is payable from the proceeds of the remarketing thereof and moneys drawn under the applicable SBPA. At September 30, 2018, there were no outstanding draws under the SBPA. In the event of the expiration or termination of the SBPA that results in a mandatory tender of the VRDOs and the purchase of the obligations by the bank, then beginning on April 1 or October 1, whichever date is at least six months subsequent to the purchase of the obligations, JEA shall begin to make equal semiannual installments over an approximate five-year period. Commitment fees range from 0.38% to 0.42% with stated termination dates ranging from May 8, 2020 to August 22, 2022, unless otherwise extended. See note 18, Subsequent Events, for further details.

JEA entered into irrevocable direct-pay letter of credit and reimbursement agreement to support the payment of principal and interest on the Water and Sewer System 2008 Series A-2 VRDOs. The letter of credit agreement constitutes both a credit facility and a liquidity facility. As of September 30, 2018, there were no draws outstanding under the letter of credit agreement. Repayment of any draws outstanding at the expiration date are payable in equal semiannual installments over an approximate five-year period. The commitment fee is 0.48% with a stated expiration date of December 2, 2018, unless otherwise extended. Subsequent to the end of the fiscal year, the letter of credit and reimbursement agreement was renewed. See note 18, Subsequent Events, for further details.

JEA has entered into continuing covenant agreements for the Variable Rate Electric System Revenue Bonds, Series Three 2008B-1, Series Three 2008B-4 and Series Three 2008D-1 (collectively, the Direct Purchased Bonds). Except as described below, the bank does not have the option to tender the respective Direct Purchased Bonds for purchase for a period specified in the respective continuing covenant agreements, which period would be subject to renewal under certain conditions. Any Direct Purchased Bond that was not purchased from such bank on the scheduled mandatory tender date that occurred upon the expiration of such period would be required to be repaid as to principal in equal semiannual installments over a period of approximately five years from such scheduled mandatory tender date. Upon any such tender for payment, the Direct Purchased Bond so tendered would be due and payable immediately. The current expiration date of the continuing covenant agreements is December 12, 2018, unless otherwise extended. The interest rate is variable and set weekly based upon SIFWA plus 40 basis points. Subsequent to the end of the fiscal year, the continuing covenant agreements were renewed. See note 18, Subsequent Events, for further details.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 8. Long-Term Debt (continued)

## Short-Term Bank Borrowings

As of September 30, 2018, JEA has a revolving credit agreement with a commercial bank for an unsecured amount of \$300,000. This agreement became effective on December 17, 2015, when JEA terminated the prior two revolving credit agreements with a total available amount of \$300,000 with two commercial banks. The revolving credit agreement may be used with respect to the Electric System, the Bulk Power Supply System, the SJRPP System, the Water and Sewer System, or the DES, and for operating expenditures or for capital expenditures.

During fiscal year 2016, the revolving credit agreement was drawn upon by the Water and Sewer System for \$3,000 and remains outstanding as of September 30, 2018, with \$297,000 available to be drawn.

The revolving credit agreement is scheduled to expire on May 24, 2021. Subsequent to the end of the fiscal year, the revolving credit agreement was amended. See note 18, Subsequent Events, for further details.

## Debt Management Strategy

JEA has entered into various interest rate swap agreements executed in conjunction with debt financings for initial terms up to 35 years (unless earlier terminated). JEA utilizes floating to fixed interest rate swaps as part of its debt management strategy. For purposes of this note, the term floating to fixed interest rate swaps refers to swaps in which JEA receives a floating rate and pays a fixed rate.

The fair value of the interest rate swap agreements and related hedging instruments is reported in the long-term debt section in the accompanying statements of net position; however, the notional amounts of the interest rate swaps are not reflected in the accompanying financial statements. JEA follows GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, therefore, hedge accounting is applied where fair market value changes are recorded in the accompanying statements of net position as either deferred outflow or deferred inflow resources.

The earnings from the debt management strategy interest rate swaps are recorded to interest on debt in the accompanying statements of revenues, expenses, and changes in net position.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

JEA entered into all outstanding floating to fixed interest rate swap agreements during prior fiscal years. The terms of the floating to fixed interest rate swap agreements outstanding at September 30, 2018, are as follows:

		Initial	N	otional	Fixed			
		Notional	A	mount	Rate of	<b>Effective</b>	Termination	
System	Hedged Bonds	Amount	Out	standing	Interest	Date	Date	Variable Rate Index
Electric	Series Three 2008C	\$ 174,000	\$	84,800	3.7%	Sep 2003	Sep 2033	68% of one month LIBOR
Electric	Series Three 2008B	117,825		82,575	4.4%	Aug 2008	Oct 2039	SIFMA
Electric	Series Three 2008B	116,425		85,600	3.7%	Sep 2008	Oct 2035	68% of one month LIBOR
Electric	2008 Series D	40,875		39,175	3.7%	Mar 2009	Oct 2037	68% of one month LIBOR
Electric	Series Three 2008D-1	98,375		62,980	3.9%	May 2008	Oct 2031	SIFMA
Electric	Series Three 2008A	100,000		51,680	3.8%	Jan 2008	Oct 2036	SIFMA
Water and Sewer	2006 Series B	38,730		30,370	4.0-4.1%	Oct 2006	Oct 2018-2022	CPI
Water and Sewer	2008 Series B	85,290		85,290	3.9%	Mar 2007	Oct 2041	SIFMA
	•	\$ 771,520	\$	522,470	•'			

The terms of the floating to fixed interest rate swap agreements outstanding at September 30, 2017, are as follows:

		Initial Notional		lotional Amount	Fixed Rate of	Effective	Termination	
System	<b>Hedged Bonds</b>	Amount	Ou	tstanding	Interest	Date	Date	Variable Rate Index
Electric	Series Three 2008C	\$ 174,000	\$	84,800	3.7%	Sep 2003	Sep 2033	68% of one month LIBOR
Electric	Series Three 2008B	117,825		82,575	4.4%	Aug 2008	Oct 2039	SIFMA
Electric	Series Three 2008B	116,425		86,000	3.7%	Sep 2008	Oct 2035	68% of one month LIBOR
Electric	2008 Series D	40,875		39,175	3.7%	Mar 2009	Oct 2037	68% of one month LIBOR
Electric	Series Three 2008D-1	98,375		62,980	3.9%	May 2008	Oct 2031	SIFMA
Electric	Series Three 2008A	100,000		51,680	3.8%	Jan 2008	Oct 2036	SIFMA
Water and Sewer	2006 Series B	38,730		34,625	3.9-4.1%	Oct 2006	Oct 2017-2022	CPI
Water and Sewer	2008 Series B	85,290		85,290	3.9%	Mar 2007	Oct 2041	SIFMA
		\$ 771,520	\$	527,125	•			

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

The following table includes fiscal year 2018 and 2017 summary information for JEA's effective cash flow hedges related to the outstanding floating to fixed interest rate swap agreements.

	Changes in Fa						
System	Classification	Amount	Classification	Amount <sup>(1)</sup>			lotional
Electric	Deferred outflows	\$ (31,247)	Fair value of debt management strategy instruments	\$	(70,103)	\$	406,810
Water and Sewer	Deferred outflows	(7,666)	Fair value of debt management strategy instruments		(16,253)		115,660
Total		\$ (38,913)		\$	(86,356)	\$	522,470

	Changes in Fair Value		Fair Value at September 30, 2017				
System	Classification	Amount	Classification	Α	mount <sup>(1)</sup>	N	lotional
Electric	Deferred outflows	\$ (44,458)	Fair value of debt management strategy instruments	\$	(101,350)	\$	407,210
Water and Sewer	Deferred outflows	(12,067)	Fair value of debt management strategy instruments		(23,919)		119,915
Total		\$ (56,525)	-	\$	(125,269)	\$	527,125

<sup>(1)</sup> Fair value amounts were calculated using market rates and standard cash flow present valuing techniques.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

For fiscal years ended September 30, 2018 and 2017, the weighted-average rates of interest for each index type of floating to fixed interest rate swap agreement and the total net swap earnings were as follows:

	2018	2017
68% of LIBOR Index:		
Notional amount outstanding	\$ 209,575	\$ 209,975
Variable rate received (weighted average)	1.17%	0.60%
Fixed rate paid (weighted average)	3.69%	3.70%
SIFMA Index (formerly BMA Index):		
Notional amount outstanding	\$ 282,525	\$ 282,525
Variable rate received (weighted average)	1.27%	0.80%
Fixed rate paid (weighted average)	4.02%	4.00%
CPI Index:		
Notional amount outstanding	\$ 30,370	\$ 34,625
Variable rate received (weighted average)	2.87%	2.60%
Fixed rate paid (weighted average)	4.02%	4.00%
Net debt management swap loss	\$ (13,395)	\$ (16,181)

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

The following two tables summarize the anticipated net cash flows of JEA's outstanding hedged variable rate debt and related floating to fixed interest rate swap agreements at September 30, 2018:

Electric System<sup>(1)</sup>

		••••			
				Net Swap	
<b>Bond Year Ending October 1</b>	Principal		Interest	Interest	Total
2018	\$ 400	\$	501	\$ 820 \$	1,721
2019	425		6,031	9,794	16,250
2020	3,200		6,024	9,784	19,008
2021	3,275		5,970	9,713	18,958
2022	3,375		5,914	9,640	18,929
2023–2027	91,100		27,219	44,951	163,270
2028–2032	172,605		16,714	28,162	217,481
2033–2037	114,180		6,745	11,464	132,389
2038–2042	18,250		466	780	19,496
Total	\$ 406,810	\$	75,584	\$ 125,108 \$	607,502

Water and Sewer System<sup>(1)</sup>

			Net Swap	
<b>Bond Year Ending October 1</b>	Principal	Interest	Interest	Total
2018	\$ 5,520	\$ 558	\$ 320	\$ 6,398
2019	5,740	2,036	2,278	10,054
2020	9,195	1,861	2,222	13,278
2021	4,860	1,581	2,132	8,573
2022	5,055	1,433	2,084	8,572
2023–2027	17,595	5,751	9,147	32,493
2028–2032	4,540	5,010	7,971	17,521
2033–2037	21,430	4,239	6,741	32,410
2038–2042	 41,725	1,597	2,540	45,862
Total	\$ 115,660	\$ 24,066	\$ 35,435	\$ 175,161

<sup>(1)</sup> Interest requirement for the variable rate debt and the variable portion of the interest rate swaps was determined by using the interest rates that were in effect at the financial statement date of September 30, 2018. The fixed portion of the interest rate swaps was determined based on the actual fixed rates of the outstanding interest rate swaps at September 30, 2018.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

Credit Risk—JEA is exposed to credit risk on hedging derivative instruments that are in asset positions. To minimize its exposure to loss related to credit risk, the Board has established limits on the notional amount of JEA's interest rate swap transactions and standards for the qualification of financial institutions with which JEA may enter into interest rate swap transactions. The counterparties with which JEA may deal must be rated (i) "AAA" by one or more nationally recognized rating agencies at the time of execution, (ii) "AA/Aa3" or better by at least two of such credit rating agencies at the time of execution, or (iii) if such counterparty is not rated "AA/Aa3" or better at the time of execution, provide for a guarantee by an affiliate of such counterparty rated at least "A/A2" or better at the time of execution where such affiliate agrees to unconditionally guarantee the payment obligations of such counterparty under the swap agreement. In addition, each swap agreement will require the counterparty to enter into a collateral agreement to provide collateral when the ratings of such counterparty (or its guarantor) fall below "AA/Aa3" and a payment is owed to JEA. All outstanding interest rate swaps at September 30, 2018, were in a liability position. Therefore, if counterparties failed to perform as contracted, JEA would not be subject to any credit risk exposure at September 30, 2018.

JEA's floating to fixed interest rate swap counterparty credit ratings at September 30, 2018, are as follows:

Counterparty	Counterparty Credit Ratings S&P/Moody's/Fitch	N	tstanding lotional Amount
Morgan Stanley Capital Service Inc.	BBB+/A3/A	\$	175,925
Goldman Sachs Mitsui Marine Derivative Products L.P.	AA-/Aa2/not rated		136,480
JPMorgan Chase Bank, N.A.	A+/Aa3/AA		124,775
Merrill Lynch Derivative Products AG	A-/A3/A+		85,290
Total		\$	522,470

Interest Rate Risk – JEA is exposed to interest rate risk where changes in interest rates could affect the related net cash flows and fair values of outstanding interest rate swaps. On a pay-fixed, receive-variable interest rate swap, as the floating swap index decreases, JEA's net payment on the swap increases, and as the fixed rate swap market declines as compared to the fixed rate on the swap, the fair value declines.

Basis Risk—JEA is exposed to basis risk on certain pay-fixed interest rate swap hedging derivative instruments because the variable-rate payments received on certain hedging derivative instruments are based on a rate or index other than interest rates that JEA pays on its hedged variable-rate debt, which is reset every one or seven days. As of September 30, 2018, the weighted-average interest rate on JEA's hedged variable-rate debt (excluding variable rate CPI bonds) is 1.71%, while the SIFMA swap index rate is 1.56% and 68% of LIBOR is 1.43%.

**Termination Risk**—JEA or its counterparties may terminate a derivative instrument if the other party fails to perform under the terms of the contract. If at the time of termination, a hedging derivative instrument were in a liability position, JEA would be liable to the counterparty for a payment equal to the liability.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 8. Long-Term Debt (continued)

Market Access Risk—JEA is exposed to market access risk due to potential market disruptions in the municipal credit markets that could inhibit the issuing or remarketing of bonds and related hedging instruments. JEA maintains strong credit ratings (see Debt Administration section of the Management Discussion and Analysis) and, to date, has not encountered any barriers to the credit markets.

# 9. Transactions with City of Jacksonville

#### Utility and Administrative Services

JEA is a separately governed authority and considered a discretely presented component unit of the City. JEA provides electric, water, and sewer service to the City and its agencies and bills for such service using established rate schedules. JEA utilizes various services provided by departments of the City including insurance, legal, and motor pool. JEA is billed on a proportionate cost basis with other user departments and agencies. The revenues for services provided and expenses for services received by JEA for these related-party transactions with the City were as follows:

	 2018	2017
Revenues	\$ 35,708	\$ 36,842
Expenses	\$ 6,031	\$ 5,433

### City Contribution

On March 22, 2016, the City and JEA entered into a five-year agreement, which established the contribution formula for the fiscal years 2017 through 2021.

Although the calculation for the annual transfer of available revenue from JEA to the City is based upon formulas that are applied specifically to each utility system operated by JEA, JEA, at its sole discretion, may utilize any of its available revenues, regardless of source, to satisfy its total annual obligation to the City.

The contributions from the JEA Electric Enterprise Fund and JEA Water and Sewer Fund for fiscal years 2018 and 2017 were as follows:

	 2018	2017
Electric	\$ 91,472	\$ 92,271
Water and Sewer	\$ 25,148	\$ 23,552

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 9. Transactions with City of Jacksonville (continued)

The JEA Electric Enterprise Fund is required to contribute annually to the General Fund of the City an amount equal to 7.468 mills per kilowatt hour delivered by JEA to retail users in JEA's service area and to wholesale customers under firm contracts having an original term of more than one year, other than sales of energy to FPL from JEA's SJRPP System. The JEA Water and Sewer Fund is required to contribute annually to the General Fund of the City an amount equal to 389.2 mills per thousand gallons of potable water and sewer service provided, excluding reclaimed water service. These calculations are subject to a minimum increase of 1% per year through 2021, using 2016 as the base year for the combined assessment for the Electric Enterprise Fund and Water and Sewer Fund. There is no maximum annual assessment.

#### Franchise Fees

In 2008, the City enacted a 3.0% franchise fee from designated revenues of the Electric and Water and Sewer systems. The ordinance authorizes JEA to pass through these fees to its electric and water and sewer funds. These amounts are included in operating revenues and expenses and were as follows:

	2018	2017
Electric	\$ 28,496	\$ 27,704
Water and Sewer	\$ 10,476	\$ 10,562

#### Insurance Risk Pool

JEA is exposed to various risks of loss related to torts, theft and destruction of assets, errors and omissions, and natural disasters. In addition, JEA is exposed to risks of loss due to injuries and illness of its employees. These risks are managed through the Risk Management Division of the City, which administers the public liability (general liability and automobile liability) and workers' compensation self-insurance program covering the activities of the City general government, JEA, Jacksonville Housing Authority, Jacksonville Port Authority, and the Jacksonville Aviation Authority. The general objectives are to formulate, develop, and administer, on behalf of the members, a program of insurance to obtain lower costs for that coverage and to develop a comprehensive loss control program.

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 9. Transactions with City of Jacksonville (continued)

JEA has excess coverage for individual workers' compensation claims above \$1,200. Liability for claims incurred is the responsibility of, and is recorded in, the City's self-insurance plan. The premiums are calculated on a retrospective or prospective basis, depending on the claims experience of JEA and other participants in the City's self-insurance program. The liabilities are based on the estimated ultimate cost of settling the claim including the effects of inflation and other societal and economic factors. The JEA workers' compensation expense is the premium charged by the City's self-insurance plan. JEA is also a participant in the City's general liability insurance program. As part of JEA's risk management program, certain commercial insurance policies are purchased to cover designated exposures and potential loss programs. These amounts are included in operating expenses and were as follows:

	 2018	2017
General liability	\$ 2,240	\$ 1,511
Workers' compensation	\$ 1,613	\$ 1,435

The following table shows the estimated workers' compensation and general liability loss accruals for the City and JEA's portion for the fiscal years ended September 30, 2018 and 2017. The amounts are recorded by the City at present value using a 4% discount rate for the fiscal years ended September 30, 2018 and September 30, 2017.

		Workers' Co	ation	General Liability				
	Ja	City of cksonville	Р	JEA ortion		City of cksonville		JEA ortion
Beginning balance Change in provision Payments	\$	94,300 32,394 (23,052)	\$	3,156 468 (1,032)	\$	15,531 5,939 (6,170)	\$	2,308 1,245 (997)
Ending balance	\$	103,642	\$	2,592	\$	15,300	\$	2,556

### 10. Fuel Purchase and Purchased Power Commitments

JEA has made purchase commitments for Scherer Unit 4 through calendar year 2022. Northside coal and petroleum coke commitments concluded at the end of September 2018. Contract terms specify minimum annual purchase commitments at fixed prices or at prices that are subject to market adjustments. JEA has remarketing rights under the coal contracts. The majority of JEA's coal and petroleum coke supply is purchased with transportation included.

In addition, JEA participates in Georgia Power agreements with rail carriers for the delivery of coal to Scherer Unit 4. Georgia Power Company, acting for itself and as agent for JEA and the other Scherer co-owners, has entered into an agreement with Burlington Northern Santa Fe Railway Company (BNSF) that extends the rail contract through calendar year 2028. Georgia Power has also entered into an agreement with the Norfolk Southern Railway Company (NS) that extends through December 31, 2019.

# Notes to Financial Statements (continued) (Dollars in Thousands)

## 10. Fuel Purchase and Purchased Power Commitments (continued)

JEA has commitments to purchase natural gas delivered to Jacksonville under a long-term contract with Shell Energy North America L.P. (Shell Energy) that expire in 2021. Contract terms for the natural gas supply specify minimum annual purchase commitments at market prices. JEA has the option to remarket any excess natural gas purchases. In addition to the gas delivered by Shell Energy, JEA has long-term contracts with Peoples Gas system, Florida Gas Transmission, Southern Natural Gas and SeaCoast Gas Transmission for firm gas transportation to allow the delivery of natural gas through those pipeline systems. There is no purchase commitment of natural gas associated with those transportation contracts.

In the unlikely event that JEA would not be in a position to fulfill its obligations to receive fuel and purchased power under the terms of its existing fuel and purchased power contracts, JEA would nonetheless be obligated to make certain future payments. If the conditions necessitating the future payments occurred, JEA would mitigate the financial impact of those conditions by remarketing the fuel and purchased power at then-current market prices. The aggregate amount of future payments that JEA does not expect to be able to mitigate appears in the table below:

	Coal and Pet			
Fiscal Year	Coke	Natural Gas		
Ending	Fuel	Transportation	<b>Transmission</b>	Total
2019	2,049	7,236	6,091	15,376
2020	1,165	7,256	7,212	15,633
2021	553	4,817	7,493	12,863
2022	247	_	7,776	8,023
2023	49	_	8,009	8,058
2024-2042	_	_	175,653	175,653

### Vogtle Units Purchased Power Agreement

#### Overview

As a result of an earlier 2008 Board policy establishing a 10% of total energy from nuclear energy goal, JEA entered into a power purchase agreement (as amended, the Additional Vogtle Units PPA) with the Municipal Electric Authority of Georgia (MEAG) for 206 megawatts (MW) of capacity and related energy from MEAG's interest in two additional nuclear generating units (the Additional Vogtle Units or Plant Vogtle Units 3 and 4) under construction at the Alvin W. Vogtle Nuclear Plant in Burke County, Georgia. The owners of the Additional Vogtle Units include Georgia Power Company (Georgia Power), Oglethorpe Power Corporation (Oglethorpe), MEAG and the City of Dalton, Georgia (collectively, the Owners or Vogtle Co-Owners). The energy received under the Additional Vogtle Units PPA is projected to represent approximately 13% of JEA's total energy requirements in the year 2023.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 10. Fuel Purchase and Purchased Power Commitments (continued)

The Additional Vogtle Units PPA requires JEA to pay MEAG for the capacity and energy at the full cost of production (including debt service on the bonds issued and to be issued by MEAG and on the loans made and to be made by the Project J Entity referred to below, in each case, to finance the portion of the capacity to be sold to JEA from the Additional Vogtle Units) plus a margin over the term of the Additional Vogtle Units PPA. Under the Additional Vogtle Units PPA, JEA is entitled to 103 MW of capacity and related energy from each of the Additional Vogtle Units for a 20-year term commencing on each Additional Vogtle Unit's commercial operation date and is required to pay for such capacity and energy on a "take-or-pay" basis (that is, whether or not either Additional Vogtle Unit is completed or is operating or operable, and whether or not its output is suspended, reduced or the like or terminated in whole or in part), except that JEA is not obligated to pay the "margin" referred to above during such periods in which the output of either Additional Vogtle Unit is suspended or terminated.

On September 11, 2018, MEAG filed a complaint in the United States District Court for the Northern District of Georgia seeking a declaratory judgement that the Additional Vogtle Units PPA is lawful and enforceable and ordering specific performance from JEA with the terms of the Additional Vogtle Units PPA. On the same day, JEA and the City, as coplaintiffs, filed a complaint in the Fourth Judicial Circuit Court of Florida seeking a declaratory judgment that the Additional Vogtle Units PPA violates the Florida Constitution and laws and public policy of the state of Florida and is therefore ultra vires, void ab initio, and unenforceable. For additional information about such litigation, see the Litigation and Regulatory Proceedings section in this note.

### Financing and In-Service Costs

MEAG created three separate "projects" (Vogtle Units 3 and 4 Project Entities) for the purpose of owning and financing its 22.7% undivided ownership interest in the Additional Vogtle Units (representing approximately 500.308 MW of capacity and related energy based upon the nominal rating of the Units). The project corresponding to the portion of MEAG's ownership interest, which will provide the capacity and energy to be purchased by JEA under the Additional Vogtle Units PPA, is referred to herein as "Project J." MEAG currently estimates that the total in-service cost for its entire undivided ownership interest in the Additional Vogtle Units will be approximately \$6,485,000, including construction costs, financing costs through the estimated in-service dates, contingencies, initial fuel load costs, and switchyard and transmission costs. MEAG has additionally provided that its total financing needs for its share of the Additional Vogtle Units, including reserve funds and other fund deposits required under the financing documents, are approximately \$6,975,000. Based on information provided by MEAG, (i) the portion of the total in-service cost for Plant Vogtle Units 3 and 4 allocable to Project J is approximately \$2,715,000 and (ii) the portion of additional in-service costs relating to reserve funds and other fund deposits is approximately \$203,000 resulting in total financing needs of approximately \$2,918,000.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 10. Fuel Purchase and Purchased Power Commitments (continued)

Financing for Project J – In order to finance a portion of its acquisition and construction of Project J and to refund bond anticipation notes previously issued by MEAG, MEAG issued approximately \$1,248,435 of its Plant Vogtle Units 3 and 4 Project J Bonds (the 2010 PPA Bonds) on March 11, 2010. Of the total 2010 PPA Bonds, approximately \$1,224,265 were issued as Federally Taxable – Issuer Subsidy – Build America Bonds where MEAG expects to receive a cash subsidy payment from the United States Treasury for 35% of the related interest, subject to reduction due to sequestration. At this time, a portion of the interest subsidy payments with respect to the Build America Bonds is not being paid as a result of the federal government sequestration process and the Bipartisan Budget Act of 2018 for the current fiscal year through fiscal year 2027. The exact amount of such reduction is determined on or about the beginning of the federal government's fiscal year, or October 1, and is subject to adjustment thereafter. The current reduction amount of 6.2% became effective on October 1, 2018. MEAG issued approximately \$185,180 of additional Project J tax-exempt bonds on September 9, 2015.

On June 24, 2015, in order to obtain certain loan guarantees from the United States Department of Energy (DOE) for further funding of Plant Vogtle Units 3 and 4, MEAG divided its undivided ownership interest in Plant Vogtle Units 3 and 4 into three separate undivided interests and transferred such interests to the Vogtle Units 3 and 4 Project Entities. MEAG transferred approximately 41.175% of its ownership interest, representing 206 MW of nominally rated generating capacity (which is the portion of MEAG's ownership interest attributable to Project J), to MEAG Power SPVJ, LLC (the Project J Entity).

The Project J Entity entered into a loan guarantee agreement with the DOE in 2015, subsequently amended in 2016 and 2017, under which the Project J Entity is permitted to borrow from the Federal Financing Bank (FFB) an aggregate amount of approximately \$577,743. To date, the Project J Entity has received proceeds from borrowings under the loan guarantee agreement in an aggregate principal amount of approximately \$341,446. There is additional borrowing capacity of approximately \$236,297 under the Project J Entity's existing DOE-guaranteed loan. On September 28, 2017, DOE, MEAG, and the Vogtle Units 3 and 4 Project Entities entered into a conditional commitment for additional DOE loan guarantees in the aggregate amount of \$414,700. On September 17, 2018, the DOE extended the expiration date of such conditional commitment to March 31, 2019. Subject to satisfaction of the conditions contained in such conditional commitment, it is expected that the Project J Entity will obtain from FFB such additional lending commitment in the amount of \$111,541. While MEAG expects that the total financing needs for Project J will exceed the aggregate of the Project J Entity's FFB lending commitments and the balance will be financed in the capital markets, in the event that the JEA litigation challenging its obligations under the Additional Vogtle Units PPA materially impedes access to capital markets for MEAG, Georgia Power has agreed to provide certain funding as described below under "Description of Construction Contracts and Status of Construction".

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 10. Fuel Purchase and Purchased Power Commitments (continued)

Summary of financing associated with Project J:

	Borrowings to Date	Additional Capacity	Total Projected Borrowings
2010A Build America Bonds	\$ 1,224,265	\$ -	\$ 1,224,265
2010B tax-exempt bonds	24,170	_	24,170
2015A tax-exempt bonds	185,180	_	185,180
DOE loan guarantee	341,446	236,297	577,743
Additional conditional DOE loan guarantee	_	111,541	111,541
Additional public markets bonds	_	666,290	666,290
Other sources of funds		129,198	129,198
Total	\$ 1,775,061	\$ 1,143,326	\$ 2,918,387

JEA

# Notes to Financial Statements (continued) (Dollars in Thousands)

# 10. Fuel Purchase and Purchased Power Commitments (continued)

Based on information provided by MEAG, JEA's portion of the debt service on the outstanding Project J debt as of September 30, 2018 is summarized as follows:

Fiscal Year Ending September 30	Principal	Interest	A	nnual Debt Service	Build America onds Subsidy	С	apitalized Interest	Net Debt Service
2019	\$ 12,750	\$ 98,800	\$	111,550	\$ (27,612)	\$	(71,188)	\$ 12,750
2020	16,183	97,995		114,178	(27,392)		(70,603)	16,183
2021	19,952	97,058		117,010	(27,100)		(69,958)	19,952
2022	20,706	95,983		116,689	(26,790)		(33,262)	56,637
2023	22,100	94,842		116,942	(26,466)		(4,207)	86,269
2024	22,967	93,642		116,609	(26,129)		_	90,480
2025	23,819	92,385		116,204	(25,776)		_	90,428
2026	24,685	91,079		115,764	(25,409)		_	90,355
2027	25,570	89,721		115,291	(25,026)		_	90,265
2028	26,538	88,311		114,849	(24,626)		_	90,223
2029	27,511	86,844		114,355	(24,209)		_	90,146
2030	28,528	85,318		113,846	(23,774)		_	90,072
2031	29,586	83,733		113,319	(23,320)		_	89,999
2032	30,661	82,084		112,745	(22,847)		_	89,898
2033	31,842	80,370		112,212	(22,353)		_	89,859
2034	33,035	78,587		111,622	(21,838)		_	89,784
2035	34,272	76,733		111,005	(21,301)		_	89,704
2036	28,275	74,805		103,080	(20,740)		_	82,340
2037	16,223	72,799		89,022	(20,155)		_	68,867
2038	10,905	70,713		81,618	(19,545)		_	62,073
2039	6,973	68,543		75,516	(18,909)		_	56,607
2040	1,424	66,250		67,674	(18,246)		_	49,428
2041	-	63,866		63,866	(17,553)		_	46,313
2042	_	31,076		31,076	(9,217)		_	21,859
2043		4,058		4,058	(1,249)			2,809
Total	\$ 494,505	\$ 1,965,595	\$	2,460,100	\$ 5 (547,582)	\$	(249,218)	\$ 1,663,300

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 10. Fuel Purchase and Purchased Power Commitments (continued)

Description of Construction Contracts and Status of Construction

In 2008, Georgia Power, acting for itself and as agent for the other Vogtle Co-Owners, entered into a contract (EPC Contract) pursuant to which the Contractor agreed to design, engineer, procure, construct, and test the Additional Vogtle Units. The entities that constituted the Contractor prior to June 9, 2017 were Westinghouse Electric Company LLC (Westinghouse) and WECTEC Global Project Services Inc. (WECTEC, and together with Westinghouse, the Contractor).

On March 29, 2017, Westinghouse and WECTEC each filed for bankruptcy protection under Chapter 11 of the United States Bankruptcy Code.

On June 9, 2017, Georgia Power (for itself and as agent for the other Vogtle Co-Owners) and the Contractor entered into a services agreement (Services Agreement) for the Contractor to transition construction management of Plant Vogtle Units 3 and 4 to Southern Nuclear Operating Company, an affiliate of Georgia Power (SNC or Southern Nuclear), and to provide ongoing design, engineering, and procurement services to SNC. The Services Agreement has taken effect and provides that the Contractor will generally be compensated on a time and materials basis for services rendered. The Services Agreement will continue until the start-up and testing of Plant Vogtle Units 3 and 4 is complete and electricity is generated and sold from both units. Facility design and engineering remains the responsibility of Westinghouse under the Services Agreement. The Services Agreement is terminable by the Vogtle Co-Owners upon 30 days' written notice.

As a result of the Westinghouse and WECTEC bankruptcy, Georgia Power, along with SNC acting as the project manager, will manage the remaining bulk construction phase of the Additional Vogtle Units on behalf of the Owners pursuant to a revised Ownership Participation Agreement. Effective October 23, 2017, Bechtel Power Corporation (Bechtel) will serve as the prime construction contractor for the remaining construction activities for Plant Vogtle Units 3 and 4 under a Construction Agreement entered into between Bechtel and Georgia Power, acting for itself and as agent for the other Vogtle Co-Owners (Construction Agreement).

Unlike the EPC Contract, which required the Contractor to absorb most of the construction cost overruns for the Additional Vogtle Units, the Construction Agreement is a cost reimbursable plus fee arrangement, whereby Bechtel will be reimbursed by the Vogtle Co-Owners for actual costs plus a base fee and an at-risk fee, which is subject to adjustment based on Bechtel's performance against cost and schedule targets. Each Vogtle Co-Owner is severally (not jointly) liable for its proportionate share, based on its ownership interest, of all amounts owed to Bechtel under the Construction Agreement.

The Vogtle Co-Owners may terminate the Construction Agreement at any time for their convenience, provided that the Vogtle Co-Owners will be required to pay amounts related to work performed prior to the termination (including the applicable portion of the base fee), certain termination-related costs, and, at certain stages of the work, the at-risk fee. Bechtel may terminate the Construction Agreement under certain circumstances, including certain Vogtle Co-Owner suspensions of work, certain breaches of the Construction Agreement by the Vogtle Co-Owners, Vogtle Co-Owner insolvency, and certain other events.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 10. Fuel Purchase and Purchased Power Commitments (continued)

Georgia Power recommended in the 17th Vogtle Construction Monitoring report (the VCM 17 Report, filed with the Georgia Public Service Commission ("GPSC") on August 31, 2017), that the construction of the Additional Vogtle Units be continued. The Vogtle Co-Owners recommended that the Additional Vogtle Units be completed on the condition that any of the Owners have the right to abandon the construction of the Plant Vogtle Units 3 and 4 if the revised cost estimate or the revised construction schedule is not approved by the GPSC or if there is a determination by the GPSC that any of Georgia Power's share of the total investment in Plant Vogtle Units 3 and 4 or Georgia Power's associated financing costs will not be recovered in Georgia Power's retail rates, because they are deemed by the GPSC to be unreasonable or imprudent.

The Vogtle Co-Owners entered into an amendment, dated as of November 2, 2017, to their joint ownership agreements for Plant Vogtle Units 3 and 4 (as amended, the "Joint Ownership Agreements") to provide for, among other conditions, additional Vogtle Co-Owner approval requirements. Pursuant to the Joint Ownership Agreements, the holders of at least 90% of the ownership interests in Plant Vogtle Units 3 and 4 must vote to continue construction if certain adverse events occur including: (1) termination or rejection in bankruptcy of certain agreements, including the Services Agreement or the Construction Agreement; (2) the GPSC or Georgia Power determines that any of Georgia Power's costs relating to the construction of Plant Vogtle Units 3 and 4 will not be recovered in retail rates because such costs are deemed unreasonable or imprudent; or (3) an increase in the construction budget contained in the Vogtle Construction Monitoring 17 Report of more than \$1,000,000 or extension of the project schedule contained in the VCM 17 Report of more than one year. In addition, pursuant to the Joint Ownership Agreements, the required approval of holders of ownership interests in Plant Vogtle Units 3 and 4 is at least (1) 90% for a change of the primary construction contractor and (2) 67% for material amendments to the Services Agreement or agreements with Southern Nuclear or the primary construction contractor, including the Construction Agreement.

The Joint Ownership Agreements also provide that the Vogtle Co-Owners' sole recourse against Georgia Power or Southern Nuclear for any action or inaction in connection with their performance as agent for the Vogtle Co-Owners is limited to removal of Georgia Power and/or Southern Nuclear as agent, except in cases of willful misconduct.

On December 21, 2017, the GPSC took a series of actions related to the construction of Plant Vogtle Units 3 and 4 and issued its related order on January 11, 2018. Among other actions, the GPSC (i) accepted Georgia Power's recommendation to continue construction of Plant Vogtle Units 3 and 4, with Southern Nuclear serving as construction manager and Bechtel as primary contractor and (ii) approved the revised schedule placing Vogtle Unit 3 in service in November 2021 and Vogtle Unit 4 in service in November 2022. In its January 11, 2018 order, the GPSC stated if certain conditions change and assumptions upon which Georgia Power's VCM 17 Report are based do not materialize, the GPSC reserved the right to reconsider the decision to continue construction.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 10. Fuel Purchase and Purchased Power Commitments (continued)

During the latter part of the second quarter through the early part of the third quarter of 2018, Georgia Power advised the other Vogtle co-owners that it had become aware that certain estimated future Vogtle project costs were projected to exceed the corresponding budgeted amounts. The base capital costs estimated to complete construction were expected to increase by approximately \$1,400,000 (the aggregate 22.7% shares of the Vogtle Units 3 and 4 Project Entities were estimated at \$317,800). Georgia Power stated that although it believed these increased costs to be reasonable and necessary to complete the project, Georgia Power did not intend to seek rate recovery for these cost increases included in the current base capital cost forecast (or any related financing costs). As a result of the increase in the total project capital cost forecast and Georgia Power's decision not to seek rate recovery of its allocation of the increase in the costs as described above, the holders of at least 90% of the ownership interests in Plant Vogtle Units 3 and 4 were required to vote to continue construction. MEAG, and the other Vogtle Co-Owners, are evaluating these increased capital costs along with a project-level contingency estimated by Georgia Power in a preliminary amount of \$800,000 (the aggregate 22.7% shares of the Vogtle Units 3 & 4 Project Entities estimated at \$182,000). In connection with future Vogtle Construction Monitoring filings, Georgia Power may request the GPSC to evaluate costs currently included in the construction contingency estimate for rate recovery as and when they are appropriately included in the base capital cost forecast.

On September 26, 2018, the co-owners received the required vote to continue construction of Plant Vogtle Units 3 and 4. In connection with the vote to continue construction, Georgia Power entered into (i) a binding term sheet (the Vogtle Owner Term Sheet) with the other co-owners to take certain actions which partially mitigate potential financial exposure for the other co-owners, including amendments to the Vogtle Joint Ownership Agreements and the purchase of production tax credits (PTCs) from the other co-owners, and (ii) a binding term sheet (the MEAG Term Sheet and, together with the Vogtle Owner Term Sheet, the "Term Sheets") with MEAG and the Project J Entity to provide funding with respect to the Project J Entity's ownership interest in Plant Vogtle Units 3 and 4 under certain circumstances.

Under the Vogtle Owner Term Sheet, among other amendments to the Vogtle Joint Ownership Agreements, provisions of the Vogtle Joint Ownership Agreements requiring that co-owners holding 90% of the ownership interests in Plant Vogtle Units 3 and 4 vote to continue construction following certain adverse events would be amended. In particular, an increase in the construction cost estimate for Plant Vogtle Units 3 and 4 would no longer constitute an adverse event and thus would no longer require a vote. In addition, the adverse event relating to disallowances of cost recovery by Georgia Power would be amended to exclude any additional amounts paid by Georgia Power on behalf of the other co-owners pursuant to certain Vogtle Owner Term Sheet provisions and the first 6% of costs during any six-month VCM reporting period that are disallowed by the GPSC for recovery, or for which Georgia Power elects not to seek cost recovery, through retail rates. In addition, the Vogtle Owner Term Sheet provides that the Vogtle Joint Ownership Agreements would be revised to provide that Georgia Power may cancel the project at any time in its sole discretion.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 10. Fuel Purchase and Purchased Power Commitments (continued)

Pursuant to the MEAG Term Sheet<sup>1</sup>, if the Project J Entity is unable to make its payments due under the Vogtle Joint Ownership Agreements solely because (i) the conduct of JEA, such as JEA's continuation of its litigation challenging its obligations under the Additional Vogtle Units PPA, materially impedes access to capital markets for MEAG for Project J, or (ii) the Additional Vogtle Units PPA is declared void by a court of competent jurisdiction or rejected by JEA under the applicable provisions of the United States Bankruptcy Code (each of (i) and (ii), a JEA Default), Georgia Power will purchase from the Project J Entity the rights to PTCs attributable to the Project J Entity's share of Plant Vogtle Units 3 and 4 (approximately 206 MW) at varying prices dependent upon the stage of construction of Plant Vogtle Units 3 and 4.

At the option of MEAG, as an alternative or supplement to Georgia Power's purchase of PTCs as described above, Georgia Power has agreed to provide up to \$250,000 in funding to MEAG for Project J in the form of loans (either advances under the Vogtle Joint Ownership Agreements or the purchase of Project J Bonds), subject to any required approvals of the GPSC and the DOE.

In the event the Project J Entity certifies to Georgia Power that it is unable to fund its obligations under the Vogtle Joint Ownership Agreements as a result of a JEA Default and Georgia Power becomes obligated to provide funding as described above, MEAG is required to (i) assign to Georgia Power its right to vote on any future adverse event and (ii) diligently pursue JEA for its breach of the Project J PPA.

Under the terms of the MEAG Term Sheet, Georgia Power may decline to provide any funding in the form of loans, including in the event of a failure to receive any required GPSC or DOE approvals, and cancel the project in lieu of providing such loan funding.

#### Litigation and Regulatory Proceedings

Litigation — As noted in the Overview section, on September 11, 2018, both MEAG and JEA filed court actions seeking declaratory judgment on the enforceability of the Additional Vogtle Units PPA. MEAG filed its action in the United States District Court for the Northern District of Georgia, Civil Action No.: 1:18-CV-04295-MHC and JEA and the City filed their action in the Circuit Court, Fourth Judicial Circuit, Duval County, Florida, Case No.: 16-2018-CA-006197-XXXX-CV-G, removed to the United States District Court for the Middle District of Florida, Case No.: 3:18-cv-174-J-39JRK. Both cases are engaged in extensive procedural litigation over the forum in which the substantive issues will be tried. JEA will vigorously defend and prosecute these actions, but provides no assurances regarding the outcome or consequences of the litigation.

Information provided regarding the MEAG Term Sheet is based on information filed by MEAG with the Municipal Securities Rulemaking Board (the "MSRB"), through the MSRB's Electronic Municipal Market Access ("EMMA") website currently located at http://emma.msrb.org. JEA has not been able to independently review the MEAG Term Sheet.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 10. Fuel Purchase and Purchased Power Commitments (continued)

Regulatory Proceedings – On September 17, 2018, JEA filed a petition with the Federal Energy Regulatory Commission (FERC) seeking a determination that FERC has exclusive jurisdiction pursuant to the Federal Power Act (FPA) over the Additional Vogtle Units PPA (FERC Petition). If FERC grants jurisdiction over the Additional Vogtle Units PPA, FERC will determine the validity of the Additional Vogtle Units PPA terms and conditions under the "just and reasonable" standard set forth in the FPA. Numerous entities, including MEAG, public utilities, municipalities, and trade groups, have filed comments with FERC challenging the theories of law and arguments raised in the FERC Petition. There is no deadline for FERC to render a decision on the FERC Petition.

#### Option to Purchase Interest in Lee Nuclear Station

On February 1, 2011, JEA entered into an option agreement with Duke Energy Carolinas, LLC (Duke Carolinas), a wholly owned subsidiary of Duke Energy Corporation, pursuant to which JEA has the option (but not the obligation) to purchase an undivided ownership interest of not less than 5% and not more than 20% of the proposed two-unit nuclear station currently known as William States Lee III Nuclear Station, Units 1 and 2 to be constructed at a site in Cherokee County, South Carolina (the Lee Project). The Lee Project planned to have 2,234 MW of electric generating capacity with a projected on-line date of 2026 with respect to Unit 1 and 2028 with respect to Unit 2. The total cost of the option was \$7,500, payment of which has been completed. JEA obtained this option in furtherance of its 2010 policy target to acquire up to 30% of JEA's energy requirements from nuclear sources by 2030.

The option agreement requires that JEA and Duke Carolinas complete negotiation of an ownership agreement and an operation and maintenance agreement for the Lee Project prior to JEA exercising the option. The option exercise period will be opened by Duke Carolinas after it (i) receives NRC approval of the COL for the Lee Project and (ii) executes an engineering, procurement, and construction agreement for the Lee Project. The Lee Project COL was received from the NRC in December 2016. In August 2017, Duke Carolinas filed with the North Carolina Utilities Commission and the South Carolina Public Service Commission to cancel the plant. This cancellation allows Duke Carolinas to seek cost recovery for the expenditures on licensing the plant, however, the NRC license remains active and the cancellation is not permanent. There is currently no schedule for negotiating an EPC agreement.

Once the exercise period is opened, JEA will have 90 days within which to exercise the option, and, if it does exercise the option, it must specify the percentage undivided ownership interest in the Lee Project that it will acquire.

After JEA exercises the option (should it elect to do so) and various regulatory approvals are obtained, JEA must pay Duke Carolinas the exercise price for the option. Such price is generally JEA's pro rata share, based on its percentage ownership interest in the Lee Project, of the development and pre construction cost for the Lee Project incurred by Duke Carolinas from the beginning of the Lee Project through the closing date of the option exercise. JEA is undecided as to the financing structure it would employ to finance its interest in the Lee Project, should it elect to exercise its option.

Under certain circumstances, should the Lee Project be terminated by Duke Carolinas, Duke may be obligated to provide JEA with options for alternative resources (but not necessarily from nuclear resources) to replace JEA's optionable portion of the projected Lee Project capacity.

### Notes to Financial Statements (continued) (Dollars in Thousands)

#### 10. Fuel Purchase and Purchased Power Commitments (continued)

Such alternative resources are to be available to JEA within two years of the projected online date for the Lee Project, once such date is set. No alternative resource for the Lee Project has yet been proposed by Duke Carolinas.

#### Solar Projects

In 2009, JEA entered into a 30-year purchased power agreement with Jacksonville Solar, LLC for the produced energy, as well as the associated environmental attributes from a solar farm, Jacksonville Solar, which has been constructed in JEA's service territory. The facility, which consists of 200,000 photovoltaic panels on a JEA-leased 100-acre site, is owned by PSEG Solar Source, LLC and generated approximately 18,391 MWh of electricity in 2018 and 20,074 MWh of electricity in 2017. JEA pays only for the energy produced. Purchases of energy were \$3,592 for fiscal year 2018 and \$3,819 in 2017.

As part of JEA's continued commitment to the environment, and to increase JEA's level of carbon-free renewable energy generation, in December 2014, the Board established a solar policy to add up to 38 MWac of solar photovoltaic capacity. To support this policy, JEA issued Requests for Proposals for Power Purchase Agreements (PPAs) in December 2014 and April 2015. Seven PPAs, representing 27 MWac, have been finalized. One other PPA, which had been finalized, was terminated due to the failure of the awardee (SunEdison) to establish site control within the time allowed by the contract. The solar PPAs are distributed around JEA's service territory.

The projects for this 2014 initiative are scheduled for completion in 2018. As of the end of fiscal year 2018, five of the seven projects had been completed: NW Jacksonville Solar, Old Plank Road Solar, Starratt Solar, Simmons Solar, and Blair Road Solar. JEA entered into 20-25 year purchased power agreements for the energy and the associate environmental attributes from each solar farm. The solar facilities generated approximately 36,755 MWh in 2018 and 5,394 MWh in 2017. JEA pays only for the energy produced. Purchases of energy were \$2,703 for fiscal year 2018 and \$354 in 2017.

The JEA Board approved a further solar expansion consisting of five 50 MWac solar facilities to be constructed on JEA owned property. These projects, totaling 250 MWac, will be structured as PPAs. EDF-DS was selected as the vendor for the sites and contract negotiations are currently underway. It is expected the facilities will be phased into service with all sites completed by 2022.

#### Trail Ridge Landfill

JEA purchases energy from two landfill gas-to-energy facilities through PPA agreements with Landfill Energy Systems (LES). Each agreement is for 9.6 MWs. Currently, JEA purchases 9.6 MW from Trail Ridge Landfill in Jacksonville, FL and 6.4 MW from Sarasota Landfill in Sarasota, FL. LES can supply the remaining 3.2 MW from Sarasota if it is expanded and becomes available. JEA pays only for the energy produced. LES pays all transmission and ancillary charges associated with transmitting the energy from Sarasota to Jacksonville, which came online in January 2015. Purchases of landfill energy were 76,821 MWh for \$4,554 in fiscal year 2018 and 89,682 MWh for \$3,671 in 2017.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 11. Energy Market Risk Management Program

The energy market risk management program is intended to help manage the risk of changes in the market prices of fuel consumed by JEA for electric generation. In December 2017, JEA entered into a financial swap that locked in the monthly commodity price of natural gas for calendar year 2018 for approximately 40% of its expected annual natural gas requirements. In August and September 2018, JEA entered into financial swaps that locked in the monthly commodity price of natural gas for December 2019 through December 2021 for approximately 45% of its expected annual natural gas requirements in those years. There was no additional activity in the program during fiscal year 2017.

JEA executes over-the-counter forward purchase and sale contracts and swaps. For effective derivative transactions, hedge accounting is applied in accordance with GASB Statement No. 53 and the fair market value changes are recorded on the accompanying statements of net position as either a deferred charge or a deferred credit until such time that the transactions end. Deferred charges of \$1,851 were included in deferred inflows of resources on the statements of net position at September 30, 2018 and \$0 at 2017. The related settled gains and losses from these transactions are recognized as fuel expenses on the accompanying statements of revenues, expenses, and changes in net position. For the year ended September 30, 2018, there was a realized gain included in fuel expense of \$4,191 and a realized loss of \$323 in 2017.

#### 12. Pension Plans

Substantially all employees of the Electric System and Water and Sewer System participate in and contribute to the City of Jacksonville General Employee Retirement Plan (GERP), as amended. The GERP is a cost-sharing, multiple-employer contributory defined benefit pension plan with a defined contribution alternative. GERP, based on laws outlined in the City of Jacksonville Ordinance Code and applicable Florida statutes, provides for retirement, survivor, death, and disability benefits. Its latest financial statements and required supplementary information are included in the 2017 Comprehensive Annual Financial Report of the City of Jacksonville, Florida. This report may be obtained at: http://www.coj.net/departments/finance/docs/accounting/city-of-jacksonville-2017-cafr-secure.aspx or by writing to the City of Jacksonville, Florida, Department of Administration and Finance, Room 300, City Hall, 117 West Duval Street, Jacksonville, Florida 32202-3418.

The first phase of pension reform was approved by the City of Jacksonville in April 2017. The reform provides for a dedicated funding source for the GERP, Corrections Officers Plan, and Police and Fire Pension Plan through the extension of the Better Jacksonville Plan half-cent sales tax. The surtax will remain in effect until the earlier of December 31, 2060 or when it is determined by the actuarial report to the Florida Department of Management Services that the funding level of each of the City's three defined benefit retirement plans, which are funded by surtax, is expected to reach or exceed 100%.

In order for the plan to benefit from the sales tax revenue, the GERP was closed to new members and employees as of September 30, 2017.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

Plan Benefits Provided – Participation in the GERP is mandatory for all full-time employees of JEA, Jacksonville Housing Authority, North Florida Transportation Planning Authority, and the City of Jacksonville, other than police officers and firefighters. Appointed officials and permanent employees not in the civil service system may opt to become members of GERP. Elected officials are members of the Florida Retirement System Elected Officer Class. Members of the GERP are eligible to retire with a normal pension benefit upon achieving one of the following: (a) completing 30 years of credited service, regardless of age; (b) attaining age 55 with 20 years of credited service; or (c) attaining age 65 with five years of credited service. There is no mandatory retirement age.

Upon reaching one of the three conditions for retirement described above, a member is entitled to a retirement benefit of 2.5% of final average compensation, multiplied by the number of years of credited service, up to a maximum benefit of 80% of final monthly compensation. A time service retirement benefit is payable bi-weekly, to commence upon the first payday coincident with or next payday following the member's actual retirement, and will continue until death.

Each member and survivor is entitled to a cost of living adjustment (COLA). The COLA consists of a 3% increase of the retiree's or survivor's pension benefits, which compounds annually. The COLA commences in the first full pay period of April occurring at least 4.5 years (and no more than 5.5 years) after retirement. In addition, there is a supplemental benefit. The supplemental benefit is equal to five dollars (\$5) multiplied by the number of years of credited service. This benefit may not exceed \$150 per month.

Contributions – Florida law requires plan contributions be made annually in amounts determined by an actuarial valuation in either dollars or as a percentage of payroll. The Florida Division of Retirement reviews and approves the City's actuarial report to ensure compliance with actuarial standards and appropriateness for funding purposes. In fiscal year 2018, JEA plan members were required to contribute 10% of their annual covered salary. In fiscal year 2017, JEA plan members were required to contribute 8% of their annual covered salary. JEA's contribution of the covered payroll for the JEA plan members was \$35,459 (21.09%) in fiscal year 2018 and \$48,942 (38.27%) in 2017. Contributions were made in accordance with contribution requirements determined through an actuarial valuation.

#### **Defined Contribution Plan**

The City has, by ordinance, a defined contribution (DC) plan within the Jacksonville Retirement System for GERP participants as an employee choice alternative to the defined benefit (DB) plans. Beginning in fiscal year 2011, employees had the option to participate in a DC plan. Employees vest in the employer contributions to the plan at 25% after two years, and 25% per year thereafter until fully vested after five years of service. Employees hired prior to September 30, 2017 can electively change from the DC plan to the DB plan, or vice versa, up to three times within their first five years of participation. All employees hired after September 30, 2017 now enter this plan.

In fiscal years 2018 and 2017, JEA plan members of the defined contribution plan were required to contribute 8% of their annual covered salary. JEA's contribution for the members of the defined contribution plan was \$1,886 (11.31%) in fiscal year 2018 and \$982 (8%) in 2017. Any contribution forfeitures were used to offset plan expenses.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

#### Disability Program Fund

All contributions for both the defined contribution and defined benefit plans of the City of Jacksonville were separated between the pension contribution and a disability program fund. Due to this change, a physical exam is not required to participate in the plans.

### Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflow of Resources Related to Pensions

**Net Pension Liability** – JEA's net pension liability at September 30, 2018 and September 30, 2017 was measured based on an actuarial valuation as of September 30, 2017 and September 30, 2016, respectively. JEA's allocated share of the net pension liability is \$527,680 (51.68%) as of September 30, 2018, based on an allocation proportional to the actual contributions paid during the year ended September 30, 2017. JEA's allocated share of the net pension liability as of September 30, 2017 was \$541,025 (50.37%), based on an allocation proportional to the actual contributions paid during the year ended September 30, 2016.

For the year ended September 30, 2018 and 2017, JEA's recognized pension expense is \$77,111 and \$74,849, respectively. As JEA has implemented regulatory accounting for pensions, the difference between the recognized pension expense and the cash contributions paid has been deferred as a regulatory asset. See note 2, Regulatory Deferrals, for additional details.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 12. Pension Plans (continued)

JEA reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	September 30			30
		2018		2017
Deferred outflows of resources				
Changes in assumptions	\$	59,741	\$	49,859
Contributions subsequent to the measurement date		35,459		48,942
Differences between expected and actual experience		25,477		24,354
Net difference between projected and actual earnings on pension investments		_		24,319
Changes in proportion		16,452		9,599
Total	\$	137,129	\$	157,073
Deferred inflows of resources				
Net difference between projected and actual earnings on pension investments	\$	(37,760)	\$	_
Changes in assumptions		(3,730)		(5,454)
Differences between expected and actual experience		(1,543)		(2,525)
Total	\$	(43,033)	\$	(7,979)

Contributions of \$35,459 were reported as deferred outflows of resources related to pensions resulting from JEA contributions subsequent to the September 30, 2017 measurement date and will be recognized as a reduction of the net pension liability in the year ended September 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended September 30	Recognition Deferred Outf (Inflows)	ed Outflows	
2019	\$ 26	3,251	
2020	24	4,888	
2021	8	3,622	
2022		3,124)	
Total	\$ 50	3,637	

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 12. Pension Plans (continued)

Actuarial Assumptions — The total pension liability was determined by an actuarial valuation as of September 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases assumption	3.00% 6.00%, of which 2.75% is the Plan's long-term payroll inflation
Investment rate of return	7.20%, net of pension plan investment expense, including inflation
Healthy pre-retirement mortality rates	50% RP2000 Combined Healthy White Collar and 50% RP2000 Combined Healthy Blue Collar, set forward 2.5 years, projected generationally with Scale BB for males; RP2000 Combined Healthy White Collar, set forward 2.5 years, projected generationally with Scale BB for females.
Healthy post-retirement mortality rates	50% RP2000 White Collar Annuitant and 50% RP2000 Blue Collar Annuitant, set forward 2.5 years, projected generationally with Scale BB for males; RP2000 White Collar Annuitant, set forward 2.5 years, projected generationally with Scale BB for females.
Disabled mortality rates	RP-2000 Disabled Retiree Mortality Table, setback four years for males and set forward two years for females

The actuarial assumptions used in the valuations were based on the results of an experience study for the period October 1, 2007 to September 30, 2012. Data from the experience study is reviewed in conjunction with each annual valuation, and updates to the mortality improvement scale and discount rate have been made as of September 30, 2017.

### Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

The long-term expected rate of return on pension 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 pension plan 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 percentages and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2017, are summarized in the following table. The long-term expected real rates of return are based on 20-year projections of capital market assumptions provided by Segal Marco Advisors.

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic equity	35%	6.40%
International equity	20%	7.40%
Real estate	25%	5.10%
Fixed income	19%	1.75%
Cash	1%	1.10%
Total	100%	=

**Discount Rate** — The discount rate used to measure the total pension liability is 7.20%. The projection of cash flows used to determine the discount rate assumed plan member contributions would be made at their applicable contribution rates and that City contributions would be made at rates equal to the actuarially determined contribution rates. Based on these assumptions, the Plan's fiduciary net position 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 the Plan's investments was applied to all periods of projected benefit payments to determine the total pension liability. Cash flow projections were run for a 120-year period.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate — The following presents the net pension liability of the Jacksonville GERP, calculated using the discount rate of 7.20% for 2018 and 7.40% for 2017, as well as what the Jacksonville GERP's net pension liability would be if it were calculated using a discount rate that is 1% lower or 1% higher than the discount rate used:

	Net Pension Liability			
	2018		2017	
1% decrease	\$ 713,777	\$	713,190	
Current discount	527,680		541,025	
1% increase	372,518		397,385	

**Pension Plan Fiduciary Net Position** – Detailed information about the pension plan's fiduciary net position is included in the 2017 Comprehensive Annual Financial Report of the City of Jacksonville, Florida.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

#### St. Johns River Power Park Plan Description

Plan Description – The SJRPP Plan is a single employer contributory defined benefit plan that covers employees of SJRPP. The SJRPP Plan provides for pension, death, and disability benefits. Participation in the SJRPP Plan is required as a condition of employment. The SJRPP Plan is subject to provisions of Chapter 112 of the State of Florida Statutes and the oversight of the Florida Division of Retirement. The SJRPP Plan is governed by a five-member pension committee (Pension Committee). As part of the Asset Transfer Agreement with FPL related to the shutdown of SJRPP, JEA assumed all payment obligations and other liabilities related to separation benefits for the qualifying SJRPP employees and any amounts required to be deposited in SJRPP Pension Fund.

The SJRPP Plan periodically issues stand-alone financial statements, with the most recent report issued for the year ended September 30, 2017. This report may be obtained at https://www.jea.com/About/Investor Relations/Financial Reports/SJRPP Pension.

Pursuant to the February 25, 2013 amendment, the SJRPP Plan consists of two tiers: Tier One is the Defined Benefits Tier and Tier Two is the Cash Balance Tier. Tier One participants will remain in the traditional defined benefit plan, and Tier Two employees (defined as employees with less than 20 years of experience) will participate in a modified defined benefit plan, or "cash balance" plan, with an employer match provided for any Tier Two employee who contributes to the 457 Plan. Participants hired after February 25, 2013 are only eligible to accrue Tier Two benefits.

Plan Benefits Provided – Members of the SJRPP Plan are eligible to retire with a normal pension benefit upon achieving one of the following: (a) completing 30 years of credited service, regardless of age; (b) attaining age 55 with 20 years of credited service; or (c) attaining age 65 with five years of credited service. There is no mandatory retirement age.

Upon reaching one of the three conditions for retirement described above, a member in Tier One is entitled to a retirement benefit of:

- 2.0% of final average earnings (FAE) multiplied by the number of years of credited service, not to exceed
   15 years
- plus 2.4% of FAE multiplied by the number of years of credited service in excess of 15 years, but not to exceed 30 years
- plus .65% of the excess FAE over the Social Security Average Wages multiplied by years of credited service, not to exceed 35 years

FAE is the annual average of a participant's earnings over the highest 36 consecutive complete months out of the last 120 months of participation immediately preceding retirement or termination. Retirement benefits are payable bi-weekly beginning on the first day of the month following or coincident with the participant's Earliest Retirement Age.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

As of February 25, 2013, the accrued benefits in Tier One of newly classified Tier Two participants were frozen. Distribution of frozen Tier One Benefits is governed by the provisions applicable to Tier One. Tier Two Benefits employees receive annual pay credits to their Cash Balance accounts in the amount of 6.0% of earnings between February 25, 2013 and September 30, 2015 and 8.5% of earnings on or after October 1, 2015. Cash Balance Accounts are credited with interest at the rate of 4% per year. Benefits may be distributed as a lump sum, by rollover in accordance with the Internal Revenue Service Code or as an annuity, at the election of the participant.

For participants retired on or after October 1, 2003, each member and survivor of Tier One is entitled to a COLA. The COLA consists of a 1% increase of the retiree's or survivor's pension benefits, which compounds annually. The COLA commences each October 1 following the fifth anniversary of payment commencement.

**Employees Covered by Benefit Terms** – At September 30, 2018 and September 30, 2017, the following employees were covered by the benefit terms:

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	2018	2017
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	309	299
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	54	49
Active Plan Members	159	209
Total Plan Members	522	557

Contributions – The SJRPP Plan's funding policy provides for biweekly employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate assets to pay benefits when due. In fiscal years 2018 and 2017, SJRPP plan members were required to contribute 4% of their annual covered salary, and SJRPP employer's contribution to the SJRPP Plan was \$26,409 (454.62%) in 2018 and \$8,039 (51.47%) in 2017.

**Net Pension Liability** – SJRPP's net pension liability at September 30, 2018 and September 30, 2017 was measured based on an actuarial valuation as of September 30, 2017 and September 30, 2016, respectively.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

**Actuarial Assumptions** —The total pension liability in the October 1, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 2.50%

Salary increases 2.5%–12.5% per year, including inflation

Investment rate of return 7.00%

than Special Risk, described as follows:

Healthy Mortality (Pre-Retirement and Post-Retirement) rates used:

Females: RP2000 Healthy Annuitant rates with 100% White Collar adjustment, generationally projected from year 2000 using Scale BB.

Males: RP2000 Healthy Annuitant rates with 50% White Collar/50% Blue Collar adjustment, generationally projected from year 2000 using

Scale BB.

The actuarial assumptions used in the October 1, 2017 valuation were based on the demographic experience from 2004 through 2012 and economic forecasts available at the time the report was issued. Mortality rates were developed by the Florida Retirement System in a recent experience study and are mandated by the State Statutes for funding valuations.

The long-term expected rate of return on pension 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 pension plan 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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation at the measurement date of September 30, 2017, are summarized in the following table.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

The target allocation and the best estimates of the rate of return for each major asset class are summarized in the following table:

		Long-term
	Target	Expected Real
Asset Class	Allocation	Rate of Return
Domestic equity	47%	6.56%
Fixed income	45%	2.20%
International equity	8%	5.50%
Total	100%	<del>-</del> -

**Discount Rate** – The discount rate used to measure the total pension liability is 7.0%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at their applicable contribution rates and that the employer's contributions will be made at rates equal to the actuarially determined contribution rates. Based on these assumptions, the Plan's fiduciary net position 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 the Plan's investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate – The following presents the net pension liability of SJRPP, calculated using a discount rate of 7.0%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1% lower or 1% higher than the current rate:

	2018	2017
1% decrease	\$ 33,976	\$ 33,650
Current discount rate	16,523	16,640
1% increase	1,896	2,206

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

Changes in the net pension liability are detailed below.

	2017	2016
Total pension liability		
Beginning balance	\$ 158,926	\$ 155,143
Service cost	1,032	1,210
Interest on the total pension liability	10,768	10,514
Changes in benefit terms	_	(59)
Difference between expected and actual experience	10,826	4,444
Changes in assumptions	26	_
Benefit payments	(12,257)	(12,326)
Ending balance	 169,321	158,926
Plan fiduciary net postion		
Beginning balance	142,286	138,902
Employer contributions	8,039	2,142
Employee contributions	625	629
Pension plan net investment income (loss)	14,571	13,379
Benefit payments	(12,257)	(12,326)
Administrative expense	(466)	(440)
Ending balance	152,798	142,286
Net pension liability	\$ 16,523	\$ 16,640

Plan Assets – Cash balances are amounts on deposit with the SJRPP Plan's trust bank, as well as amounts held in various money market funds as authorized in the Investment Policy Statement (Policy). All investments shall comply with the Policy as approved by the Pension Committee, and with the fiduciary standards set forth by the Employee Retirement Income Security Act and requirements set forth by the Florida Statutes. The trust bank balances are collateralized and subject to the Florida Security for Public Deposits Act of Chapter 280, Florida Statutes.

The Plan follows GASB Statement No. 31, Accounting and Financial Reporting for Certain Investments and for External Investment Pools. Investments are presented at fair value, which is based on available or equivalent market values. The money market mutual fund is a 2a-7 fund registered with the SEC and, therefore is presented at actual pooled share price, which approximates fair value.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

At September 30, 2017, the SJRPP Plan's cash and cash equivalents consist of the following:

Cash on hand	\$ 1
Cash equivalents:	
Wells Fargo Treasury Plus Money Market Account	 3,365
Total cash and cash equivalents	\$ 3,366

The Policy specifies investment objectives and guidelines for the SJRPP Plan's investment portfolio and provides asset allocation targets for various asset classes.

At September 30, 2017, investments controlled by the SJRPP Plan that represent 5% or more of the SJRPP Plan's net position were the Alliance Domestic Passive Collective Trust with a basis of \$17,581 and a fair market value of \$44,328. This investment represent 29% of the fiduciary net position available for benefits.

#### Risk

In accordance with GASB Statement No. 40, investments also require certain disclosures regarding policies and practices with respect to the risks associated with them (see discussion in the following paragraphs).

#### Interest Rate Risk

Interest rate risk is the risk that changes in the market interest rates will adversely affect the fair value of an investment. Generally speaking, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. As a means of limiting its exposure to interest rate risk, the SJRPP Plan's fixed income portfolio manager monitors the duration of the fixed maturity securities portfolio as part of the strategy to manage interest rate risk. As of September 30, 2017, the average modified duration of the managed fixed securities portfolio was 4.8 years.

#### Credit risk

Credit risk is the risk that a security or a portfolio will lose some or all of its value due to real or perceived changes in the ability of the issuer to repay its debt. The SJRPP Plan's rated debt instruments as of September 30, 2017 were rated by Standard & Poor's and/or an equivalent nationally recognized statistical rating organization.

The fixed income managers limit their investments to securities with an investment grade rating (BBB or equivalent) and the overall weighted average composite quality rating of the managed fixed income portfolio was Aa3.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

#### Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the SJRPP Plan will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. All the SJRPP Plan's investments are held by the SJRPP Plan's directed trustee and custodian in the SJRPP Plan's name, or by an agent in the SJRPP Plan's name.

#### 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. The Policy specifies an overall target allocation of 55% equities and 45% fixed income, including cash. The Policy further specifies target allocations for the equity investments among several asset classes.

The fair value of the asset classes and portfolio as of September 30, 2017, and specific target allocations are as follows:

	Fair		Actual	Target
	Value		Percent	Percent
U.S. Government Securities and Agencies	\$	28,258	19%	N/A
Corporate bonds - non-convertible		30,658	20%	NA
Money Market/Cash		3,366	2%	NA
Total fixed income		62,282	41%	45%
S&P 500 Index Fund		44,328	29%	28%
S&P 400 Mid-Cap Index Fund		18,428	12%	15%
Small and Mid-Cap Value Fund		13,652	9%	4%
International equities		13,920	9%	8%
Total equities	\$	90,328	59%	55%
Total	\$	152,610		

The Policy allows the percentage allocation to each asset class to vary by plus or minus 5% depending upon market conditions.

For the year ended September 30, 2017, the annual money-weighted rate of return on pension plan investments was 10.39%. This reflects the changing amounts actually invested.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 12. Pension Plans (continued)

#### Foreign Currency Risk

Foreign currency risk is the risk that changes in the exchange rates will adversely affect the fair market value of the investment or a deposit. The Plan is exposed to foreign currency risk through its investments in an international equity mutual fund. Investments in international equities are limited by the Policy's target asset allocation for that asset class. The target for international equities is 8% of the total portfolio. The international fund comprised 9% of total investments as of September 30, 2017.

#### Fair Value Disclosures

GASB Statement No. 72, Fair Value Measurement and Application, addresses accounting and financial reporting issues related to fair value measurements. It provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements.

The SJRPP Plan 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 or liability.

- Level 1 quoted prices (unadjusted) for identical assets or liabilities in active markets that are accessible at the measurement date
- Level 2 Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly
- Level 3 unobservable inputs for an asset or liability

The table below summarizes the SJRPP Plan's investments. Level 1 investments are valued using prices quoted in active markets for those securities. Level 2 investments are valued using direct market observations combined with quantitative pricing models to generate prices.

	Level 1		Level 2		Total
U.S. Government Securities and Agencies	\$	16,662	\$	11,596	\$ 28,258
Corporate bonds - non-convertible		_		30,658	30,658
Money Market/Cash		3,366		_	3,366
Total fixed income		20,028		42,254	62,282
S&P 500 Index Fund		44,328		_	44,328
S&P 400 Mid-Cap Index Fund		17,852		576	18,428
Small and Mid-Cap Value Fund		12,430		1,222	13,652
International equities		_		13,920	13,920
Total equities		74,610		15,718	90,328
Total	\$	94,638	\$	57,972	\$ 152,610

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

**Pension Plan Fiduciary Net Position** – Detailed information about the pension plan's fiduciary net position is available in the separately issued SJRPP Pension Plan financial report.

#### Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to the Pension

**Net Pension Liability** — SJRPP's net pension liability at September 30, 2018 and September 30, 2017 was measured based on an actuarial valuation as of September 30, 2017 and September 30, 2016, respectively. SJRPP's net pension liability is \$16,523 as of September 30, 2018 and \$16,640 as of September 30, 2017. As discussed in note 3, St. Johns River Power Park, during fiscal year 2018, JEA assumed FPL's portion of the pension obligation in accordance with the shutdown agreement.

For the year ended September 30, 2018 and 2017, SJRPP recognized pension expense is \$14,408 and \$4,785, respectively. As JEA has implemented regulatory accounting for pensions, the difference between the recognized pension expense and the cash contributions paid has been deferred as a regulatory asset. See note 2, Regulatory Deferrals, for additional details.

SJRPP Plan reported deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

Deferred outflows of resources20182017Contributions subsequent to the measurement date\$ 26,641\$ 8,664Net difference between projected and actual earnings on pension plan investments4,0916,136Differences between expected and actual experience2,4514,022		September 30				
Contributions subsequent to the measurement date \$ 26,641 \$ 8,664  Net difference between projected and actual earnings on pension plan investments \$ 4,091 \$ 6,136  Differences between expected and actual experience \$ 2,451 \$ 4,022				2017		
Net difference between projected and actual earnings on pension plan investments 4,091 6,136 Differences between expected and actual experience 2,451 4,022	Deferred outflows of resources					
pension plan investments 4,091 6,136 Differences between expected and actual experience 2,451 4,022	Contributions subsequent to the measurement date	\$	26,641	\$	8,664	
Differences between expected and actual experience 2,451 4,022	Net difference between projected and actual earnings on					
·	pension plan investments		4,091		6,136	
<u> </u>	Differences between expected and actual experience		2,451		4,022	
Changes in assumptions 1,055 1,809	Changes in assumptions		1,055		1,809	
Total \$ 34,238 \$ 20,631	Total	\$	34,238	\$	20,631	
Deferred inflows of resources	Deferred inflows of resources					
Net difference between projected and actual earnings on	Net difference between projected and actual earnings on					
pension plan investments \$ (7,091) \$ (4,976)	pension plan investments	\$	(7,091)	\$	(4,976)	
Total \$ (7,091) \$ (4,976)	Total	\$	(7,091)	\$	(4,976)	

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 12. Pension Plans (continued)

Contributions of \$26,641 were reported as deferred outflows of resources related to pensions resulting from contributions subsequent to the September 30, 2017 measurement date and will be recognized as a reduction of the net pension liability in the year ended September 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended September 30	Deferre	ognition of red Outflows Inflows)		
2019	\$	1,421		
2020		1,679		
2021		(1,643)		
2022		(951)		
Total	\$	506		

### 13. Other Postemployment Benefits

### Plan Description

Plan administration – JEA maintains a medical benefits plan (OPEB Plan) that it makes available to its retirees. The medical plan is a single-employer, experience rated insurance contract plan that provides medical benefits to employees and eligible retirees and their beneficiaries.

JEA currently determines the eligibility, benefit provisions, and changes to those provisions applicable to eligible retirees. The OPEB Plan does not issue separate financial statements.

**Plan membership** – As of September 30, 2017 (the actuarial valuation date), the OPEB Plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments	502
Active plan members	2,041
Total	2,543

## Notes to Financial Statements (continued) (Dollars in Thousands)

### 13. Other Postemployment Benefits (continued)

Benefits provided – The postretirement benefit portion of the benefits plan (OPEB Plan) refers to the benefits applicable to current and future retirees and their beneficiaries. In addition, retirees are eligible to continue life insurance coverage through the plan sponsored by JEA. Premiums for the first \$5,000 of coverage are being subsidized by the employer and, as such, are considered as other postemployment benefits for purposes of GASB Statement No. 75. As of January 1, 2017, the PPO plan out of pocket maximums increased to \$5,000/\$10,000, the deductible increased to \$500 per year, the coinsurance changed to 80%/50%, and the specialist copay increased to \$60. The HRA out of pocket maximum increased to \$5,000/\$10,000. The HSA deductible was set to \$1,500 for in network and \$2,500 for out of network. The copays for prescription drug benefits under all plan options increased to \$10/\$40/\$60 and copays for specialty drugs increased to \$250. Under the HSA Plan, the deductible must be satisfied before the prescription co-pay requirements. The table below outlines other key components of the OPEB plan.

	PPO			HRA				HSA						
	ln-		Out-of-		In-		Out-of-		- In-		In- Network		0	ut-of-
	Ne	twork	Network		Network		Network		Ne	twork				
Annual deductible	\$	500	\$	1,000	\$	1,500	\$	3,000	\$	1,500	\$	2,500		
Primary Care Physician co-pay	\$	25		40%	\$	25		40%		20%*		40%*		
Specialist co-pay	\$	60		40%	\$	60		40%		20%*		40%*		
Co-insurance		20%		40%		20%		40%		20%*		40%*		

<sup>\*</sup>After the annual deductible is met

**Contributions** – Retired members pay the full premium associated with the health coverage elected. There is no direct JEA subsidy currently applicable; however, there is an implicit cost. Spouses and other dependents are also eligible for coverage and the member is responsible for payment of the applicable premiums.

Florida law prohibits JEA from separately rating retirees and active employees. Therefore, JEA assigns to both groups blended-rate premiums.

In 2008, JEA began to advance-fund the OPEB obligation. This was accomplished by establishing a separate trust into which JEA makes periodic deposits and withdrawals to reimburse operations for costs incurred on a pay-as-you-go basis.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 13. Other Postemployment Benefits (continued)

**Actuarial assumptions** – The total OPEB liability in the October 1, 2017 and October 1, 2016 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Salary increases	2.5%-12.5%, including inflation; varies by years of service
Investment rate of return	7.00%
Healthcare cost trend rates	Based on the Getzen Model, with trend starting at 7.00% and gradually decreasing to an ultimate trend rate of 4.57% as of October 1, 2017 and 4.59% as of October 1, 2016 (including the impact of the excise tax).
Mortality rates	Mortality tables used for Regular Class members in the July 1, 2016 actuarial valuation of the Florida Retirement System. They are based on the results of a state wide experience study covering the period 2008 through 2013.

The long-term expected rate of return on OPEB 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 OPEB plan 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. Best estimates of arithmetic real rates of return for each major asset class included in the OPEB plan's target asset allocation at the measurement date of September 30, 2017 and September 30, 2016, are summarized in the following table.

The target allocation and the best estimates of the rate of return for each major asset class are summarized in the following table:

		2017		2016
		Long-term		Long-term
	Target	<b>Expected Nominal</b>	Target	<b>Expected Nominal</b>
Asset Class	Allocation	Rate of Return	Allocation	Rate of Return
Large cap domestic equity	34%	8.0%	39%	9.0%
Global fixed income	18%	4.6%	24%	4.0%
International equity	15%	8.5%	10%	9.8%
Domestic fixed income	12%	4.3%	16%	3.5%
Small cap domestic equity	11%	8.5%	11%	9.8%
Real estate	10%	7.4%	0%	N/A
Total	100%	•	100%	•

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 13. Other Postemployment Benefits (continued)

**Discount Rate** – GASB Statement No. 75 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total OPEB Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As the assets are projected to be sufficient to meet benefit payments, the assumed valuation discount rate of 7.00% was used.

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate — The following presents the net OPEB liability, calculated using a discount rate of 7.0%, as well as what the net OPEB liability would be if it were calculated using a rate that is 1% lower or 1% higher than the current rate:

	2018	2017
1% decrease	\$ 23,779	\$ 46,273
Current discount rate	18,835	39,508
1% increase	14,662	33,799

**Healthcare Cost Trend Rate** – JEA followed the Getzen model with trend rates for costs and premiums declining over a 22-year period from 7.00% assumed for the year 2018 to the ultimate level of 4.57%.

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate – The following presents the net OPEB liability, calculated using a healthcare cost trend rate of 7.0% down to 4.57%, as well as what the net OPEB liability would be if it were calculated using a trend rate that is 1% lower or 1% higher than the current trend rate:

	 2018	2017
1% decrease	\$ 14,401	\$ 33,442
Current healthcare cost trend rate	18,835	39,508
1% increase	24,098	46,709

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 13. Other Postemployment Benefits (continued)

Changes in the net OPEB liability are detailed below.

	2018	2017		
Total OPEB liability				
Beginning balance	\$ 60,949	\$ 62,554		
Service cost	811	781		
Interest on the total OPEB liability	4,253	4,203		
Changes in benefit terms	(11,556)	_		
Difference between expected and actual experience	(7,891)	_		
Benefit payments	(2,019)	(6,589)		
Ending balance	44,547	60,949		
Plan fiduciary net postion				
Beginning balance	21,441	18,156		
Employer contributions	5,240	5,061		
Net investment income	2,942	2,135		
Reimbursements to employer	(3,911)	(3,911)		
Ending balance	25,712	21,441		
Net OPEB liability	\$ 18,835	\$ 39,508		
Plan fiduciary net position as a percentage of the				
total OPEB liability	57.72%	35.18%		
Covered payroll	\$155,326	\$150,073		
Net OPEB liability as a percentage of covered payroll	12.13%	26.33%		

Plan Assets — The assets of the plan consist of shares held in the Florida Municipal Investment Trust (FMIT), which is administered by the Florida League of Cities. The FMIT is an interlocal governmental entity created under the laws of the State of Florida and an Authorized Investment under Sec. 163.01 Florida Statutes. It is considered an external investment pool for reporting purposes. JEA owns shares in the OPEB Fund A as directed in the Master Trust Agreement. OPEB Fund A target asset allocation is 60% equities and 40% fixed income.

At September 30, 2017 and September 30, 2016, the OPEB Plan's cash and money market balance within the OPEB Fund A was \$309 and \$322, respectively.

#### Risk

In accordance with GASB Statement No. 40, investments also require certain disclosures regarding policies and practices with respect to the risks associated with them (see discussion in the following paragraphs).

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 13. Other Postemployment Benefits (continued)

#### Interest Rate Risk

Interest rate risk is the risk that changes in the market interest rates will adversely affect the fair value of an investment. Generally speaking, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The table below details the interest rate risk in years for investments in the trust.

	Septembe	r 30, 2017	Septembe	r 30, 2016		
		Weighted		Weighted		
	Modified Avera		Modified	Average		
Fixed Income Fund	Duration	Maturity	Duration	Maturity		
FMIT Broad Market High Quality Bond Fund	4.74	6.10	4.45	5.90		
FMIT Care Plus Fixed Income Fund	2.24	7.40	2.04	6.84		

#### Credit risk

Credit risk is the risk that a security or a portfolio will lose some or all of its value due to real or perceived changes in the ability of the issuer to repay its debt. The FMIT Broad Market High Quality Bond Fund was rated by Fitch as AAf/S4 as of September 30, 2017 and September 30, 2016. The remaining funds of the trust are unrated.

#### Money-Weighted rates of return

The money-weighted rates of return for the fiscal years ended September 30, 2017 and September 30, 2016 are listed below.

Year Ended	Return
2016	7.90%
2017	13.35%

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 13. Other Postemployment Benefits (continued)

#### Fair Value Disclosures

The table below summarizes the OPEB Plan's investments. Level 1 investments are valued using prices quoted in active markets for those securities. Level 2 investments are valued using direct market observations combined with quantitative pricing models to generate prices. JEA's investment is in shares of the FMIT OPEB Fund A. The disclosure below is based on the asset allocation provided by the FMIT of those investments held by OPEB Fund A.

_	September 30, 2017						September 30, 2016					
	Level 2	: L	Level 3		Total	Level 2		Level 3		1	otal	
FMIT Broad Market High Quality Bond Fund	\$ 3,83	1 \$	-	\$	3,831	\$	3,280	\$	_	\$	3,280	
FMIT Core Plus Fixed Income Fund		-	5,785		5,785		_		4,996		4,996	
Total fixed income	3,83	1	5,785		9,616		3,280		4,996		8,276	
FMIT High Quality Growth Portfolio	2,05	7	-		2,057		1,630		_		1,630	
FMIT Large Cap Diversified Value Portfolio	2,16	0	-		2,160		1,758		_		1,758	
FMIT Russell 1000 Enhanced Index Portfolio	5,99	1	-		5,991		4,803		_		4,803	
FMIT Diversified Small to Mid Cap Equity Portfolio	2,90	5	-		2,905		2,444		_		2,444	
FMIT International Equity Portfolio	2,67	4	-		2,674		2,208		-		2,208	
Total equities	15,78	7	-		15,787		12,843		-		12,843	
Total	\$ 19,61	8 \$	5,785	\$	25,403	\$	16,123	\$	4,996	\$	21,119	

### OPEB Liabilities, OPEB Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to the OPEB

**Net OPEB Liability** – JEA's net OPEB liability at September 30, 2018 and September 30, 2017 was measured based on an actuarial valuation as of and with the measurement dates of September 30, 2017 and September 30, 2016, respectively. JEA's net OPEB liability is \$18,835 as of September 30, 2018 and \$39,508 as of September 30, 2017.

For the year ended September 30, 2018 and 2017, JEA recognized OPEB expense is (\$9,272) and \$3,508, respectively. As JEA has implemented regulatory accounting for OPEB, the difference between the recognized OPEB expense and the cash contributions paid has been deferred as a regulatory asset. See note 2, Regulatory Deferrals, for additional details.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 13. Other Postemployment Benefits (continued)

The JEA Plan recorded deferred outflows of resources and deferred inflows of resources related to OPEB as detailed in the table below.

September 30							
	2017						
\$	4,078	\$	5,240				
\$	4,078	\$	5,240				
\$	(7,102)	\$	_				
	(1,610)		(659)				
\$	(8,712)	\$	(659)				
	\$ \$	\$ 4,078 \$ 4,078 \$ 4,078 \$ (7,102) (1,610)	\$ 4,078 \$ \$ 4,078 \$ \$ 4,078 \$ \$ (7,102) \$ (1,610)				

Contributions of \$4,078 were reported as deferred outflows of resources related to OPEB resulting from contributions subsequent to the September 30, 2017 measurement date and will be recognized as a reduction of the net OPEB liability in the year ended September 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ended September 30	Recognitior Deferred Outf (Inflows)	lows
2019	\$	(1,233)
2020	(	(1,233)
2021	(	(1,233)
2022	(	(1,068)
2023		(789)
Thereafter		(3,156)
Total	\$	(8,712)

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 14. Fair Value Measurements

GASB Statement No. 72, Fair Value Measurement and Application, addresses accounting and financial reporting issues related to fair value measurements. It provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. For JEA, this statement applies to certain investments, interest rate swap agreements, and natural gas cash flow hedges.

JEA categorizes its fair value measurements within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset or liability.

- Level 1 quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date
- Level 2 Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly
- Level 3 unobservable inputs for an asset or liability

#### **Investments**

JEA's investments are summarized in the table below. Level 1 investments are valued using prices quoted in active markets for those securities. Level 2 investments are valued using direct market observations combined with quantitative pricing models to generate prices. Money market mutual funds are managed to meet the requirements of Rule 2a-7 under the Investment Company Act of 1940, as amended, and are recorded at net asset value (NAV). The local government investment pools transact with participants at a stable NAV and are recorded at NAV. Certain U.S. Treasury and government agency securities and commercial paper are measured at cost.

	2018							
		Total		Level 1		Level 2	L	evel 3
Investments by fair value level								
U.S. Treasury and government agency securities	\$	453,060	\$	453,060	\$	-	\$	-
State and local government securities		223,845		_		223,845		
Total investments by fair value level	\$	676,905	\$	453,060	\$	223,845	\$	
Investments measured at NAV								
Local government investment pools		194,786						
Money market mutual funds		23,208						
Total investments measured at fair value		894,899						
Investments measured at cost								
Commercial paper		133,074						
U.S. Treasury and government agency securities		9,837						
Total investments by cost		142,911						
Total investments per statement of net position	\$	1,037,810						

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 14. Fair Value Measurements (continued)

	2017							
	Total		Level 1		Level 2		Level 3	
Investments by fair value level								
U.S. Treasury and government agency securities	\$	420,524	\$	420,524	\$	_	\$	_
State and local government securities		323,507		54,923		268,584		_
Total investments by fair value level	\$	744,031	\$	475,447	\$	268,584	\$	_
Investments measured at NAV								
Local government investment pools		138,207						
Money market mutual funds		51,460						
Total investments measured at fair value		933,698						
Investments measured at cost								
Commercial paper		170,829						
U.S. Treasury and government agency securities		118,363						
Total investments by cost		289,192	_					
Total investments per statement of net position	\$	1,222,890	•					

#### Interest Rate Swap Agreements

JEA's interest rate swap agreements are valued using market rates as of September 30, 2018 and 2017 and standard cash flow present valuing techniques, which places them at Level 2 in the fair value hierarchy. The agreements are recorded at fair value as part of long-term debt in the statements of net position. The fair value of the interest rate swap agreements is detailed below.

	2018			2017		
Electric	\$	(70,103)	\$	(101,350)		
Water and Sewer		(16,253)		(23,919)		
Total	\$	(86,356)	\$	(125,269)		

#### Natural Gas Cash Flow Hedges

JEA's natural gas cash flow hedges consisted of swap agreements for either a 3-month or 12-month period, covering calendar year 2018 and December 2019 through December 2021. These hedges were valued using prices observed on commodities exchanges and/or using industry-standard valuation techniques, such as option modeling or discounted cash flows techniques, incorporating both observable and unobservable valuation inputs, which placed them at Level 3 in the fair value hierarchy. The fair market value changes in the hedges were recorded on a net basis in the statements of net position as either a deferred charge or a deferred credit until such time that the transactions end. At September 30, 2018 and 2017, deferred credits of \$2,536 and \$0 were included in deferred inflows of resources on the statements of net position, respectively.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 15. Commitments and Contingent Liabilities

#### **Grants**

JEA participates in various federal and state assisted grant programs that are subject to review and audit by the grantor agencies. Entitlements to these resources are generally conditional upon compliance with the terms and conditions of grant agreements and applicable federal and state regulations, including the expenditure of resources for allowable purposes. Any disallowance resulting from a federal or state audit may become a liability of JEA. It is management's opinion that the results of these audits will have no material adverse effect on JEA's financial position or results of operations.

#### Regulatory Initiatives

The electric industry and water and wastewater industry have been and will continue to be affected by a number of legislative and regulatory initiatives. The following summarizes the key regulations affecting JEA:

**Electric Enterprise System** – On August 3, 2015, the Environmental Protection Agency (EPA) issued concurrently three separate rules pertaining to emissions of carbon dioxide (CO2) fossil fuel-fired electric generating units (EGUs):

- The Final Clean Power Plan (CPP), applicable to existing fossil fuel-fired electric EGUs.
- The Final Carbon Pollution Standards Rule (CPS), applicable to new, modified and reconstructed fossil fuel-fired EGUs.
- The Proposed Federal Plan applicable to states that fail to submit an approvable plan that achieves CPP goals.

On February 9, 2016, the United States Supreme Court (SCOTUS) issued an order staying implementation of the CPP. The SCOTUS granted the applications of numerous parties to stay the CPP pending judicial review of the rule. On March 28, 2017, President Trump issued an Executive Order establishing a national policy "in favor of energy independence, economic growth, and the rule of law". The President has directed agencies to review existing regulations that potentially burden the development of domestic energy resources, and appropriately suspend, revise, or rescind regulations that unduly burden the development of U.S. energy resources beyond what is necessary to protect the public interest or otherwise comply with the law. The Executive Order specifically directed EPA to review and, if appropriate, initiate reconsideration proceedings to suspend, revise or rescind the new EPA Final Rules pertaining to CO2 emissions. EPA initially obtained temporary court orders to hold the court challenge of the CPP and the CPS in abeyance, pending the completion of EPA's review of the rules. EPA subsequently petitioned the court to pause the litigation indefinitely while EPA promulgates new rules.

### Notes to Financial Statements (continued) (Dollars in Thousands)

#### 15. Commitments and Contingent Liabilities (continued)

On August 30, 2018, EPA a proposed rule to replace the CPP. The proposed rule is titled the Affordable and Clean Energy (ACE) Rule. ACE proposes new Existing Source Performance Standards (ESPS) to regulate CO2 emissions from fossil-fueled boilers. The ACE standards are significantly less stringent than the CPP standards. ACE also proposes to simplify and remove considerable ambiguity from EPA's New Source Review (NSR) rules applicable to major improvements to generating units. EPA has also promulgated but not issued proposed New Source Performance Standards (NSPS) for fossil-fueled units. Provisions of ACE are anticipated to be complied with without significant capital expenditure and do not represent significant cost exposure for JEA. Similarly, since JEA is not presently anticipating construction of any electric generation units that would be impacted by a new NSPS, the pending rule likewise does not represent significant cost exposure for JEA. Because these rules are either proposed or pending issuance, it is difficult to know when or if the rules will become "final" and enforceable. For this reason, JEA is unable, at this time, to definitively ascertain the impact to JEA to come from prospective regulation of CO2 emissions.

On July 6, 2011, the EPA released the Cross-State Air Pollution Rule (CSAPR), which is intended as a substitute for the invalidated Clean Air Interstate Rule (CAIR). In the CSAPR, the EPA determined that 27 states in the eastern United States are in violation of the Clean Air Act, because they significantly contribute to nonattainment or interference with the maintenance of attainment of three National Ambient Air Quality Standards (NAAQS) in one or more downwind states. The three air quality standards addressed in the CSAPR are the 1997 and 2006 fine particulate matter (PM<sub>2.5</sub>), NAAQS, and the 1997 ozone NAAQS. To address these violations, the CSAPR imposes Federal Implementation Plans (FIPs) that establish state budgets for SO2 and NOx emissions from EGUs. The EPA targeted these two pollutants, because they are precursors to the formation of PM<sub>2.5</sub> and ozone in the atmosphere. The budgets are allocated to individual EGUs in the form of allowances and the CSAPR permits limited interstate emissions trading and unlimited intrastate emissions trading as a means of compliance. States became subject to the emission budgets in 2012 with more stringent limits taking effect in 2014. In April 2014, the SCOTUS upheld the rule, but remanded back certain legal issues to the DCA to address. On July 28, 2015, the DCA issued an order and opinion remanding, without vacatur, certain state budgets under the CSAPR for reconsideration by the EPA, including the ozone-season NOx emissions budget for Florida. On September 7, 2016, the EPA issued a final updated CSAPR rule that removed Florida and two other eastern states from the rule. However, the EPA has made known that it is in the early stages of developing a supplemental rule (CSAPR Update II) to address the 2015 ozone and PM<sub>2.5</sub> NAAQS. It is possible that the CSAPR Update II may mandate deeper emission reductions and an expansion of the geographic area for regulation, possibly to again include Florida. The EPA has not established a rulemaking schedule for the CSAPR Update II. Consequently, JEA is not able to estimate any impacts from the CSAPR Update II.

On December 21, 2011, the EPA issued its Mercury and Air Toxics Standards (MATS) rule, setting forth meximum achievable control technology (MACT) standards for coal and oil generating stations. The new standards regulate four categories of hazardous air pollutants (HAPS) emitted by coal- or oil-fired EGUs, namely mercury, HAP metals, acid gases, and organic HAP.

The compliance deadline for affected sources to have all necessary pollution controls installed was April 2015. JEA's units that are regulated under MATS comply with all rule requirements.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 15. Commitments and Contingent Liabilities (continued)

In April 2015, the EPA finalized rules to regulate the disposal and management of coal combustion residuals (CCRs), meaning fly ash, bottom ash, boiler slag, and flue gas desulfurization materials, destined for disposal from coal-fired power plants. The new rule became effective on October 19, 2015 and established technical requirements for surface impoundments and landfills. The rule requires protective controls, such as liners and groundwater monitoring, at landfills and surface impoundments that store CCRs. The rule, as adopted by the EPA, is enforced only by citizen-initiated lawsuits, rather than by the EPA. However, with passage of the WIIN Act in 2016, the rule can now be reformed to provide the following: 1) conversion from a "self-implementing" program to a permit program the states or EPA would have primary responsibility to administer and enforce; and, 2) flexibility for state programs to adjust and tailor federal CCR requirements to meet local, case-specific situations, so long as they are adequately protective of federal CCR requirements.

The rule applies to CCR management practices at SJRPP and Scherer. The rule does not apply to management of CCRs at Northside Generating Station (NGS) as long as it continues to burn a fuel mix with less than 50% coal. The currently operating cell within Area B of SJRPP does not have to be lined, but must comply with the operating and monitoring requirements of the rule even after the plant was decommissioned in 2018. SJRPP's two closed byproduct storage areas (Areas I and II) are not affected by this rule. SJRPP has no regulated surface impoundments. Existing surface impoundments, like that at Scherer, are required to meet increased and more restrictive technical and operating criteria or close. Georgia Power has decided to close the surface impoundment at Scherer instead of pursuing a retrofit and the timeline for closure activities is currently projected to run through 2030.

The EPA left in place the Bevill exemption for beneficial uses of CCRs in which CCRs are recycled as components of products instead of placed in impoundments or landfills. Large quantities of CCRs are used today in concrete, cement, wallboard, and other contained applications that should not involve any exposure by the public to unsafe contaminants.

On November 22, 2010, the EPA entered into a settlement agreement with Riverkeeper, Inc. regarding rule-making dates for the EPA to set technology standards for cooling water intake systems for existing facilities under Section 316(b) of the Federal Clean Water Act. Section 316(b) requires that standards for the location, design, construction and capacity of cooling water intake systems reflect the best technology available for minimizing adverse environmental impacts. The EPA announced proposed standards for cooling water intake systems on March 28, 2011. Under the proposal, existing facilities are required to conduct studies to help their respective permitting authorities determine whether and what site-specific controls, if any, would be required to reduce the number of aquatic organisms that are captured in cooling water intake systems.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 15. Commitments and Contingent Liabilities (continued)

With few changes to the proposed rule, the EPA published the final rule in the Federal Register in August 2015. The new standards will not affect any JEA facilities other than NGS. NGS is one of more than 1,260 existing facilities that use large volumes of cooling water from lakes, rivers, estuaries, or oceans to cool their plants. The new standards will likely require upgrades to the system, varying from establishment of existing facilities as the Best Technology Available (BTA) to improvements to the existing screening facilities or installation of cooling towers. A full two-year biological study is required to evaluate site-specific conditions and form a basis for assessing BTA and was initiated in 2018. Estimated final compliance deadlines are not expected until after 2024 and will depend on the level of upgrade ultimately required. Accordingly, costs of compliance have not been determined for NGS and are not included in JEA's capital program for the Electric System.

On September 30, 2016, the EPA issued the Effluent Limitation Guidelines for Steam Electric Power Plants. In setting the new and more stringent standards, the EPA evaluated the technologies and costs to remove metals and other parameters from individual wastewater streams generated by steam electric power plants and identify the BAT to affect their control. The new requirements for existing power plants must be phased in as soon as possible on or after November 1, 2018, but no later than December 31, 2023. The costs of compliance at NGS and Scherer have been evaluated and are anticipated in operating budgets and in JEA's five-year capital program for the Electric System.

Water Supply System Regulatory Initiatives – JEA was issued a 20-year Consumptive Use Permit (CUP) in May 2011 from the St. Johns River Water Management District (SJRWMD), which allows for aquifer withdrawals sufficient to completely satisfy customer demands until 2031 if certain permit conditions are met. JEA evaluates its total water management plan annually to continuously understand changes in demand and how to balance investments in a three-part program: (1) continued expansion of the reuse system, (2) measured conservation program and (3) water transfers from areas with a higher supply on JEA's north grid to areas with a lower supply on JEA's south grid via river-crossing pipelines. In North Florida, the Suwannee River Water Management District (SRWMD), Florida Department of Environmental Protection (FDEP), and the SJRWMD have set or are setting/revising Minimum Flows and Levels (MFLs) for water bodies in the region. MFLs are intended to assess the potential for ecological resource risks from water withdrawals and ensure sustainable supplies. In 2015, MFLs were adopted in the SRWMD and a determination required a recovery strategy. By permit, JEA will participate to the extent of its proportionate impact in prevention and recovery strategies that may be developed to ensure the groundwater resource remains sustainable.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 15. Commitments and Contingent Liabilities (continued)

Wastewater Treatment System Regulatory Initiatives – The Sewer System is regulated by the EPA under provisions of the Federal Clean Water Act and the Federal Water Pollution Act. In Florida, the EPA has delegated the wastewater regulatory program to FDEP. The FDEP has implemented a Total Maximum Daily Load regulation (TMDL) defining the mass of nitrogen and phosphorus that can be assimilated by the St. Johns River, to which 8 of JEA's 11 wastewater treatment plants discharge. This state rule limits the amount of nitrogen and phosphorus that these eight wastewater treatment facilities are allowed to discharge by permit. JEA is meeting these limits as the result of past capital improvements to its wastewater facilities, expansion of the reclaimed water system, and phase-out of smaller old technology wastewater facilities. By virtue of exceeding its own regulatory obligation, JEA has generated nutrient reduction credits and has assisted the City in meeting a portion of their Municipal Separate Storm System nutrient requirements by transferring 33.44 short tons per year. This was recognized in JEA's annual contribution agreement negotiated in 2016. In 2013, both the FDEP and EPA reaffirmed the site-specific nutrient standard that is codified in the Lower St. Johns River TMDL.

### Pollution Remediation Obligations

JEA is subject to numerous federal, state, and local environmental regulations resulting in environmental liabilities due to compliance costs associated with new regulatory initiatives, enforcement actions, legal actions, and contaminated site assessment and remediation. Based on an analysis of the cost of cleanup and other identified environmental contingencies, JEA has accrued a liability associated with the remediation efforts. In accordance with GASB No. 49, Accounting and Financial Reporting for Pollution Remediation Obligations, based on project estimates and probabilities, the liability is estimated to be \$20,726 at September 30, 2018. The accrual is related to the following environmental matters: Kennedy Generating Station RCRA Corrective Action for former wood preserving site; Sans Souci Substation remedial activities; Pearl Street Electric Shop remedial activities; WSSC PCB Issue, Northside Generating Station RCRA Corrective Action program; and remediation at a number of miscellaneous petroleum sites. Of the \$20,726 that JEA has accrued as environmental liabilities, approximately \$15,795 is associated with the expected cost of remediating the former wood preserving facility at the Kennedy Generating Facility. Following are other environmental matters that could have an impact on JEA; however, the resolution of these matters is uncertain and no accurate prediction of range of loss is possible at this time: Pickettville Road Landfill CERCLA site post-closure activities and the Ellis Road CERCLA site. Although uncertainties associated with these recognized environmental liabilities remain, JEA believes that the current provision for such costs is adequate and additional costs, if any, will not have a material adverse effect upon its financial position, results of operations, or liquidity. Costs associated with these obligations that were expensed prior to the approval of regulatory accounting for environmental projects are recorded in other noncurrent liabilities and total \$16,818. The remaining liability is recognized as part of revenues to be used for future costs.

## Notes to Financial Statements (continued) (Dollars in Thousands)

#### 15. Commitments and Contingent Liabilities (continued)

#### Northside Generating Station Byproduct

JEA Northside Generating Station (NGS) Units 1 and 2 produce byproducts that consist of fly ash and bed ash. JEA has obtained a permit from FDEP to beneficially use the processed byproduct material in the State of Florida, subject to certain restrictions. These ash products are processed into materials marketed as EZBase and EZSorb. The expansion of rail capacity, the ability to load rail cars directly from the storage silos, and direct leasing of railcars has enabled JEA to become a full-service marketer, delivering products by truck or rail. EZSorb is currently being transported by truck and rail to leachate solidification and environmental remediation/stabilization projects in several southeastern states.

The Byproducts Storage Area is an FDEP permitted, Class I lined storage facility at NGS. JEA received a new 20-year permit effective May 4, 2015.

A case is pending in the Second Judicial Circuit in Harrison County, Mississippi. Plaintiff is suing multiple defendants seeking damages allegedly resulting from construction defects at The Promenade, a retail shopping mall in D'Iberville, Mississippi. Plaintiff amended the complaint in April 2010 to add JEA as a defendant on various product liability theories, daiming that JEA's ash byproduct was allegedly incorporated as a component of the product of another party defendant and used by other party defendants at the subject project. Plaintiff seeks injunctive relief, to remediate the site, and damages. Multiple third party claims and cross claims were raised and remain pending. JEA believes it has good and meritorious defenses in this action and will vigorously defend the case. The plaintiff is seeking approximately \$75,000; however, the trial court ruled that JEA is entitled to a sovereign immunity cap of \$500. Plaintiff has appealed this ruling and the pre-trial rulings are currently being heard by the Mississippi Supreme Court.

#### General Litigation

JEA is party to various pending or threatened legal actions in connection with its normal operations. In the opinion of management, any ultimate liabilities that may arise from these actions are not expected to materially affect JEA's financial position, results of operations, or liquidity.

#### 16. Storm Costs

Hurricane Matthew tracked parallel along the coast of Florida on October 7, 2016 and Hurricane Irma passed to the west of Jacksonville as a tropical storm on September 11, 2017, causing extensive damage within the JEA service territory. Damage to JEA property was primarily to the transmission and distribution systems. Because of the extensive damage, Jacksonville was declared a federal major disaster area, making JEA eligible to receive reimbursement from FEMA. Requests for Public Assistance for both declared disasters were filed and accepted.

# Notes to Financial Statements (continued) (Dollars in Thousands)

#### 16. Storm Costs (continued)

JEA is in the midst of the cost reimbursement process through FEMA, which allows cost share of 87.5% of eligible cost (75.0% from FEMA and 12.5% from the State of Florida) of those costs not covered by insurance. As a result, \$27,999 of the eligible costs were deferred as costs to be recovered from future revenues in the statement of net position with the 12.5%, or \$4,000, being recognized in the maintenance and other operating expenses financial statement line item in the statement of revenues, expenses and changes in net position in fiscal year 2017. Through September 30, 2018, JEA has received \$9,033, which reduced the deferred costs to be recovered from future revenues. Of the \$9,033 received, \$6,970 was from insurance and \$2,063 from FEMA. JEA believes it is probable that reimbursement from either insurance or FEMA will be received for the eligible cost incurred that is remaining.

#### 17. Segment Information

The financial statements of JEA contain four segments, as the Electric System and Bulk Power Supply System, the SJRPP System, the Water and Sewer System, and DES represent separate identifiable activities. These systems have debt outstanding with a revenue stream pledged in support of the debt. In addition, the activities are required to be accounted for separately. JEA's Electric System and Bulk Power Supply System segment consists of an electric utility engaged in the generation, purchase, transmission, distribution, and sale of electricity primarily in Northeast Florida. JEA's SJRPP System segment consists of a generation facility that is 80% owned by JEA, which is currently in the process of being decommissioned as discussed in note 2, St. Johns River Power Park. JEA's Water and Sewer System segment consists of water collection, distribution, and wastewater treatment in Northeast Florida. The DES consists of chilled water activities.

Intercompany billing is employed between the Electric System, the Water and Sewer System, and DES and includes purchases of electricity, water, sewer, and chilled water services and the rental of inventory and buildings. The utility charges between entities are based on a commercial customer rate. All intercompany billings are eliminated in the financial statements. See intercompany charges detailed below.

		2018			2017				
	Electric	Electric W&S		Electric	W&S	DES			
Electricity services	N/A	\$ 13,422	\$ 3,282	N/A	\$ 13,324	\$ 3,351			
Water and sewer services	505	N/A	136	147	NA	144			
Chilled water services	_	408	N/A	_	507	NA			

The Electric System shares certain administrative functions with the Water and Sewer System. Generally, these costs are charged to the Electric System and the costs of these functions are allocated to the Water and Sewer System based on the benefits provided. Operating expense allocated to the Water and Sewer System was \$45,869 for fiscal year 2018 and \$43,327 for 2017.

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 17. Segment Information (continued)

In September 1999, the Water and Sewer System purchased the inventory owned by the Electric System for \$32,929. This was initiated to increase the utilization of its assets between the Electric System and the Water and Sewer System. A monthly inventory carrying charge is paid by the Electric System based on the value of the inventory multiplied by one-twelfth of the prior year's Water and Sewer average cost of debt. Inventory carrying charges were \$784 for fiscal year 2018 and \$280 for 2017.

In July 1999 and July 2004, the Electric System transferred several buildings to the Water and Sewer System in the amounts of \$22,940 and \$6,284, respectively, an amount equal to the net book value of the assets. Monthly, the Electric System reimburses the Water and Sewer System for their equitable allocation. Annual rent paid by the Electric System to the Water and Sewer System for use of these buildings was \$2,030 for fiscal year 2018 and \$1,999 for 2017.

To utilize the efficiencies in the Customer Account Information billing system and reduce the administrative efforts in recording deposits, customer deposits are recorded to one Service Agreement per account. Deposits are allocated to the Electric System or Water and Sewer System based on revenues. When the deposits are credited to customer accounts, they are allocated between the service agreements.

JEA

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 17. Segment Information (continued)

Segment information for these activities for the fiscal years ended September 30, 2018 and 2017 was as follows:

	Electric System and														
	Bulk Power S	Sup	ply System		SJRPF	Sy	stem		Watera	nd :	Sewer	DES			
	2018		2017		2018		2017		2018		2017		2018		2017
Condensed statements of net position															
Total current assets	\$ 603,965	\$	604,305	\$	70,352	\$	117,017	\$	196,938	\$	204,171	\$	,	\$	4,355
Total noncurrent assets	740,394		754,337		358,767		276,865		574,441		589,523		3,445		3,257
Net capital assets	2,652,224		2,687,232		10,144		474,437		2,682,864		2,615,950		35,027		36,180
Deferred outflows of resources	241,405 \$ 4,237,988	\$	278,864 4,324,738	¢	67,596	\$	27,339	¢	125,501	\$	131,037	¢	194 43,062	¢	43,995
Total assets and deferred outlows of resources		Ą		\$		ð	895,658		3,579,744		3,540,681	ð	43,002	\$	43,993
Total current liabilities	\$ 163,168	\$	145,154	\$		\$	11,722	\$	37,101	\$	35,426	\$	103	\$	89
Total current liabilities payable from restricted assets	184,899		191,785		63,435		157,877		117,447		120,756		2,601		2,445
Total noncurrent liabilities	373,718		393,733		39,049		14,865		221,990		235,258		34		11
Total long-term debt	2,166,201		2,328,211		281,359		420,060		1,570,576		1,625,187		34,791		36,446
Total liabilities	2,887,986		3,058,883		391,511		604,524		1,947,114		2,016,627		37,529		38,991
Deferred inflows of resources	283,185		282,821		17,715		151,613		47,304		22,791		-		-
Net investment in (divestment of) capital assets	530,479		425,023		2,138		(3,751)		1,325,600		1,202,706		(1,492)		(1,818)
Restricted net position	316,700		336,210		26,164		39,530		195,319		211,166		2,738		2,539
Unrestricted net position	219,638		221,801		69,331		103,742		64,407		87,391		4,287		4,283
Total net position	1,066,817		983,034		97,633		139,521		1,585,326		1,501,263		5,533		5,004
Total liabilities, deferred inflows of resources, and net position	\$ 4,237,988	\$	4,324,738	\$	506,859	\$	895,658	\$	3,579,744	\$	3,540,681	\$	43,062	\$	43,995
Condensed statements of revenues, expenses, and changes in ne	t position infor	mat	ion												
Total operating revenues	\$ 1,275,255	\$	1,299,592	\$	147,838	\$	268,899	\$	435,682	\$	457,908	\$	8,756	\$	8,692
Depreciation	203,075		199,743		10,987		42,754		144,144		141,838		2,403		2,364
Other operating expenses	829,441		782,778		115,612		203,273		166,291		163,293		4,603		4,570
Operating income	242,739		317,071		21,239		22,872		125,247		152,777		1,750		1,758
Total nonoperating expenses, net	(67,484)		(72,558)		(18,028)		(22,153)		(44,079)		(52,807)		(1,221)		(1,322)
Total contributions, net	(91,472)		(92,271)		-		-		2,895		1,254		_		_
Total special items			-		(45,099)		-		-		-		-		
Changes in net position	83,783		152,242		(41,888)		719		84,063		101,224		529		436
Net position, beginning of year	983,034		832,508		139,521		138,802		1,501,263		1,401,047		5,004		4,568
Effect of adoption of GASB Statement No. 75	_		(1,716)		_		_		_		(1,008)		_		_
Net position, beginning of year, restated	983,034		830,792		139,521		138,802		1,501,263		1,400,039		5,004		4,568
Net position, end of year	\$ 1,066,817	\$	983,034	\$	97,633	\$	139,521	\$	1,585,326	\$	1,501,263	\$	5,533	\$	5,004
Condensed statements of cash flow information															
Net cash provided by operating activities	\$ 457,242	\$	447,104	\$	38,185	\$	37,578	\$	276,662	\$	287,362	\$	3,880	\$	3,588
Net cash used in noncapital and related financing activities	(91,538)		(92,225)		´ -		· -		(25,031)		(23,469)		<i>'</i> –		-
Net cash used in capital and related financing activities	(389,543)		(396,544)		(193,269)		(63,622)		(291,095)		(259,443)		(4,064)		(5,139)
Net cash provided by (used in) investing activities	(30,410)		86,505		174,010		17,053		16,616		(21,679)		103		45
Net change in cash and cash equivalents	(54,249)		44,840		18,926		(8,991)		(22,848)		(17,229)		(81)		(1,506)
Cash and cash equivalents at beginning of year	340,063		295,223		121,027		130,018		145,909		163,138		7,035		8,541
Cash and cash equivalents at end of year	\$ 285,814	\$	340,063	\$	139,953	\$	121,027	\$	123,061	\$	145,909	\$	6,954	\$	7,035

# Notes to Financial Statements (continued) (Dollars in Thousands)

### 18. Subsequent Events

On October 11, 2018, Moody's Investors Service lowered its ratings with respect to the Bonds of JEA as follows:

- (a) with respect to Electric System Revenue Bonds, Bulk Power Supply System Revenue Bonds, and SJRPP System Revenue Bonds, the long-term debt ratings were lowered from "Aa2" to "A2";
- (b) with respect to Electric System Subordinated Revenue Bonds, the long-term ratings were lowered from "Aa3" to "A3":
- (c) with respect to Water and Sewer Revenue Bonds and Water and Sewer Subordinated Revenue Bonds, the long-term ratings were lowered from "Aa2" to "A2"; and
- (d) with respect to DES Revenue Bonds, the long-term ratings were lowered from "Aa3" to "A3".

As a result of the ratings change above, commitment fees related to Electric System VRDOs changed from a range of 0.38% to 0.40% to a range of 0.48% to 0.55% and commitment fees related to Water and Sewer System VRDOs remained unchanged within a range of 0.38% to 0.42%

On November 1, 2018, as a result of the ratings change, the interest rate related to the Direct Purchased Bonds changed from SIFMA plus 40 basis points to SIFMA plus 55 basis points.

On November 1, 2018, JEA amended the revolving credit agreement to increase the maximum principal amount of the credit facility available for the Electric System by \$200,000, for a total unsecured amount of \$500,000.

On November 2, 2018, the revolving credit agreement was drawn upon by the Water and Sewer System for \$2,000, with \$495,000 available to be drawn.

On November 7, 2018, JEA extended the existing irrevocable direct-pay letter of credit and reimbursement agreement related to the Water and Sewer System 2008 Series A-2 VRDO to a stated expiration date of December 1, 2023. The new commitment fee is 0.42%

# REQUIRED SUPPLEMENTARY INFORMATION

# Required Supplementary Information – Pension (Dollars in Thousands)

September 30, 2018

### **Schedules of Required Supplementary Information**

### Schedule of JEA's Proportionate Share of the Net Pension Liability

### City of Jacksonville General Employees Retirement Plan

Last Five Fiscal Years\*

	2018	2017	2016	2015	2014
Proportional share percentage	51.68%	50.37%	49.15%	48.85%	48.85%
Net pension liability	\$ 527,680	\$ 541,025	\$ 480,353	\$ 404,466	\$ 386,789
Covered payroll	\$ 134,443	\$ 126,808	\$ 127,440	\$ 128,084	\$ 129,922
Net pension liability as a percentage of covered payroll	392.49%	426.65%	376.92%	315.78%	297.71%
Plan fiduciary net pension as a percentage of the					
total pension liability	63.71%	63.00%	64.03%	69.06%	68.64%

### **Schedule of JEA Contributions**

### City of Jacksonville General Employees Retirement Plan

Last Ten Fiscal Years\*

Fiscal Year Ending September 30,	Dete	uarially ermined ribution	 ctual ribution	Contrib Defici (Exc	ency	_	overed Payroll*	Actual Contribution as a % of Covered Payroll
2009	\$	13,280	\$ 13,280	\$	_	\$	120,727	11.00%
2010		16,257	16,257		_		125,054	13.00%
2011		17,195	17,195		_		132,269	13.00%
2012		22,301	22,301		_		127,434	17.50%
2013		27,038	27,038		_		129,990	20.80%
2014		34,149	34,149		_		129,922	26.28%
2015		40,179	40,179		_		128,084	31.37%
2016		43,156	43,156		_		127,440	33.86%
2017		48,942	48,942		_		126,808	38.60%
2018		35,459	35,459		_		134,443	26.37%

<sup>\*</sup> All information is on measurement year basis.

# Required Supplementary Information – Pension (continued) (Dollars in Thousands)

#### Notes to Schedule of Contributions

Valuation date: October 1, 2017

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method Entry Age Normal Cost Method

Amortization method Level Percent of Payroll, using 1.14% Annual Increases\*

Remaining amortization period All new bases are amortized over 30 years.

Asset value of assets less unrecognized returns in

each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.

Actual assumptions:

Investment rate of return 7.50%, including inflation, net of pension plan

investment expense

Inflation rate 2.75%\*

Projected salary increases 3.00% – 6.00%, of which 2.75% is the Plan's long-term

payroll inflation assumption

Cost-of-living adjustments The Plan provision contains a 3.00% COLA.

<sup>\*</sup> The Fund's payroll inflation assumption is 2.75%. However, based on Part VII, Chapter 112.64(5)(a) of *Florida Statutes*, an assumption of 1.14% was used for amortization purposes in the valuation.

JEA

Required Supplementary Information – Pension (continued)

(Dollars in Thousands)

## SJRPP Plan – Schedule of Changes in Net Pension Liability and Related Ratios\*

	2017	2016	2015		2014	
Total Pension Liability						
Beginning balance	\$ 158,926	\$ 155,143	\$	150,629	\$	146,521
Service cost	1,032	1,210		1,275		1,470
Interest	10,768	10,514		10,271		10,026
Changes in benefit terms	_	(59)		_		_
Difference between actual and expected experience	10,826	714		3,316		2,121
Changes in assumptions	26	3,730		_		_
Benefit payments	(12,257)	(12,326)		(10,348)		(9,509)
Total pension liability – ending	\$ 169,321	\$ 158,926	\$	155,143	\$	150,629
Plan Fiduciary Net Position	 					
Beginning balance	\$ 142,286	\$ 138,902	\$	145,425	\$	135,019
Contributions – employer	8,039	2,142		3,509		5,559
Contributions – employee	625	629		648		655
Net investment income	14,571	13,379		(266)		13,763
Benefit payments	(12,257)	(12,326)		(10,348)		(9,509)
Administrative expense	(466)	(440)		(66)		(62)
Plan fiduciary net position – ending	\$ 152,798	\$ 142,286	\$	138,902	\$	145,425
Net Pension Liability – Ending	\$ 16,523	\$ 16,640	\$	16,241	\$	5,204
Plan Fiduciary Net Position as a Percentage of						
Total Pension Liability	90.24%	89.53%		89.53%		96.55%
Covered Payroll	\$ 15,621	\$ 15,730	\$	16,665	\$	21,304
Net Pension Liability as a Percentage of						
Covered Payroll	105.78%	105.79%		97.46%		24.43%

<sup>\*</sup> These schedules are presented to illustrate the requirement to share information for ten years. However, until a full ten-year trend is compiled, only available information is shown. All information is on a measurement year basis.

### SJRPP Plan – Investment Returns

Year Ended	Return
2008	-12.67%
2009	7.60%
2010	10.14%
2011	0.41%
2012	17.17%
2013	12.64%
2014	10.32%
2015	-0.19%
2016	9.99%
2017	10.39%

JEA

Required Supplementary Information – Pension (continued)

(Dollars in Thousands)

### SJRPP Plan - Schedule of Contributions

Fiscal Year Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2009	10,239	10,398	(159)	21,327	48.76%
2010	13,453	13,565	(112)	19,431	69.81%
2011	8,919	9,028	(109)	19,895	45.38%
2012	7,995	8,005	(10)	19,318	41.44%
2013	11,845	11,885	(40)	17,761	66.92%
2014	5,397	5,559	(162)	21,304	26.09%
2015	3,414	3,509	(95)	16,665	21.06%
2016	2,050	2,142	(92)	15,730	13.62%
2017	7,967	8,039	(72)	15,621	51.46%
2018	7,727	26,409	(18,682)	5,809	454.62%

# Required Supplementary Information – Pension (continued) (Dollars in Thousands)

#### **Notes to Schedule of Contributions**

Valuation date: October 1, 2017

**Methods and Assumptions Used to Determine Contribution Rates:** 

Actuarial cost method Entry Age Normal

Amortization method Level Dollar, Closed

Remaining amortization period 2 years

Asset valuation method Market value of assets

**Actual assumptions:** 

Investment rate of return 7.00% per year, compounded annually, net of

investment expenses

Inflation rate 2.5%

Projected salary increases 2.5% – 12.5%, per year, including inflation

Retirement age Experience-based table of rates based on year of

eligibility.

Mortality Mortality tables used for Regular Class and Special Risk

Class members in the July 1, 2016 actuarial valuation of the Florida Retirement System. They are based on the results of a statewide experience study covering the

period 2008 through 2013.

JEA

# Required Supplementary Information – OPEB (Dollars in Thousands)

## September 30, 2018

### OPEB Plan – Schedule of Changes in Net OPEB Liability and Related Ratios\*

	2017	2016
Total OPEB Liability		
Beginning balance	\$ 60,949	\$ 62,554
Service cost	811	781
Interest on the total OPEB liability	4,253	4,203
Changes in benefit terms	(11,556)	_
Difference between actual and expected experience	(7,891)	_
Benefit payments	 (2,019)	 (6,589)
Total OPEB liability—ending	\$ 44,547	\$ 60,949
Plan Fiduciary Net Position		
Beginning balance	\$ 21,441	\$ 18,156
Employer contributions	5,240	5,061
Net investment income	2,942	2,135
Reimbursements to employer	 (3,911)	 (3,911)
Plan fiduciary net position — ending	\$ 25,712	\$ 21,441
Net OPEB Liability – Ending	\$ 18,835	\$ 39,508
Plan Fiduciary Net Position as a Percentage of		
Total OPEB Liability	57.72%	35.18%
Covered Payroll	\$ 155,326	\$ 150,073
Net OPEB Liability as a Percentage of		
Covered Payroll	12.13%	26.33%

<sup>\*</sup> This schedule is presented to illustrate the requirement to share information for ten years. However, until a full ten-year trend is compiled, only available information is shown. All information is on a measurement year basis.

### **OPEB Plan – Investment Returns**

All information is on a measurement year basis

Year Ended	Return
2008	0.03%
2009	1.44%
2010	6.74%
2011	-1.41%
2012	15.84%
2013	11.93%
2014	8.22%
2015	-0.46%
2016	7.90%
2017	13.35%

JEA

Required Supplementary Information – OPEB (continued)

(Dollars in Thousands)

### OPEB Plan - Schedule of Contributions\*

Dete	ermined	_		Contribution Deficiency (Excess)		Covered Payroll	Actual Contribution as a % of Covered Payroll
\$	5,779	\$	4,023	\$	1,756	N/A	N/A
	5,126		5,236		(110)	138,093	3.79%
	5,344		6,601		(1,257)	N/A	N/A
	5,211		5,423		(212)	150,714	3.60%
	5,433		6,185		(752)	N/A	N/A
	4,819		4,382		437	148,617	2.95%
	5,011		7,255		(2,244)	N/A	N/A
	5,061		7,739		(2,678)	150,073	5.16%
	4,138		5,240		(1,102)	155,326	3.37%
	3,885		4,078		(193)	161,602	2.52%
	De te	5,126 5,344 5,211 5,433 4,819 5,011 5,061 4,138	Determined Contribution \$ 5,779 \$ 5,126 5,344 5,211 5,433 4,819 5,011 5,061 4,138	Determined Contribution         Actual Contribution           \$ 5,779         \$ 4,023           5,126         5,236           5,344         6,601           5,211         5,423           5,433         6,185           4,819         4,382           5,011         7,255           5,061         7,739           4,138         5,240	Determined Contribution         Actual Contribution         Determined Contribution           \$ 5,779         \$ 4,023         \$           5,126         5,236         \$           5,344         6,601         \$           5,211         5,423         \$           5,433         6,185         \$           4,819         4,382         \$           5,061         7,739         \$           4,138         5,240         \$	Determined Contribution         Actual Contribution         Deficiency (Excess)           \$ 5,779         \$ 4,023         \$ 1,756           5,126         5,236         (110)           5,344         6,601         (1,257)           5,211         5,423         (212)           5,433         6,185         (752)           4,819         4,382         437           5,011         7,255         (2,244)           5,061         7,739         (2,678)           4,138         5,240         (1,102)	Determined Contribution         Actual Contribution         Deficiency (Excess)         Covered Payroll           \$ 5,779         \$ 4,023         \$ 1,756         N/A           5,126         5,236         (110)         138,093           5,344         6,601         (1,257)         N/A           5,211         5,423         (212)         150,714           5,433         6,185         (752)         N/A           4,819         4,382         437         148,617           5,011         7,255         (2,244)         N/A           5,061         7,739         (2,678)         150,073           4,138         5,240         (1,102)         155,326

<sup>\*</sup> This schedule is presented to illustrate the requirement to share information for ten years. However, until a full ten-year trend is compiled, only available information is shown.

# Required Supplementary Information – OPEB (Dollars in Thousands)

#### Notes to Schedule of Contributions

Actuarial valuations are performed as of the beginning of the fiscal year and assumptions below pertain to all years presented unless otherwise noted.

### Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method Entry Age Normal

Inflation 2.50% Discount rate 7.00%

Salary increases 2.5% – 12.5% per year, including inflation; varies by

years of service

Retirement age Experience-based table of rates that are specific to the

type of eligibility condition

Mortality Mortality tables used for Regular Class members in the

July 1, 2016 actuarial valuation of the Florida Retirement System. They are based on the results of a statewide experience study covering the period 2008 through

2013.

Healthcare cost trend rates Based on the Getzen Model, with trend starting at 7.00%

and gradually decreasing to an ultimate trend rate of 4.57% as of October 1, 2017 and 4.59% as of October 1, 2016 (including the impact of the excise tax). The decrease is a result of the decrease in the load for

excise tax.

Aging factors Based on the 2013 SOA Study "Health Care Costs –

From Birth to Death".

Expenses Investment returns are net of the investment expenses;

and, administrative expenses related to operation of the

health plan are included in the premium costs.

Other information:

Notes Health-related assumptions are based on experience

over the plan year ending December 31, 2017.

# JEA Combining Statement of Net Position (In Thousands)

# September 30, 2018

	Electric System and Bulk Power Supply System		Elimination of intercompany transactions	Total Electric Enterprise Fund	Water and Sewer Enterprise Fund	District Energy System Fund	Total JEA
Assets							
Current assets:	\$ 285.611	\$ 65.840	s –	\$ 351,451	\$ 86,219	\$ 3,536	\$ 441.206
Cash and cash equivalents Investments	83,268	2,042	• <del>-</del>	85,310	Φ 00,219	φ 3,330 _	85,310
Accounts and interest receivable, net of allowance of \$1,830 Inventories:	197,041	790	(1,912)		54,369	860	251,148
Fuel	35,856	1,015	=	36,871	=	=	36,871
Materials and supplies	2,189	665		2,854	56,350		59,204
Total current assets	603,965	70,352	(1,912)	672,405	196,938	4,396	873,739
Noncurrent assets: Restricted assets:							
Cash and cash equivalents	203	74,113	_	74,316	36,842	3,418	114,576
Investments	419,536	23,330	-	442,866	288,761	-	731,627
Accounts and interest receivable  Total restricted assets	419,746	97,490		54 517,236	325,611	3,418	846,265
		01,100		011,200	020,011	3,110	010,200
Costs to be recovered from future revenues	301,805	261,277	=	563,082	244,987	27	808,096
Investment in The Energy Authority	6,811	-	_	6,811		-	6,811
Other assets Total noncurrent assets	12,032 740,394	358,767		12,032 1,099,161	3,843 574,441	3,445	15,875 1,677,047
Net capital assets	2,652,224	10,144	=	2,662,368	2,682,864	35,027	5,380,259
	-						
Total assets	3,996,583	439,263	(1,912)	4,433,934	3,454,243	42,868	7,931,045
Deferred outflows of resources Unrealized pension contributions and losses	83,649	34,238		117,887	53,480		171,367
Unamortized deferred losses on refundings	85,165	4,185		89,350	54,178	194	143,722
Accumulated decrease in fair value of hedging derivatives	70,103	-,100 -	_	70,103	16,253	-	86,356
Unrealized asset retirement obligation		29,173	=	29,173		=	29,173
Unrealized OPEB contributions and losses	2,488	=	=	2,488	1,590	=	4,078
Total deferred outflows of resources  Total assets and deferred outflows of resources	241,405 \$ 4,237,988	67,596 \$ 506,859	\$ (1,912)		125,501 \$ 3,579,744	194 \$ 43,062	\$ 8,365,741
Total assets and deferred outflows of resources	\$ 4,237,966	\$ 500,009	<b>5</b> (1,912)	\$ 4,742,933	\$ 3,579,744	\$ 45,00Z	\$ 0,303,741
Liabilities Current liabilities:							
Accounts and accrued expenses payable	\$ 118,901	\$ 7,668	\$ (796)	\$ 125,773	\$ 21,485	\$ 103	\$ 147.361
Customer deposits	44,267	-	- (,	44,267	15,616	_	59,883
Total current liabilities	163,168	7,668	(796)	170,040	37,101	103	207,244
Current liabilities payable from restricted assets:							
Debt due within one year	130,690	1,720	-	132,410	51,720	1,660	185,790
Renewal and replacement reserve	-	54,370	-	54,370	_	_	54,370
Interest payable	37,613	5,603	_	43,216	29,841	680	73,737
Construction contracts and accounts payable  Total current liabilities payable from restricted assets	16,596 184,899	1,742 63,435	(1,116)		35,886 117,447	261 2,601	53,369 367,266
Noncurrent liabilities:							
Net pension liability	321,885	16,523	_	338,408	205,795	_	544,203
Asset refirement obligation	-	22,526	=	22,526		-	22,526
Net OPEB liability	11,489	-	_	11,489	7,346	-	18,835
Other liabilities	40,344		_	40,344	8,849	34	49,227
Total noncurrent liabilities	373,718	39,049	_	412,767	221,990	34	634,791
Long-term debt							
Debt payable, less current portion	2,019,350	278,885	-	2,298,235	1,480,620	34,825	3,813,680
Unamortized premium (discount), net Fair value of debt management strategy instruments	76,748 70,103	2,474	_	79,222 70,103	73,703 16,253	(34)	152,891 86,356
Total long-term debt	2,166,201	281,359		2,447,560	1,570,576	34,791	4.052.927
Total liabilities	2,887,986	391,511	(1,912)		1,947,114	37,529	5,262,228
Deferred inflows of resources							
Revenues to be used for future costs	249,085	10,624	_	259,709	27,123	_	286,832
Unrealized pension gains	26,250	7,091	_	33,341	16,783	-	50,124
Unrealized OPEB gains	5,314	-	-	5,314	3,398	-	8,712
Accumulated increase in fair value of hedging derivatives Total deferred inflows of resources	2,536 283,185	17,715		2,536 300,900	47,304		2,536 348,204
		,. 10		,	,-91		
Net position  Net investment in (divestment of) capital assets  Restricted	530,479	2,138	-	532,617	1,325,600	(1,492)	1,856,725
Debt service	130,072	1,843		131,915	53,799	1,660	187,374
Other purposes	186,628	24,321	1,116	212,065	141,520	1,078	354,663
Unrestricted	219,638	69,331	(1,116)	287,853	64,407	4,287	356,547
Total net position	1,066,817	97,633		1,164,450	1,585,326	5,533	2,755,309
Total liabilities, deferred inflows of resources, and net position	\$ 4,237,988	\$ 506,859	\$ (1,912)	\$ 4,742,935	\$ 3,579,744	\$ 43,062	\$ 8,365,741

# Combining Statement of Net Position (In Thousands)

## September 30, 2017

	Electric Syste and Bulk Pow Supply Syste	er	SJRPP System	Elimination of intercompany transactions	Total Electric Enterprise Fund	Water and Sewer Enterprise Fund	District Energy System Fund	Total JEA
Assets								
Current assets:	e 040.0		44.050		r 000.040	A 400 744	£ 0.00F	¢ 400.550
Cash and cash equivalents Investments	\$ 340,06 20,62		41,950 4,493	<b>5</b> –	\$ 382,013 25,122	\$ 103,741	\$ 3,805	\$ 489,559 25,122
Accounts and interest receivable, net of allowance of \$2,101	203,43		16,597	(27,230)		52,094	550	245,444
Inventories:	200,11		10,007	(21,200,	,	02,001	-	2.0,
Fuel	38,04	4	34,728	-	72,772	_	_	72,772
Materials and supplies	2,13		19,249	-	21,385	48,336	-	69,721
Total current assets	604,30	)5	117,017	(27,230)	) 694,092	204,171	4,355	902,618
Noncurrent assets:								
Restricted assets:								
Cash and cash equivalents		_	79,077	_	79,077	42,168	3,230	124,475
Investments	442,08		192,794	-	634,874	301,834	_	936,708
Accounts and interest receivable		20	952		972	12		984
Total restricted assets	442,10	00	272,823		714,923	344,014	3,230	1,062,167
Costs to be recovered from future revenues	297,2	L1	4,042	_	301,283	239,711	27	541,021
Investment in The Energy Authority	6,28		-1,0-12	_	6,283	200,111	_	6,283
Other assets	8,7		_	_	8,713	5,798	_	14,511
Total noncurrent assets	754,33	37	276,865	-	1,031,202	589,523	3,257	1,623,982
Net capital assets	2,687,23	52	474,437	-	3,161,669	2,615,950	36,180	5,813,799
Total assets	4,045,8	'4	868,319	(27,230)	4,886,963	3,409,644	43,792	8,340,399
Deferred outflows of resources								
Unrealized pension contributions and losses	95,8		16,505	-	112,319	61,259	=	173,578
Unamortized deferred losses on refundings	78,50		10,834	-	89,337	43,816	203	133,356
Accumulated decrease in fair value of hedging derivatives	101,35		_	_	101,350	23,919	_	125,269
Unrealized OPEB contributions and losses Total deferred outflows of resources	3,19 278,86		27,339		3,197 306,203	2,043 131,037	203	5,240 437,443
Total assets and deferred outflows of resources	\$ 4,324,73			\$ (27,230)		\$ 3,540,681	\$ 43,995	\$ 8,777,842
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	200,000	<b>4</b> (=:,===	, , , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+ 510.101001	, ,,,,,,,	<b>y</b> 5) , 5
Liabilities								
Current liabilities:								
Accounts and accrued expenses payable	\$ 102,96		11,722	\$ (3,221)			\$ 89	
Customer deposits Total current liabilities	42,19		11,722	(3,221)	42,192 153,655	15,086 35,426	89	57,278 189,170
Total Cutton labilities		<del>/ T</del>	11,722	(3,221)	100,000	30,420	- 00	103,170
Current liabilities payable from restricted assets:								
Debt due within one year	135,10	)5	41,330	-	176,435	51,020	1,640	229,095
Renewal and replacement reserve		_	82,577	-	82,577		<del>-</del>	82,577
Interest payable	40,45		9,571	(04.000)	50,029	31,501	691	82,221
Construction contracts and accounts payable  Total current liabilities payable from restricted assets	16,22 191,78		24,399 157,877	(24,009)		38,235 120,756	114 2.445	54,961 448,854
Total current liabilities payable from restricted assess			107,077	(24,000)	) 320,000	120,730	2,440	440,004
Noncurrent liabilities:								
Net pension liability	330,02		13,312	-	343,337	211,000	_	554,337
Net OPEB liability	24,10			=	24,100	15,408		39,508
Other liabilities Total noncurrent liabilities	39,60		1,553 14,865		41,161 408,598	8,850 235,258	11 11	50,022 643,867
Total Horical Territ liabilities		N	14,003		400,390	230,230		043,007
Long-term debt								
Debt payable, less current portion	2,171,30	)5	408,885	-	2,580,190	1,555,485	36,485	4,172,160
Unamortized premium (discount), net	55,55		11,175	-	66,731	45,783	(39)	112,475
Fair value of debt management strategy instruments	101,35		400.000		101,350	23,919		125,269
Total long-term debt Total liabilities	2,328,2		420,060 604,524	(27,230	2,748,271 ) 3,636,177	1,625,187 2,016,627	36,446 38,991	4,409,904 5,691,795
Total labilities	3,030,00		004,524	(21,230)	3,030,177	2,010,021	30,331	3,031,733
Deferred inflows of resources								
Revenues to be used for future costs	277,5	52	147,632	-	425,184	19,422	_	444,606
Unrealized pension gains	4,86		3,981	-	8,848	3,112	=	11,960
Unrealized OPEB gains Total deferred inflows of resources	282,82		151,613		402 434,434	257 22,791	<u> </u>	659 457,225
Total dolonica who on coodings			101,010		101,101	22,101		101,220
Net position								
Net investment in (divestment of) capital assets Restricted	425,02	:3	(3,751)	=	421,272	1,202,706	(1,818)	1,622,160
Debt service	134,07	<b>7</b> 1	41,709	=	175,780	56,848	1,640	234,268
Other purposes	202,13		(2,179)	24,009	223,969	154,318	899	379,186
Unrestricted	221,80		103,742	(24,009)		87,391	4,283	393,208
Total net position	983,03		139,521		1,122,555	1,501,263	5,004	2,628,822
Total liabilities, deferred inflows of resources, and net position	\$ 4,324,73	8 \$	895,658	\$ (27,230)	5,193,166	\$ 3,540,681	\$ 43,995	\$ 8,777,842

JEA
Combining Statement of Revenues, Expenses, and Changes in Net Position (In Thousands)

	Electric System and Bulk Power		Elimination of	Total Electric	Water and Sewer	District Energy		
	Supply System	SJRPP System	intercompany transactions		Enterprise Fund	System Fund	Eliminations	Total JEA
Operating revenues	Cuppij Cycleiii	Contra Cyclem	trunouotrono	Enterprise i una	Enterprise i una	Cyclemii unu	Liminations	TOTAL DEPT
Electric	\$ 1,253,139	\$ 87,749	\$ (56,982)	\$ 1,283,906	\$ -	\$ -	\$ (16,704)	\$ 1,267,202
Water and sewer	_	· –			424,121	_	(641)	423,480
District energy system	_	_	_	_	_	8,756	(408)	8,348
Other	22,116	60,089	_	82,205	11,561	_	(2,814)	90,952
Total operating revenues	1,275,255	147,838	(56,982)	1,366,111	435,682	8,756	(20,567)	1,789,982
Operating expenses								
Operations and maintenance:								
Fuel	356,877	64,175	-	421,052	-	_	-	421,052
Purchased power	166,176	-	(56,982)	109,194	-	-	-	109,194
Maintenance and other operating expenses	244,011	52,296	-	296,307	149,646	4,603	(20,567)	429,989
Depreciation	203,075	10,987	-	214,062	144,144	2,403	-	360,609
State utility and franchise taxes	60,831	_	_	60,831	10,476	_	_	71,307
Recognition of deferred costs and revenues, net	1,546	(859)	_	687	6,169	_	_	6,856
Total operating expenses	1,032,516	126,599	(56,982)	1,102,133	310,435	7,006	(20,567)	1,399,007
Operating income	242,739	21,239	_	263,978	125,247	1,750		390,975
Nonoperating revenues (expenses)								
Interest on debt	(86,808)	(20,292)	_	(107,100)	(58,034)	(1,374)	_	(166,508)
Investment income	6,910	1,196	_	8,106	3,617	103	_	11,826
Allowance for funds used during construction	3,912	_	_	3,912	7,802	50	_	11,764
Other nonoperating income, net	6,025	1,068	_	7,093	2,764	_	_	9,857
Earnings from The Energy Authority	4,074	_	_	4,074	_	_	_	4,074
Other interest, net	(1,597)	_	_	(1,597)	(228)	_	_	(1,825)
Total nonoperating expenses, net	(67,484)	(18,028)	-	(85,512)	(44,079)	(1,221)	-	(130,812)
Income before contributions	175,255	3,211	_	178,466	81,168	529	_	260,163
Contributions (to) from								
General Fund, City of Jacksonville, Florida	(91,472)	_	_	(91,472)	(25,148)	_	_	(116,620)
Developers and other	1,597	_	_	1,597	80,560	_	_	82,157
Reduction of plant cost through contributions	(1,597)	_	_	(1,597)	(52,517)	_	_	(54,114)
Total contributions, net	(91,472)	-	_	(91,472)	2,895	-	-	(88,577)
Special items								
SJRPP deferred revenues, net	_	451,037	_	451,037	_	_	_	451,037
SJRPP impairment loss	_	(496,136)	_	(496,136)	_	_	_	(496, 136)
Total special items		(45,099)	_	(45,099)	-	-	_	(45,099)
Change in net position	83,783	(41,888)	_	41,895	84,063	529	_	126,487
Net position, beginning of year	983,034	139,521	_	1,122,555	1,501,263	5,004	_	2,628,822
Net position, end of year	1,066,817	97,633		1,164,450	1,585,326	5,533		2,755,309
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JEA
Combining Statement of Revenues, Expenses, and Changes in Net Position (In Thousands)

	Electric System and Bulk Power Supply System	SJRPP System	Elimination of intercompany transactions	Total Electric Enterprise Fund	Water and Sewer Enterprise Fund	District Energy System Fund	Eliminations	Total JEA
Operating revenues								
Electric	\$ 1,270,144	\$ 268,899	\$ (140,162)	\$ 1,398,881	\$ -	\$ -	\$ (16,675) \$	1,382,206
Water and sewer	_	_	_	_	448,348	_	(291)	448,057
District energy system	_	_	_	_	-	8,692	(507)	8,185
Other	29,448	_	_	29,448	9,560	_	(2,279)	36,729
Total operating revenues	1,299,592	268,899	(140,162)	1,428,329	457,908	8,692	(19,752)	1,875,177
Operating expenses Operations and maintenance:								
Fuel	289,949	168,845	_	458,794	_	_	_	458,794
Purchased power	217,618	_	(140,162)	77,456	_	_	_	77,456
Maintenance and other operating expenses	219,434	46,445	, , ,	265,879	141,445	4,570	(19,752)	392,142
Depreciation	199,743	42,754	_	242,497	141,838	2,364	` _	386,699
State utility and franchise taxes	59,121	_	_	59,121	10,562	_	_	69,683
Recognition of deferred costs and revenues, net	(3,344)	(12,017)	_	(15,361)	11,286	_	_	(4,075)
Total operating expenses	982,521	246,027	(140,162)	1,088,386	305,131	6,934	(19,752)	1,380,699
Operating income	317,071	22,872		339,943	152,777	1,758	_	494,478
Nonoperating revenues (expenses)								
Interest on debt	(94,350)	(24,064)	_	(118,414)	(63,183)	(1,395)	_	(182,992)
Investment income	5,177	1,522	_	6,699	3,832	45	_	10,576
Allowance for funds used during construction	6,102	_	_	6,102	5,644	28	_	11,774
Other nonoperating income, net	4,595	389	_	4,984	934	_	_	5,918
Earnings from The Energy Authority	6,335	_	_	6,335	_	_	_	6,335
Other interest, net	(417)	_	_	(417)	(34)	_	_	(451)
Total nonoperating expenses, net	(72,558)	(22,153)	_	(94,711)	(52,807)	(1,322)	_	(148,840)
Income before contributions	244,513	719		245,232	99,970	436	=	345,638
Contributions (to) from								
General Fund, City of Jacksonville, Florida	(92,271)	_	_	(92,271)	(23,552)	_	_	(115,823)
Developers and other	906	_	_	906	65,969	_	_	66,875
Reduction of plant cost through contributions	(906)	_	_	(906)	(41,163)	_	_	(42,069)
Total contributions, net	(92,271)	_	_	(92,271)	1,254		_	(91,017)
Change in net position	152,242	719	_	152,961	101,224	436	_	254,621
Net position, beginning of year	832,508	138,802	_	971,310	1,401,047	4,568	_	2,376,925
Effect of adoption of GASB Statement No. 75		,						
Net position, beginning of year, as restated	(1,716)	_	_	(1,716)	(1,008)	_	_	(2,724)
Net position, beginning or year, as restated	(1,716) 830,792	138,802		(1,716) 969,594	(1,008) 1,400,039	4,568		2,374,201

# Combining Statement of Cash Flows (In Thousands)

	and	ctric System Bulk Power ply System	SJRPP System	Elimination of intercompany transactions		Total Electric	Water and Sewer Enterprise Fund	District Energy System Fund	Elimination of intercompany transactions	Total JEA
Operating activities		p.j Cjoto				ite.price : ana		<b>G</b> J G G G G G G G G G G G G G G G G G G		
Receipts from customers	\$	1,249,048	\$ 104,261	\$ (34,089)	8. 6	1,319,220	\$ 430,685	\$ 8,446	\$ (17,753)	\$ 1,740,598
Payments to suppliers	•	(655,986)	(81,496)	34,089		(703,393)	(104,124)	(4,012)	20,567	(790,962)
Payments to employees		(160,943)	(44,669)			(205,612)	(61,403)	(554)		(267,569)
Other operating activities		25,123	60,089	_		85,212	11.504	-	(2,814)	93,902
Net cash provided by operating activities		457,242	38,185		_	495,427	276,662	3,880	(2,0)	775,969
3		- ,	,			,	-,	-,		-,
Noncapital and related financing activities										
Contribution to General Fund, City of Jacksonville, Florida		(91,538)	_	_		(91,538)	(25,031)	_	_	(116,569)
Net cash used in noncapital and related financing activities		(91,538)	_	_		(91,538)	(25,031)	_	_	(116,569)
,							,			,
Capital and related financing activities										
Defeasance of debt		(405,105)	(128,280)	_		(533,385)	(460,305)	_	_	(993,690)
Proceeds from issuance of debt, net		383,840	_	_		383,840	437,160	_	_	821,000
Acquisition and construction of capital assets		(180,050)	_	_	-	(180,050)	(203,474)	(1,053)	-	(384,577)
Repayment of debt principal		(135,105)	(41,330)	_		(176,435)	(51,020)	(1,640)	_	(229,095)
Interest paid on debt		(97,134)	(16,685)	_		(113,819)	(67,659)	(1,371)	_	(182,849)
Capital contributions		-		_			28,043	_	_	28,043
Other capital financing activities		44,011	(6,974)	_		37,037	26,160	_	_	63,197
Net cash used in capital and related financing activities		(389,543)	(193,269)	_		(582,812)	(291,095)	(4,064)	_	(877,971)
Investing activities										
Purchase of investments		(506,359)	(252,593)	_	-	(758,952)	(279,014)	_	_	(1,037,966)
Proceeds from sale and maturity of investments		462,211	428,653	-		890,864	288,607	_	_	1,179,471
Investment income		10,225	(2,050)	_	-	8,175	7,023	103	_	15,301
Distributions from The Energy Authority		3,513	_	_		3,513	_	_	_	3,513
Net cash provided by (used in) investing activities		(30,410)	174,010	_		143,600	16,616	103	_	160,319
Net change in cash and cash equivalents		(54,249)	18,926	-	-	(35,323)	(22,848)	(81)	_	(58,252)
Cash and cash equivalents at beginning of year		340,063	121,027			461,090	145,909	7,035		614,034
Cash and cash equivalents at end of year	\$	285,814	\$ 139,953	\$ -	- \$	425,767	\$ 123,061	\$ 6,954	\$ –	\$ 555,782
Reconciliation of operating income to net cash provide	d by o			_	_				_	
Operating income	\$	242,739	\$ 21,239	\$ -	\$	263,978	\$ 125,247	\$ 1,750	\$ -	\$ 390,975
Adjustments:										
Depreciation and amortization		203,075	10,987	_	•	214,062	145,424	2,403	_	361,889
Recognition of deferred costs and revenues, net		1,546	(859)	_		687	6,169	_	_	6,856
Other nonoperating income, net		103	700	_	•	803	270	_	_	1,073
Changes in noncash assets and noncash liabilities:										
Accounts receivable		13,184	15,812	_	•	28,996	(2,200)	(310)	_	26,486
Accounts receivable, restricted		13		_	•	13	3	_	_	16
Inventories		2,136	52,297	-		54,433	(8,014)	_	_	46,419
Other assets		5,688	-	_		5,688	733	_	_	6,421
Accounts and accrued expenses payable		10,076	(10,441)	_		(365)	1,330	14	_	979
Current liabilities payable from restricted liabilities		(04.0:=	(49,998)	_		(49,998)	_	_	_	(49,998)
Other noncurrent liabilities and deferred inflows	_	(21,318)	(1,552)			(22,870)	7,700	23	_	(15,147)
Net cash provided by operating activities	\$	457,242	\$ 38,185	\$ -	\$	495,427	\$ 276,662	\$ 3,880	\$ -	\$ 775,969
Non-cash activity			_		_			_		
Contribution of capital assets from developers	\$	1,597	\$ -	\$ -	\$		\$ 52,517		\$ -	\$ 54,114
Unrealized gains (losses) on fair value of investments	\$	(4,052)	\$ 4,146	<b>5</b> –	\$	94	\$ (3,480)	\$ -	\$ -	\$ (3,386)

# JEA Combining Statement of Cash Flows (In Thousands)

	and	tric System Bulk Power ply System	SJRPP Sy	stem	inte	mination of ercompany nsactions		otal Electric erprise Fund	5	ater and Sewer prise Fund		ict Energy tem Fund	Eliminati intercom transact	pany	Tot	tal JEA
Operating activities																
Receipts from customers	\$	1,207,855	\$ 269	9,957	\$	(143,764)	\$	1,334,048	\$	433,658	\$	8,282	\$ (1	7,473)	\$	1,758,515
Payments to suppliers		(605,225)	(201	1,043)		143,764		(662,504)		(91,308)		(4,171)	1	9,752		(738,231)
Payments to employees		(159,127)	(3	1,336)		_		(190,463)		(58,234)		(496)		_		(249,193)
Other operating activities		3,601		_		_		3,601		3,246		(27)		(2,279)		4,541
Net cash provided by operating activities		447,104	37	7,578		-		484,682		287,362		3,588		_		775,632
Noncapital and related financing activities																
Contribution to General Fund, City of Jacksonville, Florida		(92,225)		_		_		(92,225)		(23,469)		_		_		(115,694)
Net cash used in noncapital and related financing activities		(92,225)						(92,225)		(23,469)						(115,694)
Capital and related financing activities																
Defeasance of debt		(153,210)		_		_		(153,210)		(6,135)		_		_		(159,345)
Proceeds from issuance of debt, net		90,405		_		_		90,405		(=, :==,		_		_		90,405
Acquisition and construction of capital assets		(128,665)		_		_		(128,665)		(177,345)		(2,123)		_		(308,133)
Repayment of debt principal		(102,240)	(Δ'	3,785)		_		(146,025)		(33,875)		(1,625)		_		(181,525)
Interest paid on debt		(102,667)	,	0,226)		_		(122,893)		(69,199)		(1,391)		_		(193,483)
Capital contributions		(102,001)	(2	J,220)		_		(122,000)		24,805		(1,001)		_		24,805
Other capital financing activities		(167)		389		_		222		2,306		_		_		2,528
Net cash used in capital and related financing activities		(396,544)	(6	3,622)		_		(460,166)		(259,443)		(5,139)		_		(724,748)
Tecoustrace in copies a produce in a principle of the conference		(000,011)	(0	3,022)				(400,100)		(200,110)		(0,100)				(124,140)
Investing activities																
Purchase of investments		(641,438)	(572	2,124)		-		(1,213,562)		(589,885)		_		-	(	(1,803,447)
Proceeds from sale and maturity of investments		714,603	585	5,322		-		1,299,925		561,671		_		_		1,861,596
Investment income		7,158	:	3,855		-		11,013		6,535		45		-		17,593
Distributions from The Energy Authority		6,182		-		-		6,182		_		_		_		6,182
Net cash provided by (used in) investing activities		86,505	17	7,053		_		103,558		(21,679)		45		-		81,924
Not always in each and each an indepte		44.840	,,	004		_		35.849		(47 000)		(4.500)		_		17.114
Net change in cash and cash equivalents		,	,	3,991)				,-		(17,229)		(1,506)		_		,
Cash and cash equivalents at beginning of year	•	295,223 340,063		0,018 1,027	¢.		\$	425,241 461,090	¢.	163,138 145,909	¢.	8,541 7,035	¢		\$	596,920 614,034
Cash and cash equivalents at end of year	Ф	340,003	<b>Ф</b> 12	1,027	Ф		Ф	401,090	Ф	140,909	Ф	7,033	Ф		Ф	614,004
Reconciliation of operating income to net cash provided by operating	ng activ	vities														
Operating income	\$	317,071	\$ 2	2,872	\$	_	\$	339,943	\$	152,777	\$	1,758	\$	- :	\$	494,478
Adjustments:																
Depreciation and amortization		199,743	42	2,754		_		242,497		143,179		2,364		_		388,040
Recognition of deferred costs and revenues, net		(3,344)	(12	2,017)		_		(15,361)		11,286		_		_		(4,075)
Other nonoperating income, net		45	,	_		_		45		(1,117)		_		_		(1,072)
Changes in noncash assets and noncash liabilities:										,						,
Accounts receivable		(2,083)		1,058		_		(1,025)		(12,751)		(409)		_		(14,185)
Accounts receivable, restricted		28		_		_		28		4		` _		_		32
Inventories		(1,582)	(19	9,603)		_		(21,185)		(3,507)		_		_		(24,692)
Other assets		(23,056)		_		_		(23,056)		(4,542)		(27)		_		(27,625)
Accounts and accrued expenses payable		21,878	(2	2,327)		_		19,551		3,780		(69)		_		23,262
Current liabilities payable from restricted liabilities		-	,	4,409		_		4,409				-		_		4,409
Other noncurrent liabilities and deferred inflows		(61,596)		432		_		(61,164)		(1,747)		(29)		_		(62,940)
Net cash provided by operating activities	\$	447,104	\$ 37	7,578	\$	_	\$	484,682	\$	287,362	\$	3,588	\$	- ;	\$	775,632
Non-cash activity																
Contribution of capital assets from developers	\$	906		_	\$	-	\$	906		41,163		-	\$		\$	42,069
Unrealized losses on fair value of investments	\$	(2,193)	\$ (2	2,556)	\$	-	\$	(4,749)	\$	(2,961)	\$	-	\$	- :	\$	(7,710)



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# Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

The Board of Directors JEA Jacksonville, Florida

We have audited, in accordance with auditing standards generally accepted in the United States and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States, the financial statements of JEA, which comprise the statement of net position as of September 30, 2018, and the related statements of revenues, expenses and changes in net position and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated December 3, 2018.

#### Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered JEA's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of JEA's internal control. Accordingly, we do not express an opinion on the effectiveness of JEA's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

#### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether JEA's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.



### Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Ernst & Young LLP

December 3, 2018

# BOND COMPLIANCE INFORMATION



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### Report of Independent Auditors on Schedules of Debt Service Coverage

The Board of Directors JEA Jacksonville, Florida

We have audited, in accordance with auditing standards generally accepted in the United States, the accompanying schedules of debt service coverage (as specified in the respective JEA Bond Resolutions) of the JEA Electric System, the JEA Bulk Power Supply System, the JEA St. Johns River Power Park System, the JEA Water and Sewer System and the JEA District Energy System for the years ended September 30, 2018 and 2017, based on the financial statements referred to in the Report on Financial Statements as of September 30, 2018 and 2017 paragraph below.

### Management-s Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of the schedules of debt service coverage in conformity with the respective JEA Bond Resolutions. Management also is responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules of debt service coverage that are free of material misstatement, whether due to fraud or error.

### Auditor-s Responsibility

Our responsibility is to express an opinion on the schedules of debt service coverage based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedules of debt service coverage are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedules of debt service coverage. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedules of debt service coverage, 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 schedules of debt service coverage 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 schedules of debt service coverage.

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 schedules referred to above present fairly, in all material respects, the debt service coverage of the JEA Electric System, the JEA Bulk Power Supply System, the JEA St. Johns River Power Park System, the JEA Water and Sewer System, and the JEA District Energy System for the years ended September 30, 2018 and 2017, in conformity with the basis specified in the respective JEA Bond Resolutions.



#### Contractual Basis of Accounting

The method of calculating the schedules of debt service coverage is prescribed by the applicable JEA Bond Resolutions, which require the maintenance of certain minimum debt service coverage ratios. Our opinion is not modified with respect to this matter.

#### Report on Financial Statements as of September 30, 2018 and 2017

We have audited, in accordance with auditing standards generally accepted in the United States, the basic financial statements of JEA as of and for the years ended September 30, 2018 and 2017, and have issued our report, with an unmodified opinion thereon, dated December 3, 2018.

#### Restrictions on Use

This report is intended solely for the information and use of management and the board of directors of JEA, and the bond trustees and is not intended to be and should not be used by anyone other than these specified parties.

December 3, 2018

Ernst & Young LLP

### JEA Electric System

Revenues         2018         2017           Electric         \$ 1,229,625         \$ 1,206,919           Earnings from Tibe Energy Authority         9,525         5,939           Earnings from Tibe Energy Authority         4,074         6,335           Other, net (2)         22,16         24,403           Plus: armounts paid from the rate stabilization fund into the rate stabilization fund in the rate stab			mber 30		
Electric			2018	-	2017
Investment income (1)	Revenues				
Earnings from The Energy Authority         4,074         6,335           Other, net (2)         22,216         29,490           Plus: amounts paid from the rate stabilization fund into the rate stabilization fund         88,415         79,216           Less: amounts paid from the revenue fund into the rate stabilization fund         (64,901)         (15,991)           Total revenues         1,288,954         1,311,908           Operating expenses (3)         Fuel         328,160         253,204           Purchased power (4)         244,478         284,406           Other operations and maintenance         204,982         199,511           State utility bases and franchise fees         59,551         57,651           State utility bases and franchise fees         59,551         57,651           Net revenues         \$ 451,783         \$ 516,806           Public service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,434)         (1,431)           Less: Duild America Bonds subsidy         (1,516)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Net revenues (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordina	Electric	\$	1,229,625	\$	1,206,919
Other, net (2)         22,216         29,490           Plus: amounts paid from the rate stabilization fund into the rate stabilization fund         88,415         79,216           Less: amounts paid from the revenue fund into the rate stabilization fund         (64,901)         (15,991)           Total revenues         1,288,954         1,311,908           Operating expenses (3)         Full         328,160         253,204           Purchased power (4)         244,478         294,436           Other operations and maintenance         204,982         199,511           Sate utility taxes and franchise fees         59,551         57,561           Total operating expenses         837,171         795,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,516)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Pus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement	Investment income (1)		9,525		5,939
Plus: amounts paid from the rate stabilization fund into the rate stabilization fund         88,415 (64,901) (15,991)         79,216 (64,901)         79,216 (64,901)         (15,991)           Total revenues         1,288,954         1,311,908         1,311,90	Earnings from The Energy Authority		4,074		6,335
Less: amounts paid from the revenue fund into the rate stabilization fund         (64,901)         (15,991)           Total revenues         1,288,954         1,311,908           Operating expenses (3)           Fuel         328,160         253,204           Purchased power (4)         244,478         284,436           Other operations and maintenance         204,982         199,511           Stable utility taxes and franchise fees         837,171         756,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)	Other, net (2)		22,216		29,490
Total revenues         1,288,954         1,311,908           Operating expenses (3)         328,160         253,204           Fuel         244,478         224,436           Other operations and maintenance         204,982         199,511           State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         795,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sirking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 88,933         \$ 88,610           Senior debt service coverage (5), (min 1.20x)         6.55         x 7.53         x           Net revenues (from above)         \$ 68,933         \$ 68,610           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Pius: aggregate subcordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subcordinated debt service on outstanding subordinated bonds         196,857 </td <td>Plus: amounts paid from the rate stabilization fund into the revenue fund</td> <td></td> <td>88,415</td> <td></td> <td>79,216</td>	Plus: amounts paid from the rate stabilization fund into the revenue fund		88,415		79,216
Operating expenses (3)           Fuel         328,160         253,204           Purchased power (4)         244,478         284,436           Other operations and maintenance         204,982         199,511           State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         795,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 65,55         x 7,53         x           Net revenues (from above)         \$ 68,933         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432	Less: amounts paid from the revenue fund into the rate stabilization fund		(64,901)		(15,991)
Fuel         328,160         253,204           Purchased power (4)         244,478         284,436           Other operations and maintenance         204,982         199,511           State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         795,102           Net revenues         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 65,5 x         7.53 x           Net revenues (from above)         \$ 68,933         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432	Total revenues		1,288,954		1,311,908
Fuel         328,160         253,204           Purchased power (4)         244,478         284,436           Other operations and maintenance         204,982         199,511           State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         795,102           Net revenues         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 65,5 x         7.53 x           Net revenues (from above)         \$ 68,933         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432	Operating expenses (3)				
Purchased power (4)         244,478         284,436           Other operations and maintenance         204,982         199,511           State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         795,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 51,783         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432			328.160		253.204
Other operations and maintenance         204,982         199,511           State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         795,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 68,933         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432	· •••		,		,
State utility taxes and franchise fees         59,551         57,951           Total operating expenses         837,171         796,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 451,783         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432	,		,		,
Total operating expenses         837,171         795,102           Net revenues         \$ 451,783         \$ 516,806           Debt service         \$ 71,890         \$ 71,557           Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 516,806           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         196,357         \$ 204,432	•		,		,
Net revenues         \$ 451,783 \$ 516,806           Debt service         \$ 71,890 \$ 71,557           Less: investment income on sinking fund         (1,436) (1,431)           Less: Build America Bonds subsidy         (1,521) (1,516)           Debt service requirement         \$ 68,933 \$ 68,610           Senior debt service coverage (5), (min 1.20x)         \$ 516,806           Net revenues (from above)         \$ 451,783 \$ 516,806           Debt service requirement (from above)         \$ 68,933 \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469 137,832           Less: Build America Bonds subsidy         (2,045) (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357 \$ 204,432					
Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         6.55 x         7.53 x           Net revenues (from above)         \$ 451,783         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432		\$	,	\$	
Less: investment income on sinking fund         (1,436)         (1,431)           Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933         \$ 68,610           Senior debt service coverage (5), (min 1.20x)         6.55 x         7.53 x           Net revenues (from above)         \$ 451,783         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432					
Less: Build America Bonds subsidy         (1,521)         (1,516)           Debt service requirement         \$ 68,933 \$ 68,610           Senior debt service coverage (5), (min 1.20x)         6.55 x         7.53 x           Net revenues (from above)         \$ 451,783 \$ 516,806           Debt service requirement (from above)         \$ 68,933 \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469 137,892           Less: Build America Bonds subsidy         (2,045) (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357 \$ 204,432		\$		\$	•
Debt service requirement         \$ 68,933 \$ 68,610           Senior debt service coverage (5), (min 1.20x)         6.55 x         7.53 x           Net revenues (from above)         \$ 451,783 \$ 516,806           Debt service requirement (from above)         \$ 68,933 \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469 137,892           Less: Build America Bonds subsidy         (2,045) (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357 \$ 204,432	<u> </u>		, , ,		,
Senior debt service coverage (5), (min 1.20x)         6.55 x         7.53 x           Net revenues (from above)         \$ 451,783 \$ 516,806           Debt service requirement (from above)         \$ 68,933 \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469 137,892           Less: Build America Bonds subsidy         (2,045) (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357 \$ 204,432	· · · · · · · · · · · · · · · · · · ·			Φ.	· · /
Net revenues (from above)         \$ 451,783         \$ 516,806           Debt service requirement (from above)         \$ 68,933         \$ 68,610           Plus: aggregate subordinated debt service on outstanding subordinated bonds         129,469         137,892           Less: Build America Bonds subsidy         (2,045)         (2,070)           Total debt service requirement and aggregate subordinated debt service         \$ 196,357         \$ 204,432	Debt service requirement	\$	68,933	\$	68,610
Debt service requirement (from above)\$ 68,933\$ 68,610Plus: aggregate subordinated debt service on outstanding subordinated bonds129,469137,892Less: Build America Bonds subsidy(2,045)(2,070)Total debt service requirement and aggregate subordinated debt service\$ 196,357\$ 204,432	Senior debt service coverage (5), (min 1.20x)		6.55	x	7.53 x
Plus: aggregate subordinated debt service on outstanding subordinated bonds Less: Build America Bonds subsidy  Total debt service requirement and aggregate subordinated debt service  129,469 137,892 (2,070) (2,070) 196,357 204,432	Net revenues (from above)	\$	451,783	\$	516,806
Plus: aggregate subordinated debt service on outstanding subordinated bonds 129,469 137,892 Less: Build America Bonds subsidy (2,045) (2,070)  Total debt service requirement and aggregate subordinated debt service \$196,357 \$204,432	Debt service requirement (from above)	\$	68,933	\$	68,610
Less: Build America Bonds subsidy (2,045) (2,070) Total debt service requirement and aggregate subordinated debt service \$196,357 \$ 204,432	. , ,	•	129,469	•	,
Total debt service requirement and aggregate subordinated debt service \$ 196,357 \$ 204,432	55 5		•		,
Senior and subordinated debt service coverage (6), (min 1.15x)  2.30 x  2.53 x	Total debt service requirement and aggregate subordinated debt service	\$	,	\$	· · /
	Senior and subordinated debt service coverage (6), (min 1.15x)		2.30	x	2.53 x

- (1) Excludes investment income on sinking funds.
- (2) Excludes the Build America Bonds subsidy.
- (3) Excludes depreciation and recognition of deferred costs and revenues, net.
- (4) In accordance with the requirements of the Electric System Resolution, all the contract debt payments from the Electric System to the SJRPP and Bulk Power Supply System with respect to the use by the Electric System of the capacity and output of the SJRPP and Bulk Power Systems are reflected as a purchased power expense on these schedules. These schedules do not include revenues of the SJRPP and Bulk Power Supply System, except that the purchased power expense is net of interest income on funds maintained under the SJRPP and Bulk Power Supply System resolutions.
- (5) Net revenues divided by debt service requirement. Minimum annual coverage is 1.20x.
- (6) Net revenues divided by total debt service requirement and aggregate subordinated debt service. Minimum annual coverage is 1.15x

## JEA Bulk Power Supply System

# Schedule of Debt Service Coverage (In Thousands)

	Year ended September 30					
		2018				
Revenues	·					
Operating	\$	78,302	\$	66,818		
Investment income		162		150		
Total revenues		78,464		66,968		
Operating expenses (1)						
Fuel		28,717		36,745		
Other operations and maintenance		17,545		14,522		
Total operating expenses		46,262		51,267		
Net revenues	\$	32,202	\$	15,701		
Aggregate debt service	\$	9,943	\$	9,679		
Less: Build America Bonds subsidy		(667)		(699)		
Aggregate debt service	\$	9,276	\$	8,980		
Debt service coverage (2)		3.47	K	1.75 x		

- (1) Excludes depreciation and recognition of deferred costs and revenues, net.
- (2) Net revenues divided by aggregate debt service. Minimum annual coverage is 1.15x.

### JEA St. Johns River Power Park System, Second Resolution

	Year Ended September 30				
	2018			2017	
Revenues				_	
Operating	\$	34,196	\$	14,572	
Investment income		1,339		250	
Total revenues		35,535		14,822	
Operating expenses (1)		15,389		_	
Net revenues	\$	20,146	\$	14,822	
Aggregate debt service	\$	12,925	\$	12,950	
Less: Build America Bonds subsidy		(367)		(389)	
Aggregate debt service	\$	12,558	\$	12,561	
Debt service coverage (2)		1.60	K	1.18 x	

- (1) Excludes depreciation and recognition of deferred costs and revenues, net.
- (2) Net revenues divided by aggregate debt service. Minimum annual coverage is 1.15x.

## JEA Water and Sewer System

		er 30		
	2018			2017
Revenues				
Water	\$	171,216	\$	181,313
Water capacity fees		9,730		8,859
Sewer		260,606		264,469
Sewer capacity fees		18,268		15,916
Investment income		7,097		6,793
Other (1)		11,831		9,560
Plus: amounts paid from the rate stabilization fund into the revenue fund		16,128		26,842
Less: amounts paid from the revenue fund into the rate stabilization fund		(23,829)		(24,276)
Total revenues		471,047		489,476
Operating expenses				
Operations and maintenance (2)		160,122		152,007
Total operating expenses		160,122		152,007
Net revenues	\$	310,925	\$	337,469
Net revenues	<u> </u>	310,323	Ψ	337,409
Aggregate debt service	\$	95,818	\$	97,699
Less: Build America Bonds subsidy		(2,495)		(2,500)
Aggregate debt service	\$	93,323	\$	95,199
Senior debt service coverage (3), (min 1.25x)		3.33	v	3.54 x
	\$	310,925	\$	
Net revenues (from above)	<u> </u>	310,923	Φ	337,469
Aggregate debt service (from above)	\$	93,323	\$	95,199
Plus: aggregate subordinated debt service on outstanding subordinated debt		18,084		17,592
Total aggregate debt service and aggregate subordinated debt service	\$	111,407	\$	112,791
Senior and subordinated debt service coverage excluding capacity fees (4)		2.54	Y	277 x
	-	2.79		2.77 X
Senior and subordinated debt service coverage including capacity fees (4)		2.19	X	299 X

<sup>(1)</sup> Excludes the Build America Bonds subsidy.

<sup>(2)</sup> Excludes depreciation and recognition of deferred costs and revenues, net.

<sup>(3)</sup> Net revenues divided by aggregate debt service. Minimum annual coverage is 1.25x.

<sup>(4)</sup> Net revenues divided by total aggregate debt service and aggregate subordinated debt service. Minimum annual coverage is either 1.00x aggregate debt service and aggregate subordinated debt service (excluding capacity charges) or the sum of 1.00x aggregate debt service and 1.20x aggregate subordinated debt service (including capacity charges).

## JEA District Energy System

	Year Ended September 30				
	2018			2017	
Revenues				_	
Service revenues	\$	8,756	\$	8,692	
Investment income		103		45	
Total revenues		8,859		8,737	
Operating expenses (1)					
Operations and maintenance		4,603		4,570	
Total operating expenses		4,603		4,570	
Net revenues	\$	4,256	\$	4,167	
Aggregate debt service (2)	\$	3,019	\$	3,022	
Debt service coverage (3), (min 1.15x)		1.41	x	1.38 x	

<sup>(1)</sup> Excludes depreciation.

<sup>(2)</sup> On June 19, 2013, the closing date of the District Energy System Refunding Revenue Bonds, 2013 Series A, the JEA covenanted to deposit into the 2013 Series A Bonds Subaccount from Available Water and Sewer System Revenues an amount equal to the Aggregate DES Debt Service Deficiency that exists with respect to the 2013 Series A Bonds, in the event that the amount on deposit in the Debt Service Account in the Debt Service Fund in accordance with the District Energy System Resolution is less than Accrued Aggregate Debt Service as of the last business day of the then current month.

<sup>(3)</sup> Net revenues divided by aggregate debt service. Minimum annual coverage is 1.15x.

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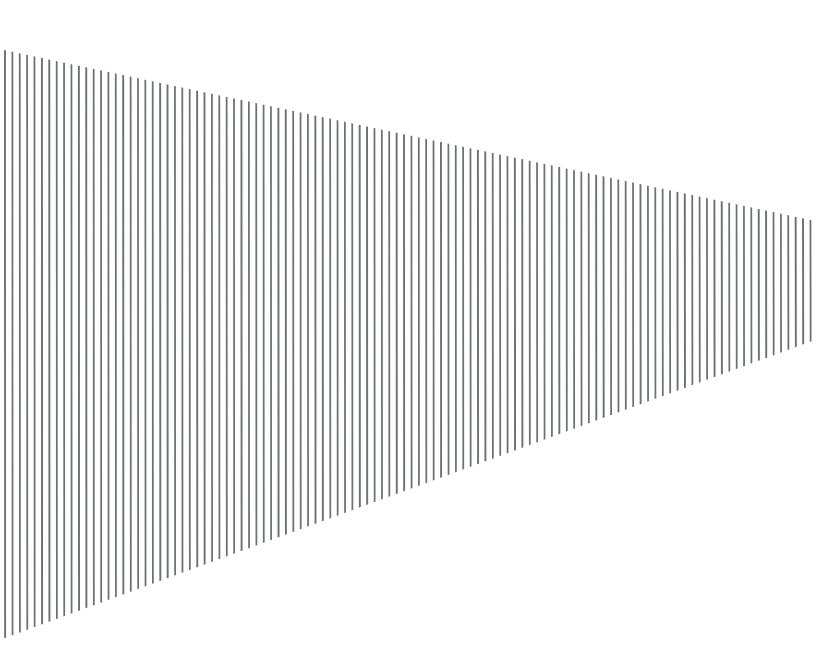
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# SUMMARY OF CERTAIN PROVISIONS OF THE WATER AND SEWER SYSTEM RESOLUTION

The following is a summary of certain provisions of the Water and Sewer System Resolution. Summaries of certain definitions contained in the Water and Sewer System Resolution are set forth below. Other terms defined in the Water and Sewer System Resolution for which summary definitions are not set forth are indicated by capitalization. The summary does not purport to be a complete description of the terms of the Water and Sewer System Resolution and, accordingly, is qualified by reference thereto and is subject to the full text thereof. In June 2013, JEA adopted Resolution No. 2013-10 ("Resolution 2013-10") which, upon the consent thereto of the holders of a majority in principal amount of Water and Sewer System Bonds Outstanding, provides for (a) the amendment of certain provisions of the Water and Sewer System Resolution to allow for the more efficient and advantageous investment of certain funds held under the Water and Sewer System Resolution, and (b) the amendment of the First Supplemental Water and Sewer System Revenue Bond Resolution, adopted by JEA on August 19, 1997 (the "First Supplemental Resolution") to revise certain provisions related to the use of reserve fund credit instruments. The amendments (the "Resolution Amendments") described in this paragraph have become effective, and apply to all of the outstanding Water and Sewer System Bonds.

The Resolution Amendments became effective on May 2, 2018 following the issuance of the JEA Water and Sewer System Revenue Bonds, 2017 Series A on December 21, 2017, the mailing of notice to bondholders and satisfaction of the requirements of the Water and Sewer System Resolution and the First Supplemental Resolution. Certain of the Resolution Amendments are also included in this summary.

The Water and Sewer System Resolution, as heretofore amended, is available for viewing and downloading on JEA's website at <a href="https://www.jea.com/About/Investor\_Relations/Bonds/">https://www.jea.com/About/Investor\_Relations/Bonds/</a>. Copies of the Water and Sewer System Resolution (as so amended), the First Supplemental Resolution and Resolution 2013-10 may be obtained from JEA; provided that a reasonable charge may be imposed for the cost of reproduction. The term "Water and Sewer System Bonds" as used in this summary has the same meaning as the term "Water and Sewer System Bonds" as used in the Annual Disclosure Report to which this summary is attached.

#### **Definition of Terms**

The following are summaries of certain definitions in the Water and Sewer System Resolution:

Accreted Value means, as of any date of computation with respect to any Water and Sewer System Capital Appreciation Bond, an amount equal to the principal amount of such Bond plus the interest accrued on such Bond from the date of original issuance of such Bond to the periodic date specified in the Supplemental Resolution authorizing such Water and Sewer System Capital Appreciation Bond on which interest on such Bond is to be compounded (hereinafter, a "Periodic Compounding Date") next preceding the date of computation or the date of computation if a Periodic Compounding Date, such interest to accrue at the interest rate per annum of the Water and Sewer System Capital Appreciation Bonds set forth in the Supplemental Resolution authorizing such Bonds, compounded periodically on each Periodic Compounding Date, plus, if such date of computation shall not be a Periodic Compounding Date, a portion of the difference between the Accreted Value as of the immediately preceding Periodic Compounding Date (or the date of original issuance) and the Accreted Value as of the immediately succeeding Periodic Compounding Date, calculated based upon an assumption that, unless otherwise provided in the Supplemental Resolution authorizing such Water and Sewer System Capital Appreciation Bonds, Accreted Value accrues in equal daily amounts on the basis of a year consisting of twelve 30-day months.

Accrued Aggregate Debt Service means, as of any date of calculation, an amount equal to the sum of the amounts of accrued Debt Service with respect to all Series, calculating the accrued Debt Service with respect to each Series at an amount equal to the sum of (i) interest on the Water and Sewer System Bonds of such Series accrued and unpaid and to accrue to the end of the then current calendar month, and (ii) Principal Installments due and unpaid and that portion of the Principal Installments for such Series next due which would have accrued (if deemed to accrue in the manner set forth in the definition of Debt Service) to the end of such calendar month; provided, however, that (i) there shall be excluded from the calculation of Accrued Aggregate Debt Service any Principal Installments which are Refundable Principal Installments, (ii) the principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Bonds or the Appreciated Value of Water and Sewer System Deferred Income Bonds shall be included in the calculation of Accrued Aggregate Debt Service at the times and in the manner provided in the Water and Sewer System Resolution and (iii) if the calculation of the Debt Service Reserve Requirement for any separate subaccount in the Debt Service Reserve Account takes into account Accrued Aggregate Debt Service, then, for purposes of such calculation, Accrued Aggregate Debt Service shall be calculated only with respect to the Water and Sewer System Bonds of the Series secured thereby.

Additionally Secured Series means a Series of Water and Sewer System Bonds for which the payment of the principal or sinking fund Redemption Price, if any, of, and interest on, all or a portion of the Water and Sewer System Bonds of which shall be secured, in addition to the pledge of the Trust Estate created pursuant to the Water and Sewer System Resolution, by amounts on deposit in a separate subaccount to be designated therefor in the Debt Service Reserve Account. For all purposes of the Water and Sewer System Resolution relating to the separate subaccount in the Debt Service Reserve Account in the Debt Service Fund established with respect to all or any portion of the Water and Sewer System Bonds of any such Additionally Secured Series, any reference to such Additionally Secured Series shall be deemed to refer only to the Water and Sewer System Bonds of such maturities (or interest rate(s) within a maturity) of such series that are so secured by amounts on deposit in such separate subaccount.

Adjusted Aggregate Debt Service for any period means, as of any date of calculation, the Aggregate Debt Service for such period except that (a) if any Refundable Principal Installment for any Series of Water and Sewer System Bonds is included in Aggregate Debt Service for such period, Adjusted Aggregate Debt Service shall mean Aggregate Debt Service determined as if each such Refundable Principal Installment had been payable, over a period extending from the due date of such Principal Installment through the later of (x) the 30th anniversary of the issuance of such Series of Water and Sewer System Bonds or (y) the 10th anniversary of the due date of such Refundable Principal Installment, in installments which would have required equal annual payments of principal and interest over such period and (b) the principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Bonds or the Appreciated Value of Water and Sewer System Deferred Income Bonds shall be included in the calculation of Adjusted Aggregate Debt Service at the times and in the manner provided in the Water and Sewer System Resolution. Interest deemed payable in any Fiscal Year after the actual due date of any Refundable Principal Installment of any Series of Water and Sewer System Bonds shall be calculated at such rate of interest as JEA, or a banking or financial institution selected by JEA, determines would be a reasonable estimate of the rate of interest that would be borne on Water and Sewer System Bonds maturing at the times determined in accordance with the provisions of the preceding sentence.

Aggregate Debt Service for any period means, as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all Series; provided, however, that (a) for purposes of estimating Aggregate Debt Service for any future period (i) any Water and Sewer System Variable Rate Bonds Outstanding during such period shall be assumed to bear interest during such period at the greater of (X) the actual rate of interest then borne by such Water and Sewer System Variable Rate Bonds or (Y) the Certified Interest Rate applicable thereto and (ii) any Water and Sewer System Option Bonds Outstanding during such period shall be assumed to mature on the stated maturity date thereof and (b) the principal and

interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Bonds or the Appreciated Value of Water and Sewer System Deferred Income Bonds shall be included in the calculation of Aggregate Debt Service at the times and in the manner provided in the Water and Sewer System Resolution; and *provided*, *further*, that if the calculation of the Debt Service Reserve Requirement for any separate subaccount in the Debt Service Reserve Account takes into account Aggregate Debt Service, then, for purposes of such calculation, Aggregate Debt Service shall be calculated only with respect to the Water and Sewer System Bonds of the Series secured thereby.

Alternate Variable Rate Taxable Index means such index as, at the time, is in general use as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is not excluded from gross income for federal income tax purposes, as determined by an Authorized Officer of JEA.

Alternate Variable Rate Tax-Exempt Index means such index as, at the time, is in general use as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is excluded from gross income for federal income tax purposes, as determined by an Authorized Officer of JEA.

Annual Net Revenues means, with respect to any Fiscal Year, the Revenues during such Fiscal Year, determined on an accrual basis, minus the sum of (a) Operation and Maintenance Expenses during such Fiscal Year, determined on an accrual basis, to the extent paid or to be paid from Revenues, (b) the Aggregate Debt Service with respect to such Fiscal Year and (c) debt service payable during such Fiscal Year with respect to all other obligations issued by JEA (including, without limitation, Subordinated Indebtedness) in connection with the System, determined on an accrual basis.

Appreciated Value means, with respect to any Water and Sewer System Deferred Income Bond, (i) as of any date of computation prior to the Current Interest Commencement Date with respect to such Water and Sewer System Deferred Income Bond, an amount equal to the principal amount of such Bond plus the interest accrued on such Bond from the date of original issuance of such Bond to the periodic date specified in the Supplemental Resolution authorizing such Water and Sewer System Deferred Income Bond on which interest on such Bond is to be compounded (hereinafter, a "Periodic Compounding Date") next preceding the date of computation or the date of computation if a Periodic Compounding Date, such interest to accrue at the interest rate per annum of the Water and Sewer System Deferred Income Bonds set forth in the Supplemental Resolution authorizing such Bonds, compounded periodically on each Periodic Compounding Date, plus, if such date of computation shall not be a Periodic Compounding Date, a portion of the difference between the Appreciated Value as of the immediately preceding Periodic Compounding Date (or the date of original issuance if the date of computation is prior to the first Periodic Compounding Date succeeding the date of original issuance) and the Appreciated Value as of the immediately succeeding Periodic Compounding Date, calculated based upon an assumption that, unless otherwise provided in the Supplemental Resolution authorizing such Deferred Income Bonds, Appreciated Value accrues in equal daily amounts on the basis of a year consisting of twelve 30-day months and (ii) as of any date of computation on and after the Current Interest Commencement Date, the Appreciated Value on the Current Interest Commencement Date.

BMA Municipal Swap Index means the rate determined on the basis of an index based upon the weekly interest rates of tax-exempt variable rate issues included in a database maintained by Municipal Market Data or any successor indexing agent which meets specific criteria established by The Bond Market Association.

Bond Anticipation Notes means notes or other evidences of indebtedness from time to time issued in anticipation of the issuance of Water and Sewer System Bonds, the proceeds of which have been or are required to be applied to one or more of the purposes for which Water and Sewer System Bonds may be

issued, the payment of which notes is to be made from the proceeds of the Water and Sewer System Bonds in anticipation of the issuance of which said notes are issued.

Bond Year means the 12 month period commencing on October 1 in any year and ending on September 30 of the following year.

Build America Bonds shall mean any Bonds with respect to which JEA has irrevocably elected, pursuant to Section 54AA(g) of the Code or any similar federal program creating subsidies for municipal borrowers for which JEA qualifies, to receive cash subsidy payments from the U.S. Treasury equal to a portion of the interest payable on such Bonds.

Capacity Charges shall mean water and sewer capacity charges imposed by JEA with respect to the System.

Certified Interest Rate means, as of any date of determination:

- (i) with respect to any Water and Sewer System Variable Rate Bonds maturing on a particular date that were, at the date of the original issuance thereof, the subject of a Counsel's Opinion to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the lesser of (1) the average of the Variable Rate Tax-Exempt Index for the five years preceding such date of determination and (2) the average rate of interest borne by Water and Sewer System Variable Rate Bonds for the 12 months preceding such date of determination; *provided*, *however*, if such Water and Sewer System Variable Rate Bonds are then being issued or shall not have been Outstanding for 12 months, then the rate of interest determined pursuant to this clause (i) shall be the rate determined pursuant to the foregoing subclause (1);
- (ii) with respect to any Water and Sewer System Variable Rate Bonds maturing on a particular date that were not, at the date of the original issuance thereof, the subject of a Counsel's Opinion to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the lesser of (a) the average of the Variable Rate Taxable Index for the five years preceding such date of determination and (b) the average rate of interest borne by such Water and Sewer System Variable Rate Bonds, for the 12 months preceding such date of determination; *provided*, *however*, if such Water and Sewer System Variable Rate Bonds are then being issued or shall not have been Outstanding for 12 months, then the rate of interest determined pursuant to this clause (ii) shall be the rate determined pursuant to the foregoing subclause (a); and
- (iii) for purposes of calculating the Debt Service Reserve Requirement for any particular subaccount in the Debt Service Reserve Account in the Debt Service Fund and with respect to any Water and Sewer System Variable Rate Bonds maturing on a particular date, the interest rate set forth in a certificate of an Authorized Officer of JEA executed on or prior to the date of the initial issuance of such Water and Sewer System Variable Rate Bonds as determined as follows: a Certified Interest Rate shall be that rate of interest determined by JEA, or a banking or financial institution or financial advisory firm selected by JEA, as the rate of interest such Water and Sewer System Variable Rate Bonds would bear if, assuming the same maturity date, terms and provisions (other than interest rate) as such proposed Water and Sewer System Variable Rate Bonds, and on the basis of JEA's credit ratings with respect to the Water and Sewer System Bonds (other than Bonds for

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which credit enhancement is provided by a third party), such proposed Water and Sewer System Variable Rate Bonds were issued at a fixed interest rate.

Code means the Internal Revenue Code of 1986, or any successor, and the applicable regulations (including final, temporary and proposed) promulgated by the United States Department of the Treasury thereunder, including Treasury Regulations issued pursuant to Sections 103 and 141 through 150, inclusive, of said Internal Revenue Code of 1986.

Contract Debts means any obligations of JEA under a contract, lease, installment sale agreement, bulk purchase agreement or otherwise to make payments out of Revenues for property, services or commodities whether or not the same are made available, furnished or received.

Costs means the costs, expenses and liabilities paid or incurred or to be paid or incurred by JEA in connection with the planning, engineering, designing, acquiring, constructing, installing, financing, repairing, extending, improving, reconstructing, retiring and disposing of the System or any part thereof and the obtaining of all governmental approvals, certificates, permits and licenses with respect thereto (including, for this purpose, any acquisition by JEA of an interest in an existing facility).

*Credit Enhancement* means, with respect to the Water and Sewer System Bonds of a Series, a maturity within a Series or an interest rate within a maturity, the issuance of an insurance policy, letter of credit, surety bond or any other similar obligation, whereby the issuer thereof becomes unconditionally obligated to pay when due, to the extent not paid by JEA or otherwise, the principal of and interest on such Water and Sewer System Bonds.

*Credit Enhancer* means any person or entity which, pursuant to a Supplemental Resolution, is designated as a Credit Enhancer and which provides Credit Enhancement for any Water and Sewer System Bonds.

Current Interest Commencement Date means, with respect to any particular Water and Sewer System Deferred Income Bonds, the date specified in the Supplemental Resolution authorizing such Water and Sewer System Deferred Income Bonds (which date must be prior to the maturity date for such Water and Sewer System Deferred Income Bonds) after which interest accruing on such Water and Sewer System Deferred Income Bonds shall be payable periodically on dates specified in such Supplemental Resolution, with the first such payment date being the first such periodic date immediately succeeding such Current Interest Commencement Date.

*Debt Service* for any period means, as of any date of calculation and with respect to any Series, an amount equal to the sum of:

(i) interest accruing during such period on Water and Sewer System Bonds of such Series, except to the extent that such interest is to be paid from deposits into the Debt Service Account made from the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of the indebtedness of JEA; provided, that in the event that the Bonds of any Series (or any portion thereof) shall constitute Build America Bonds, then in respect of the interest payable on such Bonds, for purposes of the definition, the interest on the Bonds of such Series shall be calculated net of the amount of the cash subsidy payments due from the U.S. Treasury. If for whatever reason, JEA no longer receives cash subsidy payments from the U.S. Treasury in respect of the interest payable on such Bonds (other than as a result of the U.S. Treasury reducing a particular payment by offsetting an amount due from JEA to it), for purposes of this definition, the interest on the Bonds of such Series shall be calculated without regard to such subsidy, and

(ii) that portion of each Principal Installment for such Series which would accrue during such period if such Principal Installment were deemed to accrue daily in equal amounts from the next preceding Principal Installment due date for such Series (or, (x) in the case of Water and Sewer System Bonds other than Reimbursement Obligations, if (1) there shall be no such preceding Principal Installment due date or (2) such preceding Principal Installment due date is more than one year prior to the due date of such Principal Installment, then, from a date one year preceding the due date of such Principal Installment or from the Date of Issuance of the Water and Sewer System Bonds of such Series, whichever date is later, and (y) in the case of Reimbursement Obligations, in accordance with the terms thereof and the Supplemental Resolution authorizing such Reimbursement Obligations), except to the extent that such Principal Installment is paid or to be paid from the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA.

Such interest and Principal Installments for such Series shall be calculated on the assumption that (x) no Water and Sewer System Bonds (except for Water and Sewer System Option Bonds actually tendered for payment prior to the stated maturity thereof and paid, or to be paid, from Revenues) of such Series Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment of each Principal Installment on the due date thereof, (y) the principal amount of Water and Sewer System Option Bonds tendered for payment before the stated maturity thereof and paid, or to be paid, from Revenues, shall be deemed to accrue on the date required to be paid pursuant to such tender and (z) the principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Bonds or the Appreciated Value of Water and Sewer System Deferred Income Bonds shall be included in the calculation of Debt Service at the times and in the manner provided in the Water and Sewer System Resolution; *provided*, *however*, that if the calculation of the Debt Service Reserve Requirement for any separate subaccount in the Debt Service Reserve Account takes into account Debt Service, then, for purposes of such calculation, Debt Service shall be calculated only with respect to the Water and Sewer System Bonds of the Series secured thereby.

Notwithstanding anything to the contrary contained in the Water and Sewer System Resolution, (a) if JEA has in connection with any Water and Sewer System Bonds entered into a Designated Swap Obligation which provides that, in respect of a notional amount equal to the Outstanding principal amount of such Water and Sewer System Bonds, JEA is to pay to a Designated Swap Obligation Provider an amount determined based upon a variable rate of interest and the Designated Swap Obligation Provider is to pay to JEA an amount determined based upon a fixed rate of interest, then, for purposes of calculating the Debt Service with respect to such Water and Sewer System Bonds for purposes of the "additional bonds test" and the "rate covenant" contained in clause (7) of subsection 1 of Section 203 and Section 711 of the Water and Sewer System Resolution and, it will be assumed that such Water and Sewer System Bonds bear interest at a rate equal to the sum of (1) the lesser of (A) the average of the variable rate payable by JEA pursuant to such Designated Swap Obligation for the five years preceding the date of determination, calculating such rate based upon the method, formula or index with respect thereto set forth in such Designated Swap Obligation and (B) the average of the actual rates paid by JEA pursuant to such Designated Swap Obligation for the 12 months preceding such date of determination; provided, however, if such Designated Swap Obligation shall not have been in effect for 12 months, then the rate of interest determined pursuant to this clause (1) shall be the rate determined pursuant to the foregoing subclause (A) and (2) the difference (whether positive or negative) between (X) the fixed rate of interest on such Water and Sewer System Bonds and (Y) the fixed rate of interest payable to JEA pursuant to such Designated Swap Obligation and (b) if JEA has in connection with any Water and Sewer System Variable Rate Bonds entered into a Designated Swap Obligation which provides that, in respect of a notional amount equal to the Outstanding principal amount of such Water and Sewer System Variable Rate Bonds, JEA is to pay to a Designated Swap Obligation Provider an amount determined based upon a fixed rate of interest and the Designated Swap Obligation Provider is to pay to JEA an amount determined based upon a variable rate of interest, then, for purposes of calculating the Debt Service Requirement with respect to such Water and Sewer System Variable Rate Bonds for purposes of the "additional bonds test" and the "rate covenant" contained in clause (7) of subsection 1 of Section 203 and Section 711 of the Water and Sewer System Resolution, it will be assumed that such Water and Sewer System Variable Rate Bonds bear interest at the fixed rate of interest payable by JEA pursuant to such Designated Swap Obligation.

Debt Service Reserve Requirement means, with respect to each separate subaccount in the Debt Service Reserve Account, unless otherwise determined in the manner provided in the Water and Sewer System Resolution, as of any date of calculation, an amount equal to the maximum Aggregate Debt Service coming due on the Water and Sewer System Bonds of all Series secured thereby then Outstanding in the then current or any future Bond Year excluding interest on such Water and Sewer System Bonds to be paid from deposits in the Debt Service Account made from the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA.

For the purpose of the calculation of the Debt Service Reserve Requirement in the event that the Bonds of any Series shall constitute Build America Bonds, then until such time, if any, as JEA, for whatever reason, no longer receives cash subsidy payments from the U.S. Treasury in respect of the interest payable on such Bonds (other than as a result of the U.S. Treasury reducing a particular payment by offsetting an amount due from JEA to it), the interest on such Bonds shall be calculated net of the amount of such subsidy; provided, however, that if at any time the specified percentage of the interest payable on such Bonds represented by such subsidy shall be permanently reduced, then the amount of such Debt Service Reserve Requirement shall be increased to reflect the amount of interest payable on such Bonds that no longer is payable to JEA by the U.S. Treasury, and the amount of such increase shall be required to be funded in equal semiannual installments over a five (5)-year period, with the first such installment becoming due on the first April 1 or October 1 that is at least six (6) months following the date on which such specified percentage is so reduced, except that if at any time from the commencement of such funding, either (x) any of such Bonds shall cease to be Outstanding or (y) the amount of such Debt Service Reserve Requirement shall be reduced for any reason whatsoever, then the obligation of JEA to make deposits during the balance of such period shall be redetermined (taking into account the amount (if any) of such Bonds that remain Outstanding and the amount (if any) of such reduction in such Debt Service Reserve Requirement) and the resulting reduction in the amount required to be deposited to the Initial Subaccount shall be evenly apportioned over the remainder of such five (5)-year period and provided, further, that in the event that JEA, for whatever reason, ceases to receive cash subsidy payments from the U.S. Treasury in respect of the interest payable on any such Bonds (other than as a result of the U.S. Treasury reducing a particular payment by offsetting an amount due from JEA to it), then the amount of such Debt Service Reserve Requirement shall be increased to reflect the full amount of interest payable on such Bonds, and such increase shall be required to be funded in equal semiannual installments over a five (5)-year period, with the first such installment becoming due on the first April 1 or October 1 that is at least six (6) months following the date on which JEA does not receive the first such cash subsidy payment that it theretofore was qualified to receive, except that if at any time from the commencement of such funding, either (x) any of such Bonds shall cease to be Outstanding or (y) the amount of such Debt Service Reserve Requirement shall be reduced for any reason whatsoever, then the obligation of JEA to make deposits during the balance of such period shall be redetermined (taking into account the amount (if any) of such Bonds that remain Outstanding and the amount (if any) of such reduction in such Debt Service Reserve Requirement) and the resulting reduction in the amount required to be deposited to the Initial Subaccount shall be evenly apportioned over the remainder of such five (5)-year period. Notwithstanding any other provision of this resolution, any one or more installments of any increase in the Debt Service Reserve Requirement with respect to the Initial Subaccount in the Debt Service Reserve Account in the Sinking Fund provided for in the preceding sentence may be prepaid at any time in whole or in part by JEA by designating in JEA's records that such payment(s) is (or are) to be treated as a prepayment.

Defeasance Securities shall mean, unless otherwise provided with respect to the Bonds of a Series in the Supplemental Resolution authorizing such Bonds, U.S. Obligations which shall not be subject to redemption prior to their maturity other than at the option of the holder thereof or as to which an irrevocable notice of redemption of such securities on a specified redemption date has been given and such securities are not otherwise subject to redemption prior to such specified date other than at the option of the holder thereof. (This definition was modified pursuant to Resolution 2013-10.)

Defeased Municipal Obligations shall mean any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (a) which are not callable prior to maturity, or which have been duly called for redemption by the obligor on a date or dates specified and as to which irrevocable instructions have been given to a trustee in respect of such bonds or other obligations by the obligor to give due notice of such redemption on such date or dates, which date or dates shall be also specified in such instructions, (b) which are secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or U.S. Obligations which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the redemption date or dates specified in the irrevocable instructions referred to in subclause (a) of this definition, as appropriate, (c) as to which the principal of and interest on the U.S. Obligations on deposit in such fund along with any cash on deposit in such fund are sufficient to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this definition on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (a) of this definition, as appropriate and (d) which at the time of their purchase hereunder are rated "AAA" by Standard & Poor's Ratings Group and, if rated by Moody's Investors Service, are rated "Aaa" by such agency. (This definition was added pursuant to Resolution 2013-10.)

Designated Swap Obligation means, to the extent from time to time permitted by law, any interest rate swap transaction (i) which is entered into by JEA for the purpose of converting synthetically the interest rate on any particular Water and Sewer System Bonds from a fixed rate to a variable rate or from a variable rate to a fixed rate (regardless of whether such Designated Swap Obligation shall have a term equal to the remaining term of such Bonds) and (ii) which has been designated in a certificate of an Authorized Officer of JEA filed with the records of JEA as such (which certificate shall specify the Water and Sewer System Bonds with respect to which such Designated Swap Obligation is entered into).

Designated Swap Obligation Provider means any person with whom JEA enters into a Designated Swap Obligation.

Federal Agency Securities shall mean bonds, debentures, or other evidences of indebtedness issued or guaranteed by any agency or corporation which has been or may hereafter be created pursuant to an Act of Congress as an agency or instrumentality of the United States of America which at the time of their purchase hereunder are rated "AAA" by Standard & Poor's Ratings Group and "Aaa" by Moody's Investors Service, if rated by both rating agencies, and, if rated by one rating agency, shall have a rating of "AAA" or "Aaa" by Standard & Poor's Ratings Group or Moody's Investors Service, as the case may be. (This definition was added pursuant to Resolution 2013-10.)

*Investment Securities* shall mean and include any other securities, obligations or investments that, at the time, shall be permitted by Florida Law for the investment of JEA's funds. (This definition was modified pursuant to Resolution 2013-10.)

Maximum Annual Aggregate Adjusted Water and Sewer System Debt Service means, as of any date of calculation, the greatest Adjusted Aggregate Debt Service for the then current or any future Fiscal Year.

*Net Revenues* means, for any period, the Revenues during such period, determined on an accrual basis, minus Operation and Maintenance Expenses during such period, determined on an accrual basis, to the extent paid or to be paid from Revenues.

One-Month LIBOR Rate means, as of any date of determination, the offered rate for deposits in U.S. dollars for a one-month period which appears on the Telerate Page 3750 at approximately 11:00 A.M., London time, on such date, or if such date is not a date on which dealings in U.S. dollars are transacted in the London interbank market, then on the next preceding day on which such dealings were transacted in such market.

Operation and Maintenance Expenses means the current expenses, paid or accrued, of operation, maintenance and repair of the System, including administration costs, as calculated in accordance with generally accepted accounting principles, and shall include all Contract Debts. Notwithstanding the foregoing, Operation and Maintenance Expenses shall not include any reserve for renewals or replacements or any allowance for depreciation or amortization and there shall be included in Operation and Maintenance Expenses only that portion of the total administrative, general and other expenses of JEA which are properly allocable to the System.

Principal Installment means, as of any date of calculation and with respect to any Series, so long as any Water and Sewer System Bonds thereof are Outstanding, (i) the principal amount of Water and Sewer System Bonds (including, in the case of any Water and Sewer System Option Bond, the principal amount thereof tendered for payment prior to the stated maturity thereof and paid, or to be paid, from Revenues) of such Series due (or so tendered for payment and paid, or to be so paid) on a certain future date for which no Sinking Fund Installments have been established, or (ii) the unsatisfied balance (determined as provided in the Water and Sewer System Resolution) of any Sinking Fund Installments due on a certain future date for Water and Sewer System Bonds of such Series, plus the amount of the sinking fund redemption premiums, if any, which would be applicable upon redemption of such Water and Sewer System Bonds on such future date in a principal amount equal to said unsatisfied balance of such Sinking Fund Installments, or (iii) if such future dates coincide as to different Water and Sewer System Bonds of such Series, the sum of such principal amount of Water and Sewer System Bonds and of such unsatisfied balance of Sinking Fund Installments due on such future date plus such applicable redemption premiums, if any.

Refundable Principal Installment means any Principal Installment for any Series of Water and Sewer System Bonds which JEA intends to pay with moneys which are not Revenues, if such intent was expressed in the Supplemental Resolution authorizing such Series. Any such Principal Installment will be a Refundable Principal Installment only through the penultimate day of the month preceding the month in which such Principal Installment comes due or such earlier time as JEA no longer intends to pay such Principal Installment with moneys which are not Revenues.

Reimbursement Obligations means all Water and Sewer System Bonds issued to evidence JEA's obligation to repay any advances or loans made to, or on behalf of, JEA in connection with any Credit Enhancement or liquidity support for the Water and Sewer System Bonds of a Series (or a maturity or maturities or interest rate within a maturity thereof).

Renewal and Replacement Requirement means, at any date of calculation, an amount equal to 10 percent of the sum of (a) the aggregate amount of Water and Sewer System Bonds Outstanding under the Water and Sewer System Resolution and (b) the aggregate amount of all other obligations issued by JEA in connection with the System (including, without limitation, Subordinated Indebtedness) outstanding and unpaid (or as to which provision for payment has not been made in accordance with the terms thereof).

Revenues means (i) all revenues, income, rents, service fees and receipts properly allocable to the System resulting from ownership and operation of the System, excluding (a) unless otherwise determined by the Governing Body, Capacity Charges, (b) customer deposits and any other deposits subject to refund unless such deposits have become property of JEA and (c) if and to the extent determined by the JEA Board, special assessments, if any, levied by JEA in connection with any facilities constituting a part of the System, (ii) the proceeds of any insurance covering business interruption loss relating to the System and (iii) interest received or to be received on any moneys or securities held pursuant to the Water and Sewer System Resolution and paid or required to be paid into the Revenue Fund. For any purpose of the Water and Sewer System Resolution that requires the computation of Revenues with respect to any period of time, "Revenues" shall include such amounts resulting, received or to be received, as the case may be, during such period, determined on an accrual basis, plus (x) the amounts, if any, paid from the Rate Stabilization Fund into the Revenue Fund during such period, but only to the extent that such amounts originally were deposited to the Rate Stabilization Fund from Revenues (excluding from (x) amounts included in the Revenues for such period representing interest earnings transferred from the Rate Stabilization Fund to the Revenue Fund pursuant to the Water and Sewer System Resolution) and minus (y) the amounts, if any, paid from the Revenue Fund into the Rate Stabilization Fund during such period. Notwithstanding the foregoing, all cash subsidy payments received by JEA from the U.S. Treasury in respect of interest payable on any Build America Bonds shall not constitute "Revenues" for any purpose of the Resolution.

System or Water and Sewer System means each and every part of the water system and sewer system owned and operated by JEA for water supply, transmission, treatment and distribution and for sewage collection, transmission, treatment and disposal or distribution now existing and hereafter acquired by lease, contract, purchase or otherwise or constructed, including any interest or participation of JEA in any facilities in connection with said system, together with all additions, betterments, extensions and improvements to said system or any part thereof hereafter constructed or acquired and together with all lands, easements, licenses and rights of way and all other works, property or structures and contract rights and other tangible and intangible assets now or hereafter owned or used in connection with or related to said System; provided, however, that upon compliance with certain provisions of the Water and Sewer System Resolution described under "Certain Other Covenants - Additional Utility Functions" below, the term System shall be deemed to include other utility functions added to the System such as the acquisition, distribution, and sale of natural gas, the production, distribution and sale of process steam, or other utility functions that are, in accordance with Prudent Utility Practice, reasonably related to the services provided by the System. Notwithstanding the foregoing definition of the term System, such term shall not include the existing electric system owned by JEA or any bulk power supply utilities or systems now owned or hereafter acquired by JEA, nor shall it include any properties or interests in properties of JEA (a) which JEA determines shall not constitute a part of the System for the purpose of the Water and Sewer System Resolution at the time of the acquisition thereof by JEA or (b) as to which there shall be filed with the records of JEA a certificate of the Consulting Engineer stating, in its opinion, that the exclusion of such properties or interests in properties from the System will not materially impair the ability of JEA to comply during the current or any future Fiscal Year with the provisions of the rate covenant described under "Covenant as to Rates, Fees and Other Charges" below.

*Trust Estate* means (i) the proceeds of the sale of the Water and Sewer System Bonds, (ii) the Revenues, and (iii) all Funds and Accounts established by the Water and Sewer System Resolution (other than the Debt Service Reserve Account), including the investments and investment income, if any, thereof.

*U.S. Obligations* shall mean any bonds or other obligations which constitute direct obligations of, or as to principal and interest are unconditionally guaranteed by, the United States of America, including Federal Agency Securities to the extent unconditionally guaranteed by the United States of America. (This definition was added pursuant to Resolution 2013-10.)

*U.S. Treasury* shall mean the U.S. Treasury or any party designated by the federal government to issue cash subsidy payments on Build America Bonds.

Variable Rate Taxable Index means the One-Month LIBOR Rate or, if the One-Month LIBOR Rate no longer shall be available, the Alternate Variable Rate Taxable Index.

Variable Rate Tax-Exempt Index means the BMA Municipal Swap Index or, if the BMA Municipal Swap Index no longer shall be available, the Alternate Variable Rate Tax-Exempt Index.

Water and Sewer System Bond or Bonds means any bonds, notes or other obligations or evidences of indebtedness, as the case may be, authenticated and delivered under and Outstanding pursuant to the Water and Sewer System Resolution but shall not mean Subordinated Indebtedness or Bond Anticipation Notes

Water and Sewer System Capital Appreciation Bond or Bonds means any Water and Sewer System Bonds issued under the Water and Sewer System Resolution as to which interest is (i) compounded periodically on dates that are specified in the Supplemental Resolution authorizing such Water and Sewer System Capital Appreciation Bonds and (ii) payable only at the maturity, earlier redemption or other payment thereof pursuant to the Water and Sewer System Resolution or the Supplemental Resolution authorizing such Water and Sewer System Capital Appreciation Bonds.

Water and Sewer System Deferred Income Bond or Bonds means any Water and Sewer System Bonds issued under the Water and Sewer System Resolution as to which interest accruing prior to the Current Interest Commencement Date is (i) compounded periodically on dates specified in the Supplemental Resolution authorizing such Water and Sewer System Deferred Income Bonds and (ii) payable only at the maturity, earlier redemption or other payment thereof pursuant to the Water and Sewer System Resolution or the Supplemental Resolution authorizing such Water and Sewer System Deferred Income Bonds.

Water and Sewer System Option Bond or Bonds means any Water and Sewer System Bonds which by their terms may be tendered by and at the option of the Holder thereof for payment by JEA prior to the stated maturity thereof, or the maturities of which may be extended by and at the option of the Holder thereof.

Water and Sewer System Variable Rate Bond means any Water and Sewer System Bond not bearing interest throughout its term at a specified rate or specified rates determined at the time of issuance of the Series of Water and Sewer System Bonds of which such Water and Sewer System Bond is one.

#### Pledge

The Water and Sewer System Bonds are special obligations of JEA payable from and secured by the funds pledged therefor. Pursuant to the Water and Sewer System Resolution, there is pledged for the payment of the principal and Redemption Price of, and interest on, the Water and Sewer System Bonds in accordance with their terms and the provisions of the Water and Sewer System Resolution, subject only to the provisions of the Water and Sewer System Resolution thereof for the purposes and on the terms and conditions set forth in the Water and Sewer System Resolution, the Trust Estate.

Pursuant to the Water and Sewer System Resolution, there also are pledged, as additional security for the payment of the principal or sinking fund Redemption Price, if any, of, and interest on, the Water and Sewer System Bonds of each Additionally Secured Series secured thereby, subject only to the provisions of the Water and Sewer System Resolution permitting the application thereof for the purposes and on the

terms and conditions set forth in the Water and Sewer System Resolution, amounts on deposit in any separate subaccount established in the Debt Service Reserve Account, including the investments and investment income, if any, thereof.

#### **Application of Revenues**

Revenues are pledged by the Water and Sewer System Resolution to payment of principal of and interest and redemption premium on the Water and Sewer System Bonds of all series, subject to the provisions of the Water and Sewer System Resolution permitting application for other purposes. For the application of Revenues, the Water and Sewer System Resolution establishes a Revenue Fund, a Debt Service Fund, a Subordinated Indebtedness Fund, a Rate Stabilization Fund and a Renewal and Replacement Fund, all of which are held by JEA.

Pursuant to the Water and Sewer System Resolution, all Revenues are to be deposited promptly by JEA to the credit of the Revenue Fund. Notwithstanding anything to the contrary contained in the Water and Sewer System Resolution, in the event that any Revenues constitute "impact fees" within the meaning of applicable Florida law, JEA may use and apply such Revenues only in the manner permitted or required by such applicable law, and JEA is to take such measures (including, without limitation, the establishment of such separate accounts or subaccounts or the implementation of such accounting procedures) as an Authorized Officer of JEA may determine are necessary or desirable to effect the foregoing. Each month JEA is to make transfers from the Rate Stabilization Fund to the Revenue Fund, in accordance with the then current Annual Budget or as otherwise determined by JEA. Each month JEA is to pay from the Revenue Fund amounts necessary to meet Operation and Maintenance Expenses as they become due and payable.

Following the payment of Operation and Maintenance Expenses, the Water and Sewer System Resolution provides that the moneys in the Revenue Fund shall be applied monthly, to the extent available, and subject to the limitation described in the preceding paragraph regarding "impact fees," in the following manner and in the following order of priority:

1. To the Debt Service Account and the Debt Service Reserve Account in the Debt Service Fund, (a) an amount at least equal to the amount, if any, required so that the balance in the Debt Service Account (excluding capitalized interest on deposit therein in excess of the amount thereof to be applied to pay interest accrued and to accrue on all Water and Sewer System Bonds to the end of the then current calendar month) equals the Accrued Aggregate Debt Service as of the last day of the then current month and (b) the respective amounts, if any, required so that the balance in each separate subaccount in the Debt Service Reserve Account equals the Debt Service Reserve Requirement related thereto.

Amounts in the Debt Service Account are to be applied by JEA to pay the principal or Redemption Price of and interest on the Water and Sewer System Bonds. In addition, JEA may apply such amounts to the purchase or redemption of Water and Sewer System Bonds to satisfy sinking fund requirements.

Amounts in each separate subaccount in the Debt Service Reserve Account are to be applied by JEA to pay the principal or sinking fund Redemption Price of or interest on each Additionally Secured Series of Water and Sewer System Bonds secured thereby, if and to the extent necessary following the application of amounts on deposit in the Debt Service Account in accordance with the terms of the Water and Sewer System Resolution; *provided*, *however*, that the amount payable from the Initial Subaccount with respect to the Water and Sewer System Variable Rate Bonds of a particular series and maturity shall be limited to the amount on deposit therein allocable to the Water and Sewer System Variable Rate Bonds of such series and maturity, based upon the interest rate that such Water and Sewer System Variable Rate Bonds of such series and maturity are deemed to bear for purposes of computing the Debt Service Reserve Requirement for the Initial Subaccount, as described in the second paragraph under "Debt Service Reserve Account" herein.

Whenever the amount in the Debt Service Reserve Account, together with the amount in the Debt Service Account, is sufficient to pay in full all Outstanding Water and Sewer System Bonds in accordance with their terms, the funds on deposit in the Debt Service Reserve Account will be transferred to the Debt Service Account, and no further deposits will be required to be made to the Debt Service Fund.

In the event of the refunding or defeasance of any Water and Sewer System Bonds, JEA may withdraw from the Debt Service Account, and, if the Water and Sewer System Bonds being refunded or defeased are Water and Sewer System Bonds of an Additionally Secured Series, withdraw from the separate subaccount in the Debt Service Reserve Account securing such Water and Sewer System Bonds, all or any portion of the amounts accumulated therein and deposit such amounts with the Escrow Agent for the Water and Sewer System Bonds being refunded or defeased to be held for the payment of the principal or Redemption Price, if applicable, and interest on such Water and Sewer System Bonds; provided that such withdrawal shall not be made unless (i) immediately thereafter the Water and Sewer System Bonds being refunded or defeased shall be deemed to have been paid pursuant to the Water and Sewer System Resolution, and (ii) the amount remaining in the Debt Service Account and, if applicable, such separate subaccount in the Debt Service Reserve Account after such withdrawal, and after giving effect to the issuance of any obligations being issued to refund such Water and Sewer System Bonds and the disposition of the proceeds thereof and, in the case of any separate subaccount in the Debt Service Reserve Account, any surety bond, insurance policy, letter of credit or other similar obligation that may be credited to such subaccount in accordance with the provisions of the Supplemental Resolution establishing such subaccount, shall not be less than the Accrued Aggregate Debt Service and the Debt Service Reserve Requirement relating thereto, respectively. In the event of such refunding or defeasance, JEA may also withdraw from the Debt Service Account or such separate subaccount in the Debt Service Reserve Account all or any portion of the amounts accumulated therein and deposit such amounts in any Fund or Account under the Water and Sewer System Resolution; provided, however, that such withdrawal cannot be made unless items (i) and (ii) hereinabove have been satisfied and, at the time of such withdrawal, there will exist no deficiency in any Fund or Account held under the Water and Sewer System Resolution.

Whenever the moneys on deposit in any subaccount established in the Debt Service Reserve Account exceed the Debt Service Reserve Requirement related thereto, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation that may be credited to such subaccount, such excess will be deposited in the Revenue Fund.

See also "Debt Service Reserve Account" herein.

2. **To the Subordinated Indebtedness Fund**, an amount at least equal to the amount, if any, required to be deposited therein in the then current month to pay principal or sinking fund installments of and premiums, if any, and interest on each issue of Subordinated Indebtedness and reserves therefor as required by the Supplemental Resolution authorizing such Subordinated Indebtedness.

At any time and from time to time JEA may deposit in the Subordinated Indebtedness Fund for the payment of the principal or sinking fund installments of and interest and premium on each issue of Subordinated Indebtedness amounts received from the proceeds of additional issues of Subordinated Indebtedness or amounts received from any other source.

If at any time there is a deficiency in the Debt Service Account or any separate subaccount(s) in the Debt Service Reserve Account and the available funds in the Renewal and Replacement Fund are insufficient to cure such deficiency, there will be transferred from the Subordinated Indebtedness Fund to such Account or subaccount(s) the amount necessary to cure such deficiency (or, if the amount in the Subordinated Indebtedness Fund is less than the amount necessary to make up the deficiencies with respect to the Debt Service Account and all of the separate subaccounts in the Debt Service Reserve Account, then the amount in the Subordinated Indebtedness Fund will be applied first to make up the deficiency in the

Debt Service Account, and any balance remaining will be applied ratably to make up the deficiencies with respect to the separate subaccounts in the Debt Service Reserve Account, in proportion to the deficiency in each such subaccount).

- 3. **To the Rate Stabilization Fund**, the amount, if any, budgeted for deposit into such Fund for the then current month as set forth in the current Annual Budget or the amount otherwise determined by JEA to be credited to such Fund for the month.
- 4. To the Renewal and Replacement Fund, an amount at least equal to the sum of (i) one-twelfth (1/12th) of ten percent of the Annual Net Revenues of the Water and Sewer System for the preceding Fiscal Year and (ii) such additional amount as will make the total annual payment into such Fund during the Fiscal Year of which such month is a part equal to at least five percent of the Revenues of the Water and Sewer System for the preceding Fiscal Year; provided, however, that so long as there shall be held in the Renewal and Replacement Fund an amount which is at least equal to the Renewal and Replacement Requirement, no deposits are required to be made into the Renewal and Replacement Fund; and provided, further, however, that the failure of JEA to make such payment into the Renewal and Replacement Fund in any month shall not constitute an Event of Default under the Water and Sewer System Resolution; provided that any deficiencies therefor shall have been restored prior to the end of the Fiscal Year of which such month is a part; and provided, further, that the full amount required to be deposited in said Renewal and Replacement Fund in such Fiscal Year has been deposited therein by the end of such Fiscal Year.

Amounts in the Renewal and Replacement Fund may be applied to the Costs of the Water and Sewer System, the payment of extraordinary operation and maintenance costs and contingencies and payments with respect to the prevention or correction of any unusual loss or damage in connection with all or part of the Water and Sewer System, in the manner provided in the Water and Sewer System Resolution. Amounts in the Renewal and Replacement Fund also may be applied to the purchase, redemption, payment or provision for payment of Water and Sewer System Bonds or interest thereon or, upon determination of the JEA Board, to the payment of the costs of enlargements, extensions, improvements and replacements of capital assets of any other utility system owned and operated by JEA and not constituting a part of the Water and Sewer System.

If at any time there is a deficiency in the Debt Service Account or any separate subaccount(s) in the Debt Service Reserve Account, there will be transferred from the Renewal and Replacement Fund to such Account or subaccount(s) the amount necessary to cure such deficiency (or, if the amount in the Renewal and Replacement Fund is less than the amount necessary to make up the deficiencies with respect to the Debt Service Account and all of the separate subaccounts in the Debt Service Reserve Account, then the amount in the Renewal and Replacement Fund will be applied first to make up the deficiency in the Debt Service Account, and any balance remaining will be applied ratably to make up the deficiencies with respect to the separate subaccounts in the Debt Service Reserve Account, in proportion to the deficiency in each such subaccount). If at any time there is a deficiency in the Subordinated Indebtedness Fund and the amounts on deposit in the Debt Service Account and each separate subaccount in the Debt Service Reserve Account shall equal the current requirements of such Account and subaccounts, respectively, and such amounts are not required for the payment of Operation and Maintenance Expenses, there will be transferred from the Renewal and Replacement Fund to the Subordinated Indebtedness Fund the amount necessary to cure such deficiency.

Notwithstanding anything to the contrary contained in the Water and Sewer System Resolution, in the event that any amounts on deposit in the Renewal and Replacement Fund constitute "impact fees" within the meaning of applicable Florida law, JEA will use and apply such amounts only in the manner permitted or required thereby, and JEA will take such measures (including, without limitation, the establishment of such separate accounts or subaccounts in the Renewal and Replacement Fund or the

implementation of such accounting procedures) as an Authorized Officer of JEA may determine are necessary or desirable to effect the foregoing.

The balance of any moneys remaining in the Revenue Fund after the above required payments have been made may be used by JEA for any lawful purpose of JEA (including, but not limited to, (a) the purchase, redemption or provision for payment of any of the Water and Sewer System Bonds, (b) transfers to any utility system owned and/or operated by JEA currently or in the future and (c) the annual transfer by JEA to the City's General Fund not otherwise prohibited by the Water and Sewer System Resolution; provided, however, that none of the remaining moneys can be used for any purpose other than those specified above unless all current payments, including all deficiencies in prior payments, if any, have been made in full and unless JEA has complied fully with all the covenants and provisions of the Water and Sewer System Resolution.

"Available Water and Sewer System Revenues" are those monies remaining on deposit in the Revenue Fund established under the Water and Sewer System Resolution and available for use by JEA for any lawful purpose. In the event that the amount on deposit in the Debt Service Account in the Debt Service Fund in accordance with clause (a) of subsection (1) of Section 506 of the District Energy System Resolution is less than Accrued Aggregate Debt Service with respect to the 2013 Series A Bonds of the District Energy System as of the last Business Day of the then current month, JEA shall deposit into the 2013 Series A Bonds Subaccount in the Debt Service Reserve Account in the Debt Service Fund under the District Energy System Resolution from Available Water and Sewer System Revenues an amount equal to the Aggregate DES Debt Service Deficiency that exists. See "SUMMARY OF CERTAIN PROVISIONS OF THE DISTRICT ENERGY SYSTEM RESOLUTION – Debt Service Fund – Debt Service Reserve Account and 2013 Series A Bonds Subaccount – 2013 Series A Bonds Subaccount".

During any period in which the Debt Service Requirement for any series of Bonds containing Build America Bonds shall be calculated in the manner provided in the *proviso* of clause (1) of the first paragraph of the definition thereof, no later than each interest payment date for such Build America Bonds then Outstanding, JEA shall withdraw from the Revenue Fund and transfer to the Debt Service Account in the Sinking Fund an amount equal to the amount of the cash subsidy payment payable to JEA by the U.S. Treasury in respect of the interest payable on such Build America Bonds on such interest payable on any Build America Bonds shall be deposited by JEA from the U.S. Treasury in respect of the interest payable on any Build America Bonds shall be deposited by JEA upon the receipt thereof in the Revenue Fund, but no such payment shall constitute Revenues for any purpose of the Electric System Resolution.

#### **Construction Fund**

The Water and Sewer System Resolution establishes a Construction Fund, into which are paid amounts required by the provisions of the Water and Sewer System Resolution and any Supplemental Resolution and, at the option of JEA, any moneys received for or in connection with the System, unless required to be applied otherwise as provided in the Water and Sewer System Resolution. In addition, proceeds of insurance against physical loss of or damage to the System or of contractors' performance bonds, pertaining to the period of construction or acquisition, will be paid into the Construction Fund.

JEA may withdraw amounts from the Construction Fund for the payment of amounts due and owing on account of the Costs of the System upon determination of an Authorized Officer of JEA (or such officer's designee) that an obligation in the amount to be paid from the Construction Fund has been incurred by JEA and that each item thereof is a proper and reasonable charge against the Construction Fund, and that such amount has not been paid.

To the extent that other moneys are not available therefor, amounts in the Construction Fund shall be applied to the payment of principal of and interest on Water and Sewer System Bonds when due.

Amounts credited to the Construction Fund which JEA at any time determines to be in excess of the amounts required for the purposes thereof shall be deposited in the Debt Service Reserve Account, if and to the extent necessary to make the amount in any separate subaccount therein equal to the Debt Service Reserve Requirement related thereto (or, if such excess shall be less than the amount necessary to make up the deficiencies with respect to all of the separate subaccounts in the Debt Service Reserve Account, then such excess shall be applied ratably, in proportion to the deficiency in each such subaccount), and any balance of such excess, upon written determination of an Authorized Officer of JEA, shall be deposited in the Revenue Fund and may be used by JEA for any lawful purpose of JEA, subject to the limitations contained in the Water and Sewer System Resolution; *provided*, *however*, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the Water and Sewer System Resolution.

JEA may discontinue the acquisition or construction of any portion of the System, the Costs of which are at the time being paid out of the Construction Fund, if the JEA Board determines by resolution that such discontinuance is necessary or desirable in the conduct of the business of JEA and not disadvantageous to the Holders of the Water and Sewer System Bonds.

#### **Debt Service Reserve Account**

JEA may establish a separate subaccount in the Debt Service Reserve Account with respect to any one or more maturities (or interest rate(s) within a maturity) of the Water and Sewer System Bonds of one or more series as provided in the Water and Sewer System Resolution. Amounts on deposit in any separate subaccount in the Debt Service Reserve Account will be applied to pay the principal or sinking fund Redemption Price of or interest on each Additionally Secured Series of Water and Sewer System Bonds secured thereby, if and to the extent necessary following the application of amounts on deposit in the Debt Service Account (exclusive of amounts, if any, set aside in said Account for the payment of interest on Water and Sewer System Bonds on a future date) in accordance with the terms of the Water and Sewer System Resolution.

Pursuant to the First Supplemental Water and Sewer System Revenue Bond Resolution adopted by JEA on August 19, 1997 (the "First Supplemental Resolution"), authorizing, among others, JEA's Water and Sewer System Revenue Bonds, 1997 Series B (the "1997 Series B Bonds") JEA established a separate subaccount in the Debt Service Reserve Account in the Debt Service Fund entitled the "Initial Subaccount". The 1997 Series B Bonds, which as of the date of the Annual Disclosure Report to which this Appendix is attached are no longer outstanding, were additionally secured by amounts on deposit in the Initial Subaccount, including the investments and investment income, if any, thereof, which amounts are pledged as additional security for the payment of the principal or sinking fund redemption price of, and interest on, the 1997 Series B Bonds, subject only to the provisions of the Water and Sewer System Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Water and Sewer System Resolution. The Initial Subaccount in the Debt Service Reserve Account may, at the option of JEA, secure one or more maturities (or interest rate(s) within a maturity) of the additional Water and Sewer System Bonds of any series thereafter issued; provided, however, that for purposes of computing the Debt Service Reserve Requirement for the Initial Subaccount, the Water and Sewer System Variable Rate Bonds, if any, of each series and maturity secured thereby shall be deemed to bear interest at the Certified Interest Rate established with respect thereto at the time of the original issuance thereof unless the interest rate(s) on such Water and Sewer System Variable Rate Bonds of a particular series and maturity shall have been converted synthetically to a fixed interest rate pursuant to an interest rate swap transaction that has a term equal to, and the notional amount of which amortizes at the same times and in the same amounts as, such Water and Sewer System Variable Rate Bonds of such series and maturity, in which case, such Water and Sewer System Variable Rate Bonds shall be deemed to bear interest at the fixed rate payable by JEA under such interest rate swap transaction for so long as such interest rate swap transaction shall remain in effect (provided, however, that if, at the time of the original

issuance thereof, the interest rate on the Water and Sewer System Variable Rate Bonds of a particular series and maturity shall have been converted synthetically to a fixed interest rate pursuant to such an interest rate swap transaction, but such interest rate swap transaction shall be terminated prior to the final maturity date of such Water and Sewer System Variable Rate Bonds, then the Debt Service Reserve Requirement for the Initial Subaccount shall be recalculated as of the date of termination of such interest rate swap transaction, based upon the Certified Interest Rate established for such Water and Sewer System Variable Rate Bonds at the time of the original issuance thereof, and any resulting deficiency in the amount on deposit in the Initial Subaccount shall be required to be funded with moneys and/or one or more additional surety bonds, insurance policies or letters of credit that may be credited to the Initial Subaccount in accordance with the provisions of the First Supplemental Resolution). As of the date of the Annual Disclosure Report to which this Appendix is attached, the Initial Subaccount also secures JEA's Water and Sewer System Revenue Bonds, 2009 Series B, 2010 Series A, 2010 Series B, 2010 Series E, 2010 Series E, 2010 Series F, 2012 Series A, 2012 Series B, 2013 Series A, 2014 Series A, and 2017 Series A and JEA's Variable Rate Water and Sewer System Revenue Bonds, 2006 Series B, 2008 Series A-2 and 2008 Series B.

Pursuant to the Water and Sewer System Resolution, the Water and Sewer System Bonds of any series are not required to be additionally secured by amounts on deposit in any separate subaccount in the Debt Service Reserve Account. JEA currently intends to secure all long-term Water and Sewer System Bonds with the Initial Subaccount in the Debt Service Reserve Account. In the event that one or more maturities (or interest rate(s) within a maturity) of the Water and Sewer System Bonds of a series hereafter issued are to be additionally secured by amounts on deposit in the Initial Subaccount in the Debt Service Reserve Account, it will be a condition to the issuance of the Water and Sewer System Bonds of such series that the amount on deposit in the Initial Subaccount, after giving effect to the issuance of such Water and Sewer System Bonds, equals the Debt Service Reserve Requirement for such Subaccount.

The Water and Sewer System Resolution requires JEA to deposit and maintain in the Initial Subaccount in the Debt Service Reserve Account moneys, Investment Securities and/or reserve fund credit instruments (hereinafter defined) in an amount equal to the Debt Service Reserve Requirement for the Initial Subaccount. The Debt Service Reserve Requirement for the Initial Subaccount is defined in the First Supplemental Resolution, as of any date of calculation, as an amount equal to the lowest of (a) ten percent of the original principal amount of the Water and Sewer System Bonds of all issues (as defined for federal income tax purposes) secured thereby (or, if the Water and Sewer System Bonds of any such issue are issued at an issue price (as computed for federal income tax purposes) of greater than 102 percent or less than 98 percent of the principal amount thereof, ten percent of such issue price), (b) the maximum Aggregate Debt Service on the Water and Sewer System Bonds of all series secured thereby then outstanding for the current or any future Bond Year (excluding interest (other than accrued interest paid in connection with the initial issuance thereof) on such Water and Sewer System Bonds to be paid from deposits in the Debt Service Account in the Debt Service Fund made from the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA) or (c) 125 percent of the average annual Debt Service on the Water and Sewer System Bonds of all series secured thereby then outstanding for the then current and each future Bond Year (excluding interest (other than accrued interest paid in connection with the initial issuance thereof) on such Water and Sewer System Bonds to be paid from deposits in the Debt Service Account in the Debt Service Fund made from the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); provided, however, that in no event may an increase in the Debt Service Reserve Requirement for the Initial Subaccount resulting from the issuance of an additional issue (as defined for federal income tax purposes) of Water and Sewer System Bonds exceed ten percent of the original principal amount of the Water and Sewer System Bonds of such issue (or, if the Water and Sewer System Bonds of such issue are issued at an issue price (as computed for federal income tax purposes) of greater than 102 percent or less than 98 percent of the principal amount thereof, ten percent of such issue price).

Amounts in the Initial Subaccount in the Debt Service Reserve Account in excess of the Debt Service Reserve Requirement for such Subaccount, after giving effect to any reserve fund credit instrument, will be credited to the Revenue Fund.

The First Supplemental Resolution provides that in lieu of maintaining moneys or investments in the Initial Subaccount in the Debt Service Reserve Account, JEA at any time may cause to be deposited therein for the benefit of the Holders of the Water and Sewer System Bonds secured thereby an irrevocable surety bond, an insurance policy or a letter of credit satisfying the conditions set forth therein (a "reserve fund credit instrument"), in an amount equal to the difference between the Debt Service Reserve Requirement for the Initial Subaccount and the sums of money or value of Investment Securities then on deposit in the Initial Subaccount, if any. The following is a summary of the provisions of the First Supplemental Resolution, as amended by the applicable portion of the Resolution Amendments, relating to the deposit of reserve fund credit instruments to the Initial Subaccount:

- (a) A surety bond or insurance policy issued by a company licensed to issue an insurance policy guaranteeing the timely payment of debt service on the Initial Subaccount Additionally Secured Bonds (a "municipal bond insurer") may be deposited in the Initial Subaccount to meet the Debt Service Reserve Requirement for the Initial Subaccount if the claims paying ability of the issuer thereof shall be rated at least "AA-" or "Aa3" by any two of Standard & Poor's Ratings Group (hereinafter referred to as "S&P") or Moody's Investors Service (hereinafter referred to as "Moody's") or Fitch Ratings (hereinafter referred to as "Fitch").
- (b) An unconditional irrevocable letter of credit issued by a bank may be deposited in the Initial Subaccount to meet the Debt Service Reserve Requirement for the Initial Subaccount if the issuer thereof is rated at least "AA-" or "Aa3" by any two of S&P, Moody's or Fitch. The letter of credit shall be payable in one or more draws upon presentation by the beneficiary thereof of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal or interest on the Initial Subaccount Additionally Secured Bonds. The draws shall be payable within two days of presentation of the sight draft. The letter of credit shall be for a term of not less than three years. The issuer of the letter of credit shall be required to notify JEA and the beneficiary thereof, not later than 30 months prior to the stated expiration date of the letter of credit, as to whether such expiration date shall be extended, and if so, shall indicate the new expiration date.
- shall deposit in the Initial Subaccount an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subaccount, together with any other qualifying reserve fund credit instruments, to equal the Debt Service Reserve Requirement for the Initial Subaccount, such deposit to be paid in equal installments on at least a semi-annual basis over the remaining term of the letter of credit, unless the reserve fund credit instrument is replaced by a reserve fund credit instrument meeting the requirements in any of clauses (a) or (b) above. The letter of credit shall permit a draw in full not less than two weeks prior to the expiration or termination of such letter of credit if the letter of credit has not been replaced or renewed. The beneficiary of the letter of credit shall draw upon the letter of credit prior to its expiration or termination unless an acceptable replacement is in place or the Initial Subaccount is fully funded in its required amount.
- (d) The use of any reserve fund credit instrument pursuant to this subsection 4 shall be subject to receipt of an opinion of counsel as to the due authorization, execution, delivery and enforceability of such instrument in accordance with its terms, subject to

applicable laws affecting creditors' rights generally, and, in the event the issuer of such credit instrument is not a domestic entity, an opinion of foreign counsel. In addition, the use of an irrevocable letter of credit shall be subject to receipt of an opinion of counsel to the effect that payments under such letter of credit would not constitute avoidable preferences under Section 547 of the U.S. Bankruptcy Code or similar state laws with avoidable preference provisions in the event of the filing of a petition for relief under the U.S. Bankruptcy Code or similar state laws by or against JEA.

- The obligation to reimburse the issuer of a reserve fund credit instrument (e) for any fees, expenses, claim or draws upon such reserve fund credit instrument shall be subordinate to the payment of debt service on the Bonds. The right of the issuer of a reserve fund credit instrument to payment or reimbursement of its fees and expenses shall be subordinated to cash replenishment of the Initial Subaccount, and, subject to the second succeeding sentence, its right to reimbursement for claims or draws shall be on a parity with the cash replenishment of the Initial Subaccount. The reserve fund credit instrument shall provide for a revolving feature under which the amount available thereunder will be reinstated to the extent of any reimbursement of draws or claims paid. If the revolving feature is suspended or terminated for any reason, the right of the issuer of the reserve fund credit instrument to reimbursement will be further subordinated to cash replenishment of the Initial Subaccount to an amount equal to the difference between the full original amount available under the reserve fund credit instrument and the amount then available for further draws or claims. If (i) the issuer of a reserve fund credit instrument becomes insolvent or (ii) the issuer of a reserve fund credit instrument defaults in its payment obligations thereunder or (iii) the claims-paying ability of the issuer of the insurance policy or surety bond falls below "AA-" or "Aa3" by any two of S&P, Moody's or Fitch or (iv) the rating of the issuer of the letter of credit falls below "AA-" or "Aa3" by any two of S&P, Moody's or Fitch, the obligation to reimburse the issuer of the reserve fund credit instrument shall be subordinate to the cash replenishment of the Initial Subaccount.
- If (i) the revolving reinstatement feature described in the preceding clause (e) is suspended or terminated or (ii) the rating of the claims paying ability of the issuer of the surety bond or insurance policy falls below "AA-" or Aa3" by any two of S&P, Moody's or Fitch or (iii) the rating of the issuer of the letter of credit falls below "AA-" or Aa3" by any two of S&P, Moody's or Fitch, JEA shall either (X) deposit into the Initial Subaccount an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subaccount to equal the Debt Service Reserve Requirement for the Initial Subaccount, such amount to be paid over the ensuing five years in equal installments deposited at least semi-annually or (Y) replace such instrument with a surety bond, insurance policy or letter of credit meeting the requirements in any of clauses (a) or (b) above within six months of such occurrence. In the event (1) the rating of the claimspaying ability of the issuer of the surety bond or insurance policy falls below "A-" or "A3" by any two of S&P, Moody's or Fitch or (2) the rating of the issuer of the letter of credit falls below "A-" or "A3" by any two of S&P, Moody's or Fitch or (3) the issuer of the reserve fund credit instrument defaults in its payment obligations or (4) the issuer of the reserve fund credit instrument becomes insolvent, JEA shall either (X) deposit into the Initial Subaccount an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subaccount to equal to Debt Service Reserve Requirement for the Initial Subaccount, such amount to be paid over the ensuing year in equal installments on at least a monthly basis or (Y) replace such instrument with a surety bond, insurance policy or letter of credit meeting the requirements in any of clauses (a) through (b) above within six months of such occurrence.

- (g) Where applicable, the amount available for draws or claims under the reserve fund credit instrument may be reduced by the amount of cash or value of Investment Securities deposited in the Initial Subaccount pursuant to clause (X) of the final sentence of the preceding clause (f).
- (h) In the event that a reserve fund credit instrument shall be deposited into the Initial Subaccount as aforesaid, any amounts owed by JEA to the issuer of such reserve fund credit instrument as a result of a draw thereon or a claim thereunder, as appropriate, shall be included in any calculation of debt service requirements required to be made pursuant to the Resolution for purposes of clause (7) of subsection 1 of Section 203 and subsection 1 of Section 711 of the Resolution.
- (i) The beneficiary of any reserve fund credit instrument shall ascertain the necessity for a claim or draw upon such reserve fund credit instrument and provide notice to the issuer of the reserve fund credit instrument in accordance with its terms not later than three days (or such longer period as may be necessary depending on the permitted time period for honoring a draw under the reserve fund credit instrument) prior to each interest payment date for the Bonds of any Initial Subaccount Additionally Secured Series.
- (j) Cash on deposit in the Initial Subaccount shall be used (or investments purchased with such cash shall be liquidated and the proceeds applied as required) prior to any drawing on any reserve fund credit instrument. If and to the extent that more than one reserve fund credit instrument is deposited in the Initial Subaccount, drawings thereunder and repayments of costs associated therewith shall be made on a pro rata basis, calculated by reference to the maximum amounts available thereunder.

On January 4, 2001, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2001 Series A, JEA caused FGIC to issue its Municipal Bond Debt Service Reserve Fund Policy (the "Initial FGIC Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Initial FGIC Reserve Policy is in a maximum amount of \$37,126,447.50, is non-cancellable, terminates on October 1, 2039 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

On April 11, 2002, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2002 Series A, JEA caused FGIC to issue an additional Municipal Bond Debt Service Reserve Fund Policy (the "Second FGIC Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Second FGIC Reserve Policy is in a maximum amount of \$8,503,298.05, is non-cancellable, terminates on October 1, 2041 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

On October 24, 2002, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2002 Series C, JEA caused FGIC to issue an additional Municipal Bond Debt Service Reserve Fund Policy (the "Third FGIC Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Third FGIC Reserve Policy is in a maximum amount of \$9,531,724.90, is non-cancellable, terminates on October 1, 2041 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

Because of a rating downgrade of FGIC, JEA funded the Initial Subaccount with cash and the Berkshire Reserve Policy (hereinafter defined) in the amount of the Initial FGIC Reserve Policy, the Second FGIC Reserve Policy and the Third FGIC Reserve Policy (collectively, the "FGIC Reserve Policies") thereby fulfilling the requirements of the First Supplemental Resolution with regard to the FGIC Reserve Policies.

On November 21, 2003, simultaneously with the issuance of JEA's Variable Rate Water and Sewer System Revenue Bonds, 2003 Series C (the "2003 Series C Bonds"), JEA caused XL Capital Assurance Inc. ("XLCA") to issue a debt service reserve insurance policy (the "Initial XLCA Reserve Policy") for deposit to the credit of a separate subaccount created in the Debt Service Reserve Account. The Initial XLCA Reserve Policy is in a maximum amount of \$3,750,000.00, is non-cancelable, terminates on October 1, 2038 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount. On April 8, 2004, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2004 Series A and B, JEA redeemed the 2003 Series C Bonds, and the Initial XLCA Reserve Policy was reissued by XLCA and deposited by JEA into the Initial Subaccount.

On September 22, 2004, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2004 Series C, JEA caused Assured Guaranty Municipal Corp., previously known as Financial Security Assurance Inc. ("FSA") to issue its Debt Service Reserve Insurance Policy (the "Initial FSA Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Initial FSA Reserve Policy is in a maximum amount of \$3,702,459.05, is non-cancelable, terminates on October 1, 2039 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

On March 24, 2005, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2005 Series A (the "2005 Series A Bonds"), JEA caused MBIA Insurance Corporation ("MBIA") to issue its Debt Service Reserve Surety Bond (the "Initial MBIA Surety Bond") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Initial MBIA Surety Bond is in a maximum amount of \$9,003,471.86, is non-cancelable, terminates on October 1, 2041 (or the date on which JEA has made all payments required to be made on the Initial Subaccount Additionally Secured Bonds pursuant to the Water and Sewer System Resolution) and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

On June 6, 2005, JEA caused MBIA to issue an additional Debt Service Reserve Surety Bond (the "Second MBIA Surety Bond") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Second MBIA Surety Bond is in a maximum amount of \$13,719,213.54, is non-cancelable, terminates on October 1, 2041 (or the date on which JEA has made all payments required to be made on the Initial Subaccount Additionally Secured Bonds pursuant to the Water and Sewer System Resolution) and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

On May 25, 2006, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2006 Series A (the "2006 Series A Bonds"), JEA caused MBIA to issue an additional Debt Service Reserve Surety Bond (the "Third MBIA Surety Bond") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Third MBIA Surety Bond is in a maximum amount of \$2,375,403.75, is non-cancelable, terminates on October 1, 2041 (or upon the earlier retirement of all of the 2006 Series A Bonds) and satisfied the requirements with respect to a reserve fund credit instrument

contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

Effective as of January 1, 2009, MBIA Inc., parent company of MBIA, restructured MBIA; such restructuring involved the reinsurance and assignment of MBIA's obligations under the Initial MBIA Surety Bond, the Second MBIA Surety Bond and the Third MBIA Surety Bond (collectively, the "MBIA Surety Bonds") to National Public Finance Guarantee Corporation ("NPFGC") which is a subsidiary of MBIA Inc. Because of a rating downgrade of MBIA, JEA has made deposits to the Initial Subaccount in the amount of the MBIA Surety Bonds.

On March 8, 2007, simultaneously with the issuance of JEA's Variable Rate Water and Sewer System Revenue Bonds, 2007 Series A (the "2007 Series A Bonds"), JEA caused XLCA to issue a debt service reserve insurance policy (the "Second XLCA Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Second XLCA Reserve Policy is in a maximum amount of \$5,275,233.64, is non-cancelable, terminates on October 1, 2041 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

Because of a rating downgrade of XLCA, JEA has made deposits to the Initial Subaccount in the amount of the Initial XLCA Reserve Policy and the Second XLCA Reserve Policy.

On July 26, 2007, simultaneously with the issuance of JEA's Water and Sewer System Revenue Bonds, 2007 Series C (the "2007 Series C Bonds"), JEA caused FSA to issue its Debt Service Reserve Insurance Policy (the "Second FSA Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Second FSA Reserve Policy is in a maximum amount of \$468,627.91, is non-cancelable, terminates on October 1, 2037 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

On February 7, 2008, simultaneously with the issuance of JEA's Variable Rate Water and Sewer System Revenue Bonds, 2008 Series A (the "2008 Series A Bonds"), JEA caused FSA to issue its Debt Service Reserve Insurance Policy (the "Third FSA Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Third FSA Reserve Policy is in a maximum amount of \$15,000,000.00, is non-cancelable, terminates on October 1, 2042 (or upon the earlier retirement of all of the 2008 Series A Bonds) and satisfied the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution) at the time of its deposit to the Initial Subaccount.

The forms of the Initial FSA Reserve Policy, the Second FSA Reserve Policy and the Third FSA Reserve Policy (collectively, the "FSA Reserve Policies") are substantially identical, and a specimen thereof is attached to this APPENDIX B as Attachment 1. Because of a rating downgrade of FSA, JEA has made deposits to the Initial Subaccount equal to the aggregate amount of the FSA Reserve Policies.

On August 11, 2008, JEA caused Berkshire Hathaway Assurance Corporation ("Berkshire") to issue its Debt Service Reserve Fund Financial Guaranty Insurance Policy (the "Berkshire Reserve Policy") for deposit to the credit of the Initial Subaccount in the Debt Service Reserve Account. The Berkshire Reserve Policy is in a maximum amount of \$33,000,000.00, is non-cancelable, terminates on October 1, 2038 and otherwise satisfies the requirements with respect to a reserve fund credit instrument contained in the Water and Sewer System Resolution (including the First Supplemental Resolution). The form of the Berkshire Reserve Policy is attached hereto to this APPENDIX B as Attachment 2. Because of a rating downgrade of Berkshire, JEA made deposits to the Initial Subaccount equal to the amount of the Berkshire Reserve Policy.

On October 2, 2018, JEA transferred \$33,000,000 from the Initial Subaccount to the Construction Fund. JEA was able to make such a transfer as a result of Resolution Amendments contained in Resolution 2013-10 that lowered the minimum ratings requirement for the provider of a reserve fund credit instrument that is a surety bond or insurance policy to fund the Initial Subaccount. Upon the effectiveness of such amendments, the Berkshire Reserve Policy may be counted as satisfying the Debt Service Reserve Requirement.

#### **Investment of Funds and Accounts**

The Water and Sewer System Resolution provides that moneys held in the Funds and Accounts established thereunder may be invested and reinvested in Investment Securities which will provide moneys when needed for payments from such Funds and Accounts. Investment Securities are to be valued as of September 30 in each year, at the amortized cost thereof. In the event that JEA causes to be deposited in any separate subaccount in the Debt Service Reserve Account an irrevocable surety bond, an insurance policy, a letter of credit or any other similar obligation, such surety bond, insurance policy, letter of credit or other obligation shall be valued at the lesser of the face amount thereof or the maximum amount available thereunder.

Interest (net of that which represents a return of accrued interest paid in connection with the purchase of any investment) earned on any moneys or investments in such Funds and Accounts, other than the Construction Fund, shall be paid into the Revenue Fund. Interest earned on any moneys or investments in the Construction Fund shall be held in such Fund for the purposes thereof or, upon written determination of an Authorized Officer of JEA, paid into the Revenue Fund.

#### **Additional Water and Sewer System Bonds**

JEA may issue one or more series of additional Water and Sewer System Bonds for the purposes of (a) paying or providing for the payment of the Costs of the Water and Sewer System and (b) refunding any Water and Sewer System Bonds. All such Water and Sewer System Bonds will be payable from the Trust Estate pledged pursuant to the Water and Sewer System Resolution and secured thereby on a parity with all other Water and Sewer System Bonds. In addition, each series of Water and Sewer System Bonds may be additionally secured by amounts on deposit in a separate subaccount in the Debt Service Reserve Account in the Debt Service Fund established under the Water and Sewer System Resolution (which may be the Initial Subaccount therein). Set forth below are certain conditions applicable to the issuance of additional Water and Sewer System Bonds:

Certificates of Authorized Officer of JEA. The issuance of each series of additional Water and Sewer System Bonds (other than Water and Sewer System Refunding Bonds and Reimbursement Obligations) is conditioned upon the filing with JEA of a certificate of an Authorized Officer of JEA: (1) setting forth the amounts of Net Revenues and Capacity Charges for any 12 consecutive month period within the 24 consecutive months immediately preceding the date of issuance of the additional Water and Sewer System Bonds of the series with respect to which such certificate is being given; and (2) stating that the difference between such Net Revenues and such Capacity Charges for such 12 consecutive month period is at least equal to the greater of (X) 125 percent of the Maximum Annual Aggregate Adjusted Water and Sewer System Debt Service (calculating such Maximum Annual Aggregate Adjusted Water and Sewer System Debt Service with respect to the Water and Sewer System Bonds of all series then Outstanding and the additional Water and Sewer System Bonds of the series with respect to which such certificate is given) or (Y) the sum of (i) the Maximum Annual Aggregate Adjusted Water and Sewer System Debt Service (calculated as aforesaid) and (ii) the amount most recently determined to be required to be deposited in the Renewal and Replacement Fund for the then current, or a previous, Fiscal Year; provided, however, that the Net Revenues for such 12 month period may be adjusted for the purposes of such certificate (a) to reflect for such period revisions in the rates, fees, rentals and other charges of JEA for the product and services of the Water and Sewer System made after the commencement of such period and preceding the date of issuance of such additional Water and Sewer System Bonds; (b) to reflect any increase in Net Revenues due to any new facilities of the Water and Sewer System having been placed into use and operation subsequent to the commencement of such period and prior to the date of issuance of such additional Water and Sewer System Bonds; and (c) to include an amount equal to the average annual contribution to Net Revenues for the first three full Fiscal Years commencing after the date of acquisition thereof, estimated to be made by facilities anticipated to be acquired and expected to be placed into use and operation within two years of the date of such certificate.

**Debt Service Reserve.** If, at JEA's option, any series of additional Water and Sewer System Bonds is to be additionally secured by amounts on deposit in the Initial Subaccount in the Debt Service Reserve Account in the Debt Service Fund established under the Water and Sewer System Resolution, the issuance of the additional Water and Sewer System Bonds of such series is further conditioned upon the deposit to the Initial Subaccount of moneys or reserve fund credit instruments, or a combination thereof, in an amount such that the balance in such Subaccount equals the Debt Service Reserve Requirement for such Subaccount calculated immediately after the delivery of such Water and Sewer System Bonds.

**No Default.** In addition, Water and Sewer System Bonds of any series other than Water and Sewer System Refunding Bonds may be issued only if JEA certifies that upon the issuance of such series JEA will not be in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Water and Sewer System Resolution.

#### **Subordinated Indebtedness**

JEA may issue Subordinated Indebtedness for any lawful purpose of JEA related to the System, which Subordinated Indebtedness shall be payable out of, and may be secured by a pledge of, such amounts in the Subordinated Indebtedness Fund as may from time to time be available therefor; *provided*, *however*, that any such pledge will be subordinate in all respects to the pledge of the Trust Estate created by the Water and Sewer System Resolution as security for the Water and Sewer System Bonds.

#### **Issuance of Other Indebtedness**

The Water and Sewer System Resolution does not restrict the issuance by JEA of other indebtedness to finance facilities which are not a part of the System *provided* that such indebtedness shall not be payable out of or secured by the Revenues or any Fund or Account held under the Water and Sewer System Resolution and neither the cost of such facilities nor any expenditure in connection therewith or with the financing thereof shall be payable from the Revenues or from any such Fund or Account.

#### Redemption

In the case of any redemption of Water and Sewer System Bonds, JEA shall give written notice to the Bond Registrar(s) therefor and the Paying Agents of the redemption date, of the Series, and of the principal amounts of the Water and Sewer System Bonds of each maturity of such Series and of the Water and Sewer System Bonds of each interest rate within a maturity to be redeemed (which Series, maturities, interest rates within a maturity and principal amounts thereof to be redeemed shall be determined by JEA in its sole discretion, subject to any limitations with respect thereto contained in the Water and Sewer System Resolution or any Supplemental Resolution authorizing the Series of which such Water and Sewer System Bonds are a part). Such notice shall be filed with such Bond Registrars and the Paying Agents for the Water and Sewer System Bonds to be redeemed at least 40 days prior to the redemption date (or such shorter period (a) as shall be specified in the Supplemental Resolution authorizing the Series of the Water and Sewer System Bonds to be redeemed or (b) as shall be acceptable to such Bond Registrars and Paying Agents). In the event notice of redemption shall have been given, and unless such notice shall have been

revoked or shall cease to be in effect in accordance with the terms thereof, there shall be paid on or prior to the redemption date to the appropriate Paying Agents an amount which, in addition to other moneys, if any, available therefor held by such Paying Agents, will be sufficient to redeem on the redemption date at the Redemption Price thereof, plus interest accrued and unpaid to the redemption date, all of the Water and Sewer System Bonds to be redeemed.

#### Covenant as to Rates, Fees and Other Charges

Under the Water and Sewer System Resolution, JEA has covenanted that it will at all times fix, establish, maintain, charge and collect rates, fees and charges for the use or the sale of the output, capacity or service of the System which shall be sufficient to provide an amount at least equal to the difference between (a) Net Revenues in each Bond Year and (b) Capacity Charges in such Bond Year which shall be the greater of (i) 125 percent of the Aggregate Debt Service for such Bond Year; provided, however, that any Principal Installment which is a Refundable Principal Installment may be excluded from Aggregate Debt Service for purposes of the foregoing but only to the extent that JEA intends to pay such Principal Installment from sources other than Revenues, and (ii) the amount which, together with other available funds, shall be sufficient for the payment of: (a) the amount to be paid during such Bond Year into the Debt Service Account (other than amounts required to be paid into such Account out of the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); (b) the amount, if any, to be paid during such Bond Year into each separate subaccount in the Debt Service Reserve Account (other than amounts required to be paid into any such subaccount out of the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); (c) the amount, if any, to be paid during such Bond Year into the Subordinated Indebtedness Fund (other than amounts required to be paid into such Fund out of the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); (d) the amount, if any, to be paid during such Bond Year into the Renewal and Replacement Fund (other than amounts required to be paid into such Fund out of the proceeds of Water and Sewer System Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); and (e) all other charges and liens whatsoever payable out of Revenues during such Bond Year. Nothing in the preceding sentence shall be deemed to prevent or preclude JEA, for purposes of financial reporting, from preparing and disseminating schedules of debt service coverage based upon Net Revenues without deduction therefrom of Capacity Charges, nor shall anything in the preceding sentence be deemed to require JEA, for purposes of financial reporting, to prepare schedules of debt service coverage based upon the difference between Net Revenues and Capacity Charges.

#### **Certain Other Covenants**

Creation of Liens. JEA shall not issue any bonds, notes, debentures or other evidences of indebtedness of similar nature, other than the Water and Sewer System Bonds, payable out of or secured by a security interest in or pledge of the Trust Estate, any separate subaccount in the Debt Service Reserve Account or other moneys, securities or funds held or set aside by JEA or by the Fiduciaries under the Water and Sewer System Resolution and shall not create or cause to be created any lien or charge on the Trust Estate, any separate subaccount in the Debt Service Reserve Account or such moneys, securities or funds; provided, however, that nothing contained in the Water and Sewer System Resolution shall prevent JEA from issuing, if and to the extent permitted by law, (a) Bond Anticipation Notes or other evidences of indebtedness payable out of, and which may be secured by a pledge of (i) the proceeds of sale of Water and Sewer System Bonds or investment income therefrom, or (ii) amounts in the Construction Fund derived from the proceeds of sale of said Bond Anticipation Notes or investment income therefrom as may from time to time be available for payment of such Bond Anticipation Notes or other evidences of indebtedness (including redemption premiums, if any, and interest thereon) as part of the Costs of the System, or (iii) Revenues to be derived on and after such date as the pledge of the Revenues provided in the Water and Sewer System Resolution shall be discharged and satisfied as provided in the Water and Sewer System Resolution, or (b) Subordinated Indebtedness.

Disposition of the System. Except as described in this paragraph, JEA may not sell, lease, mortgage or otherwise dispose of any part of the System. JEA may sell or exchange at any time and from time to time any property or facilities constituting part of the System only if (i) JEA shall determine that such property or facilities are not needed or useful in the operation of the System, or (ii) the net book value of the property or facilities sold or exchanged is not more than five percent of the net book value of the property and facilities of the System, or (iii) there shall be filed with the records of JEA a certificate of the Consulting Engineer stating, in its opinion, that the sale or exchange of such property or facilities will not materially impair the ability of JEA to comply during the current or any future Fiscal Year with the rate covenant described under "Covenant as to Rates, Fees and Other Charges" above. The proceeds of any sale or exchange of any property or facilities constituting a part of the System not used to acquire other property necessary or desirable for the safe or efficient operation of the System shall be deposited in the Revenue Fund; provided, however, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the Water and Sewer System Resolution. In addition to any agreement in effect as of the date on which JEA assumes ownership of the System to which JEA and/or the City is a party relating to the ownership or operation of any part of the System or the use of the output thereof, JEA also may lease or make contracts or grant licenses for the operation of, or make arrangements for the use of, or grant easements or other rights with respect to, any part of the System; provided that any such lease, contract, license, arrangement, easement or right (i) does not impede the operation by JEA or its agents of the System and (ii) does not materially adversely affect the rights or security of the Holders of the Water and Sewer System Bonds under the Water and Sewer System Resolution. Any payments received by JEA under or in connection with any such lease, contract, license, arrangement, easement or right in respect of the System shall constitute Revenues. JEA also may enter into certain sale-leaseback and lease-leaseback transactions if certain conditions set forth in the Water and Sewer System Resolution are satisfied. The proceeds of any such transaction not used to acquire other property necessary or desirable for the safe or efficient operation of the System shall be deposited in the Revenue Fund; provided, however, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the Water and Sewer System Resolution. JEA may permanently discontinue the acquisition or construction of any portion of the System as described in the final paragraph under "Construction Fund" above.

Insurance. JEA shall at all times keep or cause to be kept the properties of the System which are of an insurable nature and of the character usually insured by those operating properties similar to such properties of the System insured against loss or damage by fire and from other causes customarily insured against and in such relative amounts as are usually obtained. JEA shall at all times maintain or cause to be maintained insurance or reserves against loss or damage from such hazards and risks to the person and property of others as are usually insured or reserved against by those operating properties similar to the properties of the System.

Reconstruction of the System; Application of Insurance Proceeds; Condemnation Awards. If any useful portion of the System shall be damaged or destroyed or taken by any governmental authority under the power of eminent domain or otherwise ("Condemnation"), JEA shall, as expeditiously as possible, continuously and diligently prosecute or cause to be prosecuted the reconstruction or replacement thereof, unless there shall be filed with the records of JEA a certificate of an Authorized Officer of JEA setting forth a determination by JEA that, taking into account all relevant facts and circumstances, including, if and to the extent JEA deems appropriate, the advice of the Consulting Engineer as to engineering matters, its attorneys as to legal matters and other consultants and advisors, such reconstruction or replacement is not in the interest of JEA and the Holders of the Water and Sewer System Bonds. Except as provided in the Water and Sewer System Resolution, the proceeds of any insurance paid or award received on account of such damage, destruction (other than any business interruption loss insurance or insurance proceeds deposited in the Construction Fund pursuant to the Water and Sewer System

Resolution) or Condemnation shall be held by JEA in a special account and made available for, and to the extent necessary be applied to, the cost of such reconstruction or replacement.

Additional Utility Functions. JEA may expand the utility functions of the System as they exist as of the date on which JEA assumes the ownership thereof as permitted in the definition of "System" only if JEA files with the books and records of JEA a certified copy of resolutions of the JEA Board to the effect that the addition of such utility functions (a) will not impair the ability of JEA to comply during the current or any future Fiscal Year with the provisions of the Water and Sewer System Resolution, including specifically the rate covenant described under "Covenant as to Rates, Fees and Other Charges" above and (b) will not materially adversely affect the rights of the Holders of the Water and Sewer System Bonds. In making the determinations to be set forth in such resolutions, the JEA Board may rely upon such certificates and opinions of its Consulting Engineer, independent certified public accountants, bond counsel, financial advisors or other appropriate advisors as the JEA Board shall deem necessary or appropriate.

#### **Amendment of Water and Sewer System Resolution**

The Water and Sewer System Resolution and the rights and obligations of JEA and of the Holders of the Water and Sewer System Bonds may be amended by a Supplemental Resolution with the written consent (i) of the Holders of not less than a majority in principal amount of the Water and Sewer System Bonds affected by such modification or amendment and (ii) in case the modification or amendment changes the terms of any Sinking Fund Installment, of the Holders of not less than a majority in principal amount of the Water and Sewer System Bonds of the particular Series and maturity entitled to such Sinking Fund Installment. No such modification or amendment may (A) permit a change in the terms of redemption or maturity of the principal of any Water and Sewer System Bond or any installment of interest or a reduction in the principal, Redemption Price or rate of interest thereon without consent of each affected Holder, or (B) reduce the percentages or otherwise affect the classes of Water and Sewer System Bonds the consent of the Holders of which is required to effect any such modification or amendment. For purposes of the foregoing, (a) a change in the terms of redemption of any Water and Sewer System Bond shall be deemed only to affect such Bond and (b) the Holders of Water and Sewer System Bonds may include the initial Holders thereof, regardless of whether such Water and Sewer System Bonds are being held for resale. The Water and Sewer System Resolution provides that, if not in default in respect of any of its obligations with respect to Credit Enhancement for Water and Sewer System Bonds of a Series, or a maturity within a Series, the Credit Enhancer for, and not the actual Holders of, Water and Sewer System Bonds of a Series, or a maturity within a Series, for which such Credit Enhancement is being provided will be deemed to be the Holder of such Water and Sewer System Bonds of any Series, or a maturity within a Series, at all times for the purpose of giving any approval or consent to the effectiveness of any Supplemental Resolution or any amendment, change or modification of the Water and Sewer System Resolution which requires the written approval or consent of Holders, except that the foregoing provisions will not apply to any change in the terms of redemption or maturity of the principal of any Outstanding Water and Sewer System Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon, or shall reduce the percentages or otherwise affect the classes of Water and Sewer System Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. See "Action by Credit Enhancer When Action by Holders of Water and Sewer System Bonds Required" herein.

The Supplemental Resolutions authorizing JEA's Variable Rate Water and Sewer System Revenue Bonds, 2008 Series A-2 and 2008 Series B (collectively, the "Prior Series Variable Rate Water and Sewer System Bonds") provide that in the event that JEA shall adopt any Supplemental Resolution making any amendment to the Water and Sewer System Resolution for which the consent of the Holders of the Prior Series Variable Rate Water and Sewer System Bonds of a particular Series shall be required (hereinafter in

this paragraph referred to as an "Amending Resolution"), an authorized officer of JEA may deliver to the Tender Agent for the Prior Series Variable Rate Water and Sewer System Bonds of such Series a certificate requiring that the Prior Series Variable Rate Water and Sewer System Bonds of such Series be subject to mandatory tender for purchase at the time and in the manner provided in said Supplemental Resolutions. Following the date on which such mandatory tender shall occur, all subsequent Holders of the Prior Series Variable Rate Water and Sewer System Bonds of such Series shall be deemed to have consented to such Amending Resolution, notwithstanding anything to the contrary contained in the Water and Sewer System Resolution. JEA intends to include this provision in each Supplemental Resolution it may adopt in the future authorizing the issuance of any Series of additional Water and Sewer System Variable Rate Bonds.

The Water and Sewer System Resolution also may be amended, upon the delivery of a Counsel's Opinion to the effect that the provisions of such amendment will not have a material adverse effect on the interests of the Holders of Outstanding Water and Sewer System Bonds, but without the consent of Holders of Water and Sewer System Bonds, (i) to cure any ambiguity, omission, defect or inconsistent provision in the Water and Sewer System Resolution; (ii) to insert provisions clarifying the Water and Sewer System Resolution; or (iii) to make any other modification or amendment of the Water and Sewer System Resolution which such counsel in its reasonable judgment determines will not have a material adverse effect on the interests of the Holders of the Water and Sewer System Bonds. Notwithstanding any other provision of the Water and Sewer System Resolution, in determining whether the interests of the Holders of Outstanding Water and Sewer System Bonds are materially adversely affected, such counsel shall consider the effect on the Holders of any Water and Sewer System Bonds for which Credit Enhancement has been provided without regard to such Credit Enhancement.

Without the consent of the Holders of Water and Sewer System Bonds, JEA may adopt a Supplemental Resolution which (i) closes the Water and Sewer System Resolution against, or provides additional conditions to, the issuance of Water and Sewer System Bonds or other evidences of indebtedness; (ii) adds covenants and agreements of JEA; (iii) adds limitations and restrictions to be observed by JEA; (iv) authorizes Water and Sewer System Bonds of an additional Series; (v) provides for the issuance of Water and Sewer System Bonds in coupon form payable to bearer or in uncertificated form; (vi) confirms any security interest or pledge of the Revenues or of any other moneys, securities or funds; (vii) if and to the extent authorized in a Supplemental Resolution authorizing an Additionally Secured Series of Water and Sewer System Bonds, specifies the qualifications of any provider of an obligation similar to a surety bond, insurance policy or letter of credit for deposit into the particular subaccount in the Debt Service Reserve Account securing the Water and Sewer System Bonds of such Additionally Secured Series; (viii) makes any modification which is to be effective only after all Water and Sewer System Bonds of each Series Outstanding as of the date of the adoption of such Supplemental Resolution cease to be Outstanding; and (ix) authorizes Subordinated Indebtedness.

#### **Defeasance**

The pledge of the Trust Estate and each separate subaccount in the Debt Service Reserve Account created by the Water and Sewer System Resolution and all covenants, agreements and other obligations of JEA to the Holders of Water and Sewer System Bonds will cease, terminate and become void and be discharged and satisfied whenever all Water and Sewer System Bonds and interest due or to become due thereon are paid in full. If any Water and Sewer System Bonds are paid in full, such Water and Sewer System Bonds shall cease to be entitled to any lien, benefit or security under the Water and Sewer System Resolution, and all covenants, agreements and obligations of JEA to the Holders of such Water and Sewer System Bonds will cease, terminate and become void and be discharged and satisfied. Water and Sewer System Bonds are deemed to have been paid and are not entitled to the lien, benefit and security of the Water and Sewer System Resolution whenever the following conditions (or such other conditions as may be set forth in the Supplemental Resolution authorizing such Water and Sewer System Bonds) are met: (i) in case any Water and Sewer System Bonds are to be redeemed prior to their maturity, JEA has given to

the Escrow Agent therefor instructions to give notice of redemption therefor, (ii) there has been deposited with such Escrow Agent either moneys or Defeasance Securities the principal of and interest on which when due will provide moneys which, together with other moneys, if any, also deposited, will be sufficient to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on such Water and Sewer System Bonds, and (iii) in the event such Water and Sewer System Bonds are not to be redeemed or paid at maturity within the next succeeding 60 days, JEA has given such Escrow Agent instructions to give a notice to the Holders of such Water and Sewer System Bonds that the above deposit has been made and that such Water and Sewer System Bonds are deemed to have been paid and stating the maturity or redemption date upon which moneys are expected to be available for the payment of the principal or Redemption Price, if applicable, on said Water and Sewer System Bonds.

#### **Events of Default; Remedies**

Events of Default under the Water and Sewer System Resolution include (i) failure to pay the principal or Redemption Price of any Water and Sewer System Bond when due (determined without giving effect to any payments made with funds provided by any Credit Enhancer pursuant to any Credit Enhancement); (ii) failure to pay any installment of interest on any Water and Sewer System Bond or the unsatisfied balance of any Sinking Fund Installment when due (determined without giving effect to any payments made with funds provided by any Credit Enhancer pursuant to any Credit Enhancement) and continuance thereof for a period of 30 days; (iii) failure by JEA to perform or observe any other covenants, agreements, or conditions contained in the Water and Sewer System Resolution or the Water and Sewer System Bonds and continuance thereof for a period of 60 days after written notice; and (iv) certain events of bankruptcy or insolvency. Upon the happening of any such Event of Default the Holders of not less than 25 percent in principal amount of the Water and Sewer System Bonds Outstanding may declare the principal of all the Water and Sewer System Bonds then Outstanding, and the interest accrued thereon, due and payable (subject to a rescission of such declaration upon the curing of such default before the Water and Sewer System Bonds have matured); provided, however, that in the event that a Supplemental Resolution authorizing Water and Sewer System Bonds for which Credit Enhancement is being provided provides that the principal of such Water and Sewer System Bonds, and the accrued interest thereon, may not be declared due and payable immediately (nor such declaration be rescinded and annulled, as provided in the Water and Sewer System Resolution) without the consent in writing of the Credit Enhancer therefor, then such Water and Sewer System Bonds, and the interest accrued thereon, shall not become due and payable immediately as aforesaid (nor may such declaration be rescinded and annulled) without such written consent, and, in that event, the remedies available to the Holders of such Water and Sewer System Bonds (or such Credit Enhancer on behalf of such Holders) shall be limited to the other remedies set forth in the Water and Sewer System Resolution.

During the continuance of an Event of Default under the Water and Sewer System Resolution, JEA is to apply all moneys, securities, funds and Revenues held or received by JEA (other than amounts on deposit in any separate subaccount in the Debt Service Reserve Account) as follows and in the following order: (i) for Operation and Maintenance Expenses and for the reasonable renewals, repairs, replacements of the System necessary in the judgment of JEA to prevent a loss of Revenues; (ii) to the interest and principal or Redemption Price due on the Water and Sewer System Bonds; and (iii) to the interest and principal or redemption price due on Subordinated Indebtedness. During the continuance of an Event of Default under the Water and Sewer System Resolution, JEA is to apply all amounts on deposit in each separate subaccount in the Debt Service Reserve Account to the interest and principal or sinking fund Redemption Price due on the Water and Sewer System Bonds of any Additionally Secured Series secured thereby.

The Water and Sewer System Resolution provides that, if not in default in respect of any of its obligations with respect to Credit Enhancement for Water and Sewer System Bonds, the Credit Enhancer for, and not the actual Holders of, Water and Sewer System Bonds for which such Credit Enhancement is

being provided will be deemed to be the Holder of such Water and Sewer System Bonds at all times for the purposes of giving any approval or consent, exercising any remedies or taking any other actions in respect of the occurrence of an Event of Default. See "Action by Credit Enhancer When Action by Holders of Water and Sewer System Bonds Required" herein.

# **Action by Credit Enhancer When Action by Holders of Water and Sewer System Bonds Required**

Except as otherwise provided in a Supplemental Resolution authorizing Water and Sewer System Bonds for which Credit Enhancement is being provided, if not in default in respect of any of its obligations with respect to Credit Enhancement for the Water and Sewer System Bonds of a Series, or a maturity within a Series, the Credit Enhancer for, and not the actual Holders of, the Water and Sewer System Bonds of a Series, or a maturity within a Series, for which such Credit Enhancement is being provided, shall be deemed to be the Holder of Water and Sewer System Bonds of any Series, or maturity within a Series, as to which it is the Credit Enhancer at all times for the purpose of (i) giving any approval or consent to the effectiveness of any Supplemental Resolution or any amendment, change or modification of the Water and Sewer System Resolution which requires the written approval or consent of Holders; provided, however, that the foregoing shall not apply to any change in the terms of redemption or maturity of the principal of any Outstanding Water and Sewer System Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon, or shall reduce the percentages or otherwise affect the classes of Water and Sewer System Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto and (ii) giving any approval or consent, exercising any remedies or taking any other action following the occurrence of an Event of Default under the Water and Sewer System Resolution.

### Special Provisions Relating to Water and Sewer System Capital Appreciation Bonds, Water and Sewer System Deferred Income Bonds and Reimbursement Obligations

The principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Bonds or the Appreciated Value of Water and Sewer System Deferred Income Bonds becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments made under the definitions of Debt Service, Accrued Aggregate Debt Service, Adjusted Aggregate Debt Service and Aggregate Debt Service only from and after the date (the "Calculation Date") which is one year prior to the date on which such Accreted Value or Appreciated Value, as the case may be, becomes so due, and the principal and interest portions of such Accreted Value or Appreciated Value shall be deemed to accrue in equal daily installments from the Calculation Date to such due date.

For the purposes of (i) receiving payment of the Redemption Price if a Water and Sewer System Capital Appreciation Bond is redeemed prior to maturity, or (ii) receiving payment of a Water and Sewer System Capital Appreciation Bond if the principal of all Water and Sewer System Bonds is declared immediately due and payable following an Event of Default or (iii) computing the principal amount of Water and Sewer System Bonds held by the Holder of a Water and Sewer System Capital Appreciation Bond in giving to JEA any notice, consent, request, or demand pursuant to the Water and Sewer System Resolution for any purpose whatsoever, the principal amount of a Water and Sewer System Capital Appreciation Bond shall be deemed to be its then current Accreted Value.

For the purposes of (i) receiving payment of the Redemption Price if a Water and Sewer System Deferred Income Bond is redeemed prior to maturity, or (ii) receiving payment of a Water and Sewer System Deferred Income Bond if the principal of all Water and Sewer System Bonds is declared immediately due and payable following an Event of Default or (iii) computing the principal amount of Water and Sewer System Bonds held by the Holder of a Water and Sewer System Deferred Income Bond in giving to JEA any notice, consent, request, or demand pursuant to the Water and Sewer System Resolution for any purpose whatsoever, the principal amount of a Water and Sewer System Deferred Income Bond shall be deemed to be its then current Appreciated Value.

Except as otherwise provided in a Supplemental Resolution authorizing a Series of Reimbursement Obligations, for the purposes of (i) receiving payment of a Reimbursement Obligation, whether at maturity, upon redemption or if the principal of all Water and Sewer System Bonds is declared immediately due and payable following an Event of Default or (ii) computing the principal amount of Water and Sewer System Bonds held by the Holder of a Reimbursement Obligation in giving to JEA any notice, consent, request, or demand pursuant to the Water and Sewer System Resolution for any purpose whatsoever, the principal amount of a Reimbursement Obligation shall be deemed to be the actual principal amount that JEA shall owe thereon, which shall equal the aggregate of the amounts advanced to, or on behalf of, JEA in connection with the Water and Sewer System Bonds of the Series or maturity or interest rate within a maturity for which such Reimbursement Obligation has been issued to evidence JEA's obligation to repay any advances or loans made in respect of the Credit Enhancement or liquidity support provided for such Water and Sewer System Bonds, less any prior repayments thereof.

#### Recent Amendments to the Water and Sewer System Resolution

In June 2013, JEA adopted Resolution 2013-10 which, upon the consent thereto of the holders of a majority in principal amount of Water and Sewer System Bonds Outstanding, provides for the amendment of certain provisions of the Water and Sewer System Resolution and the First Supplemental Resolution.

The amendments have become effective, and:

- (a) Revise certain definitions in order to allow for the more efficient and advantageous investment of certain funds held under the Water and Sewer System Resolution; and
- (b) Revise certain provisions of the First Supplemental Resolution related to the use of a reserve fund credit instrument (as defined therein) to fund the Initial Subaccount in the Debt Service Reserve Account established thereby.

See the following definitions under "Definition of Terms" hereunder: Defeasance Securities, Defeased Municipal Obligations, Federal Agency Securities, Investment Securities, U.S. Obligations, and see the summary of the provisions of the First Supplemental Resolution, as amended by the applicable portion of the Resolution Amendments, relating to the deposit of reserve fund credit instruments to the Initial Subaccount under "Debt Service Reserve Account" hereunder.

Also see "FINANCIAL INFORMATION RELATING TO WATER AND SEWER SYSTEM – Debt Relating to Water and Sewer System – Recent Amendments to the Water and Sewer System Resolution" in the Annual Disclosure Report to which this summary is attached for a discussion regarding the recent amendments.

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#### Attachment 1



MUNICIPAL BOND DEBT SERVICE RESERVE INSURANCE POLICY

> 2035 to-R Policy No

> > remium:

BONDS: Water and Sewer System Revenue Bonds, 2004 Series C and other Additionally Secured Bonds secured by amounts on deposit in the Initia Subaccount in the Debt Service Reserve Account

the Debt Service Reserve Fund

FINANCIAL SECURITY ASSURANCE INC. ("Financial Security", UNCONDITIONALLY AND IRREVOCABLY agrees to pay to the trustee of "Paying Agent") as set forth in the documentation the "Bond Document" securing the Bonds, for the benefit of the Owners, subject only to the Items endorsement hereto), that portion of the principal of and interest on the Bonds. the "Tristie") or paying providing for the Issue of this Pelicy (which in that shall become Due but shall be unpaid by reason of Nonpay ment by the is

Financial Security will make payment as provided in the Pothe Business Day on which such principal and interest become following the Business Day on which financial/Security shall reasonably satisfactory to it. A Notice of Nonphymeol will be of received prior to 1,000 m. New York Inne) on such Business I Agent on next Business Day. If any not to have been received Notice of Monpayment received nolete, it sha ecuri emed d by Financial Security for purpor the Trustee, Paying Agent or Is Payment by Financial Security t ce and Final shall promptly so advis may submit Notice of Nonpayment. nt for the n of shall, to the ext oof, disch rge the obligation or this Policy. Upon such ancial Security shall become payment, Financia Security shall become entitled to reimburserper, and expenses) pursuant to the Bond Document. Uppo dissursem shall become the dwnet of the Bond, any appurtenant coupon to principal of or luterest on the Bond and shall be jully subroget Owner's fright to receive payments upder the Bond and sell insurextent of any payment by Financial Security hereunder. entitled to reimbe aid (tebether with interest Bond, Financial Security r right to receipt of payment of ights of the Owner, including the in respect of the Bond, to the

The amount available under this Policy for sayment shall not exceed the Policy Limit. The amount available at any particular time to be paid to the Trustee or Paying Agent under the terms of this Policy shall automatically be reduced by any payment under this Policy. However, lafter such payment, the amount available under this Policy shall be reinstated in full or in part, but only uf to the Policy Limit, to the extent of the reimbursement of such payment (exclusive of interest and expenses) to Financial Security by or on behalf of the Issuer. Within three Business Days of such reimbursement, Financial Security shall provide the Trustee, the Paying Agent and the Issuer with notice of their elembursement and reinstatement.

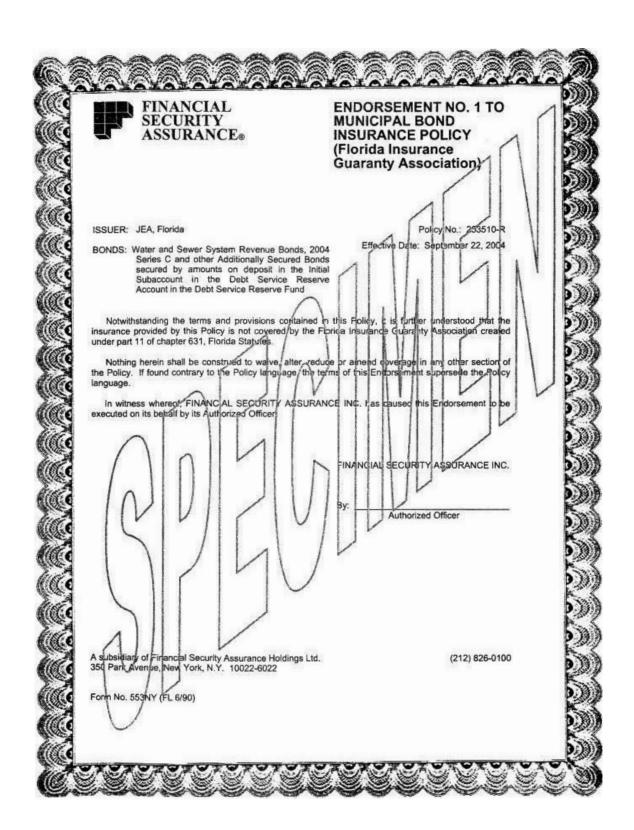
Payment under this Policy shall not be available with respect to (a) any Nonpayment that occurs prior to the Discretive Date of after the Termination Date of this Policy or (b) Bonds that are not outstanding under the Bond Document. If the amount payable under this Policy is also payable under another insurance policy or surety bond neuring the Bonds, payment first shall be made under this Policy to the extent of the amount available under this Policy up to the Policy Limit. In no event shall Financial Security incur duplicate liability for the same amounts with it is possible to the Bonds that are covered under this Policy and any other insurance policy or surety bond. inancial Security has issued.

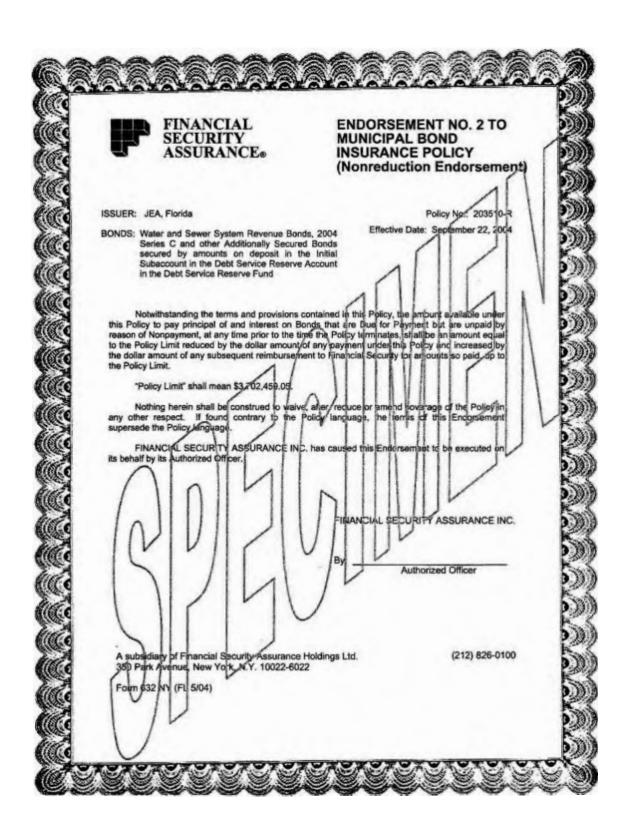
Except to the extent expressly modified by an endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy. "Business Day" means any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in the State of New York are, or the Insurer's Fiscal Agent is, authorized or required by law or executive order to remain closed. "Due for Payment" means (a) when referring principal of a Bond, payable on the stated maturity date thereof or the date on which the same shall have on duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity unless Financial Security shall elect, in its sole discretion, to pay such principal due

Page 2 of 2 Policy No. 203510-R upon such acceleration together with any accrued interest to the date of acceleration and (b) when referring to interest on a Bond, payable on the stated date for payment of interest. "Nonpayment" means, in respect of a Bond, the failure of the Issuer to have provided sufficient funds to the Paying Agent for payment in full of all principal and interest that is Due for Payment on such Bond. "Nonpayment" shall also include, in respect of a Bond, any payment of principal or interest that is Due for Payment made to an Owner by or on behalf of the Issuer that has been recovered from such Owner pursuant to the United States Bankruptly Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction. Notice means telephonic or telecopied notice, subsequently confirmed in a signed writing or written notice by registered or certified mail, from the Issuer, the Trustee or the Paying Agent to Financial Security which notice shall specify (a) the person or entity making the claim, (b) the Policy Number, (c) the dejimed amount and (d) the date such claimed amount became Due for Payment. "Owner means, in respect of a Good, the person of entity whe, at the claimed amount became Due for Payment. "Owner" means, in respect of a Bond, the person of entity who, at the time of Nonpayment, is entitled under the terms of such Bond to payment of principal or interest thereunder, except that "Owner" shall not include the Issuer or any person or entity whose direct or lindings of oilligation constitutes the underlying security for the Bonds. "Policy Limit" shall be the dollar amount of the dobt service reserve fund required to be maintained for the Bonds by the Bond Document from time to time (the "Debt Service Reserve Requirement"), but in no event shall the Policy Limit exceed \$3,702,459.05. The Policy Limit shall automatically and irrevocably be reduced from time to time by the amount of each treduction in the Debt Service Reserve Requirement, as provided in the Bond Document. "Termination Late" means October 1, 2039.

Financial Security may appoint a fiscal agent (the "Insurer's Fiscal Agent.") for purposes of this Policy by giving written notice to the Trustee and the Paying Agent specifying the nemerand notice address of the Insurer's Fiscal Agent. From and after the date of receip; of such notice by the Trustee and the Faying Agent, (a) copies of all notices required to be delivered to Financial Security pursuant to this Folicy shall be simultaneously delivered to the Insurer's Fiscal Agent and to Financial Security in under this Policy inay be padde directly by Financial Security or by the Insurer's Fiscal Agent on behalf of Financial Security. The Insurer's Fiscal Agent is the agent of Financial Security only and the Insurer's Fiscal Agent shall in the event, be liable to any Owner for any act of the Insurer's Fiscal Agent or any failure of Financial Security to deposit or cause to be deposited sufficient funds to make payments due under this Policy. funds to make payments due under this Policy. To the fullest extent permitted by applicable law, Financial Security agrees not to assert, and bereby waives, only for the benefit of each Owner, all rights (whether by counterplain), setoff or otherwise) and defenses (including, without limitation, the defense of flaud) whether acquired by sublogation, assignment or otherwise, to the extent that such rights and defenses may be available to Financial Security to avoid payment of its obligations under this Policy in accordance with the excress provisions of his Folicy.

[This Policy sets forth in full the undertaking of Financial Security, and shall not be modified, altered or affected by any other agreement or instrument, including any modification or amendment thereto. Except to the extent expressly modified by an endorsement hereto, (a) any preprim paid in respect of this Policy is nonrefundable to any reason whatsoever, including payment, by provision being made for payment, of the Bonds prior to maturity and (b) this Policy may not be canceled or revoked. THIS POLICY IS NOT COVERED BY THE PROPERTY/CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAW. NSURANCE LAW. In witness whereof, FINANCIAL SECURITY ASSURANCE INC. has caused this Policy to be executed on its behalf by its Authorized Officer. FINANCIAL SECURITY ASSURANCE INC. Authorized Officer A subsidiary of Financial Security Assurance Holdings Ltd. 350 Park Avenue, New York, N.Y. 10022-6022 (212) 826-0100 om 501B NY (8/96)





#### **Attachment 2**

# BERKSHIRE HATHAWAY ASSURANCE CORPORATION NEW YORK, NEW YORK

# DEBT SERVICE RESERVE FUND FINANCIAL GUARANTY INSURANCE POLICY

## DECLARATIONS

Policy No.:

98SRD102446

Issuera

JEA

Issuer Address:

Jacksonville, Florida

Obligations:

All Water and Sewer System Revenue Bonds which constitute an Additionally Secured Series secured by amounts on deposit in the Initial Subaccount in the Debt Service Reserve Account in the Debt Service Reserve Pund established pursuant to the First

Supplemental Water and Sewer System Revenue Bond

Resolution of August 19, 1997

Effective Date:

August 11, 2008

Termination Date:

October 1, 2038

Insured Limit:

\$33,000,000

Percentage:

Insured Limit of this Policy divided by the sum of the available limits of all surety bonds, insurance policies, letters of credit or any other reserve fund credit instruments outstanding on the Date of Demand as defined in this Policy that meet the

requirements of the Initial Subaccount at the time of a demand

under this Policy.

Premium:

Endorsements:

None

#### INSURANCE POLICY TERMS AND CONDITIONS

BERKSHIRE HATRIAWAY ASSURANCE CORPORATION ("BHAC"), in consideration of the payment of the premium received by BHAC and subject to the terms of this Policy, hereby unconditionally and irrevocably agrees to pay to the Trustee for the benefit of the Holders the Insured Payments on the Payment Due Date but shell be unpaid by reason of Nonpayment by the Issuer. Payment will be made on the later to occur of (i) the Business Day following the day on which BHAC shall have Received a completed notice of Nonpayment in form attached as fixhibit A to the Policy, or (ii) the Payment Due Date with respect to the applicable principal or interest payment (the later of the dates referred to in clauses (i) and (ii) being the "Date of Demand"). If a notice of Nonpayment to BHAC is incomplete or does not in any instance conform to the terms and conditions of this Policy, it shall be deemed not Received, and BHAC shall promptly give notice to the Trustee that the purported notice of Nonpayment is not deemed Received. Upon receipt of such notice, the Trustee may submit an amended notice of Nonpayment. Payment by BHAC to the Trustee for the benefit of the Holders shall discharge the obligation of BHAC under this Policy to the extent of such payment.

Except as described below, this Policy is non-cancelable by BHAC for any reason. The Fremium on this Policy is not refundable for any reason, including the payment prior to maturity of the Obligations. This Policy does not insure against loss of any premium on the Obligation paid by the Holder or any acceleration payment which at any time may become due in respect of any Obligation, other than at the sole option of BHAC, nor does this Policy insure against any risk other than Nonpayment.

Under no circumstance shall BHAC's obligations under this Policy exceed the Insured Limit. The amount available at any time to be paid to the Trustee under the terms of this Policy shall automatically be reduced by any payment under this Policy; provided that Issuer may reinstate the Insured Limit by payment of the amount paid by BHAC hereunder plus interest and expenses as provided herein. Issuer shall repay any draws under this Policy and pay all related reasonable expenses incurred by BHAC. Interest shall accrue and be payable on such draws and expenses from the date of payment by BHAC at the Late Payment Rate. Repayment of draws and payment of expenses and accrued interest there on at the Late Payment Rate (collectively "Folicy Costs") shall commence in the first month following each draw, and each such monthly payment shall be in an amount at least equal to 1/12 of the aggregate of Policy Costs related to such draw. Payment of such Policy Costs shall be payable in the manner provided in paragraph (f) of subsection 4 of Section 6.01 of the First Supplemental Water and Sewer System Revenue Bond Resolution of the Issuer adopted August 19, 1997.

Each reinstatement payment shall first be applied to payment of interest and expenses and any remainder deemed to be repayment of the principal paid by BHAC to reinstate the Insured Limit. BHAC shall provide the Trustee and the Issuer with notice of reinstatement of the Insured Limit in the form provided in Exhibit B to this Policy within three Business Days following Receipt of the full reinstatement payment due BHAC. Under no circumstances shall BHAC incur duplicate liability for the same amounts owing with respect to the Obligations that are covered under this Policy and any other insurance policy or surety bond that BHAC has issued.

Under no circumstances may the Insured Limit be increased from the amount stated in the Declarations other than by Endorsement to this Policy.

BHAC shall have no liability under this Policy with respect to any Obligation which is not subject to the Resolution. This Policy will not apply to any Obligation that is not part passu in security to the Water and Sewer System Refunding Revenue Bonds, 2007 Series C whether or not such 2007 Series C Bonds remain outstanding; provided that, if the 2007 Series C Bonds are not outstanding, this Policy will not apply to any Obligation that would not have been part passu in security to the Water and Sewer System Refunding Revenue Bonds, 2007 Series C if they had remained outstanding. BHAC shall have no liability under this Policy for any Nonpayment with respect to an Obligation that is not issued pursuant to the Resolution, without amendment of that Resolution.

This Policy excludes from coverage any Non-Payment occurring prior to the Effective Date or after the Termination Date.

If JEA shall fail to pay any Policy Costs in accordance with the requirement of this Policy, BHAC shall be entitled to exercise any and all legal and equitable remedies available to it, including (i) the bringing of an action for mandamus and (ii) those remedies provided under the Resolution other than (A) acceleration of the maturity of the Obligations or (B) remedies which would adversely affect owners of the Obligations. In furtherance of the foregoing, JEA hereby acknowledges and agrees that BHAC shall be a third-party beneficiary of the Resolution, and shall be entitled to bring suit on the Resolution based upon JEA's failure to pay any Policy Costs as aforesaid.

The Resolution shall not be discharged until all Policy Costs owing to BHAC shall have been paid in full. JEA's obligation to pay such emounts shall survive payment in full of the Obligations.

Except to the extent expressly modified by the Declarations to this Policy or any endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy.

"Business Day" means any day other than (i) a Saturday or Sunday, (ii) any day on which the offices of the Custodian are closed, or (iii) any day on which banking institutions are authorized or required by Jaw, executive order or governmental decree to be closed in the City of New York, New York.

"Holder" means, in respect of any Obligation, the person or entity who, at the time of Nonpayment, is the registered owner of an Obligation pursuant to the applicable Resolution governing the Obligation entitled to payment of principal or interest thereunder, except that Holder shall not include the Issuer or any person or entity whose direct or indirect obligation constitutes the underlying security for the Obligations.

"Initial Subaccount" means the initial subaccount in the Debt Service Reserve Account in the Debt Service Reserve Fund established pursuant to the First Supplemental Water and Sewer System Revenue Bond Resolution of the Issuer adopted August 19, 1997.

"Insured Psymonts" means the Percentage set forth in the Declarations multiplied by the principal of and interest for which payment is due on the Obligations on the applicable Payment Due Date, but only after any cash and investments in the Initial Subaccount on the Date of Demand under this Policy have been applied to amounts due under the Obligations on that Payment Due Date. Insured Payments shall not include any additional amounts owing by the Issuer solely as a result of the failure by the Trustee to pay such amount when due and payable, including without limitation any such additional amounts as may be attributable to penalties or to interest accruing at a default rate, to amounts payable in respect of indennification, or to any other additional amounts payable by the Trustee by reason of such failure.

"Late Payment Rate" means, the lesser of (a) the per annum rate of interest, publicly announced from time to time by JPMorgan Chase Bank at its principal office in the City of New York, as its prime or base lending rate (the "Prime Rate") (any change in such Prime Rate to be effective on the date such change is announced by JPMorgan Chase Bank) plus three percent interest plus fifty basis points per annum starting twolve months after any draw is made and increasing by fifty basis points per annum every twelve months any draw remains unpaid, and (b) the maximum rate permissible under applicable usury or similar laws limiting interest rates. The Late Payment rate shall be computed on the basis of the actual number of days clapsed over a year of 365 days. In the event JPMorgan Chase Bank ceases to announce its Prime Rate publicly, Prime Rate shall be the publicly announced prime or base lending rate of such national bank as BHAC shall specify.

"Nonpayment" means, in respect of an Obligation, the failure of the Issuer to have provided sufficient funds to the Trustee for payment in full of all principal and interest due on such Obligation on the applicable Payment Due Date.

"Obligations" mean the bonds described in the Declarations which are outstanding under the terms of the Resolution.

"Payment Due Daie" means (i) when referring to the principal of an Obligation, the stated

maturity date thereof, or the date on which such Obligation shall have been duly called for mandatory sinking fund redemption, and does not refer to any earlier date on which payment is due by reason of a call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity (unless BHAC in its sole discretion elects to make any principal payment, in whole or in part, on such earlier date) and (ii) when referring to interest on an Obligation, the stated date for payment of such interest.

"Receipt" or "Received" means actual receipt of notice of or, if notice is given by overnight or other delivery service, or by certified or registered United States mail, by a delivery receipt signed by a person authorized to accept delivery on behalf of the person to whom the notice was given. Notices to BHAC may be mailed by certified mail or may be delivered by telecopier to facsimile number 203 363 5221, attn: Bond Insurance Claims, or to such other address as shall be specified by BHAC to the Trustee in writing.

"Resolution" means the Water and Sewer System Revenue Bond Resolution of the Issuer adopted February 18, 1997, the First Supplemental Water and Sewer System Revenue Bond Resolution of the Issuer adopted August 19, 1997 and any further supplemental resolution issued subject to the foregoing resolutions.

"Trustee" means the trustee or paying agent, as set forth in the applicable Resolution of the Issuer governing the Obligations.

All capitalized terms used in this Policy and not otherwise defined in this Policy shall have the meaning given them in the applicable Resolution governing the Obligations.

To the fullest extent permitted by applicable law, BHAC hereby waives, in each case for the benefit of the Holders only, all rights and defenses of any kind (including, without limitation, the defense of fraud in the inducement or in fact or any other circumstance that would have the effect of discharging a surety, guarantor or any other person in law or in equity) that may be available to BHAC to deny or avoid payment of amounts due under this Policy in accordance with the express provisions hereof, and BHAC furthermore hereby expressly waives any claim for set-off or other counterclaim against payment hereunder. Nothing in this paragraph will be construed (i) to waive, limit or otherwise impair, and BHAC expressly reserves, BHAC's rights and remedies, including, without limitation; its right to assert any claim or to pursue recoveries (based on contractual rights, securities law violations, fraud or other causes of action) against any person or entity, in each case, whether directly or acquired as a subrogee, assignee or otherwise, subsequent to making any payment to the Trustee, in accordance with the express provisions hereof, and/or (ii) to require payment by BHAC of any amounts that have been previously paid or that are not otherwise due in accordance with the express provisions of this Policy.

This Policy sets forth in full the undertaking of BHAC with respect to the subject matter hereof, and shall not be modified, altered or affected by any other agreement or instrument, including without limitation, any modification or amendment thereto, unless the modification or amendment is agreed to by the Custodian of the Obligations. THIS POLICY IS NOT COVERED BY THE PROPERTY/CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAWS OR THE FLORIDA INSURANCE GUARANTY ASSOCIATION SPECIFIED IN THE FLORIDA INSURANCE GUARANTY ASSOCIATION ACT. Payments under this Policy may not be accelerated except at the sole option of BHAC.

Premium is due from the Issuer not later than the Effective Date.

This Policy will be governed by, and shall be construed in accordance with, the laws of the State of Florida.

IN WITNESS WHEREOF, BHAC has caused this Policy to be executed on its behalf by its duly authorized officer, and to become effective and binding upon BHAC by virtue of such signature.

BERKSHIRE HATHAWAY ASSURANCE CORPORATION

## Exhibit A

	Policy No NOTICE OF NONPAYMENT
	, 20
100 Fi	SHIRE HATHAWAY ASSURANCE CORPORATION rst Stamford Place ord, CT 06902
Attenti	ion:
Hathay otherw	Reference is made to the Policy No (the "Policy") issued by Berkshire way Assurance Corporation ("BHAC"). The terms which are capitalized herein and not rise defined have the meanings specified in the Policy unless the context otherwise requires.
The Pa	lying Agent hereby certifies that:
	1. On the Payment Due Date of, 20 \$ [became] [will become] due for payment on the following Obligations:_[list of Obligations]
	2. The amount on deposit in the Debt Service Account of the Debt Service Fund and the Initial Subaccount of the Debt Service Reserve Account of the Debt Service Fund available to pay such amount is \$, which is \$ less than the amount due (the "Deficiency Amount");
	3. The Paying Agent hereby demands payment of \$ which amount does not exceed the lesser of (i) the Percentage multiplied by the Deficiency Amount and (ii) the amount available to be drawn under the Policy which in no event shall exceed the Insured Limit;
	4. The Paying Agent has not heretofore made demand under the Policy for the amount specified in 3. above or any portion thereof; and
	5. The Paying Agent hereby requests that payment of the amount specified in 3. above be made by BHAC under the Policy and directs that payment under the Policy be made to the following account by bank wire transfer of federal or other immediately available funds in accordance with the terms of the Policy: [Paying Agent's Account].
	[Paying Agent]
- 11-1	Bv:

#### Exhibit R

	150 months	
		Policy No
	NOTICE OF REINSTA	ATEMENT
		. 20
[Paying Agent]		
[Address]		
Berkshire Hathaway herein and not othe context otherwise re BHAC herei	rwise defined have the meaninguires.  by delivers notice that it is in the financial Guaranty Agree.	(the "Policy") issued by AC"). The terms which are capitalized ags specified in the Policy unless the receipt of payment from the Issuer eement relating to the Policy and as of
	BERKSHIRE HATHAWAY	ASSURANCE CORPORATION
		Authorized Officer
		Attests
		Title:



# SUMMARY OF CERTAIN PROVISIONS OF THE SUBORDINATED WATER AND SEWER SYSTEM RESOLUTION

The following is a summary of certain provisions of the Subordinated Water and Sewer System Resolution. Summaries of certain definitions contained in the Subordinated Water and Sewer System Resolution are set forth below. Other terms defined in the Subordinated Water and Sewer System Resolution for which summary definitions are not set forth are indicated by capitalization. The summary does not purport to be a complete description of the terms of the Subordinated Water and Sewer System Resolution and, accordingly, is qualified by reference thereto and subject to the full text thereof.

The Subordinated Water and Sewer System Resolution, as heretofore amended, is available for viewing and downloading on JEA's website at <a href="https://www.jea.com/About/Investor\_Relations/Bonds/">https://www.jea.com/About/Investor\_Relations/Bonds/</a>. Copies of the Subordinated Water and Sewer System Resolution also may be obtained from JEA; provided that a reasonable charge may be imposed for the cost of reproduction. The term "Subordinated Bonds" as used in the Subordinated Water and Sewer System Resolution and in this summary has the same meaning as the term "Subordinated Water and Sewer System Bonds" as used in the Annual Disclosure Report to which this summary is attached.

#### **Definitions**

The following are summaries of certain definitions in the Subordinated Water and Sewer System Resolution:

Accreted Value means, as of any date of computation with respect to any Water and Sewer System Capital Appreciation Subordinated Bond, an amount equal to the principal amount of such Bond plus the interest accrued on such Bond from the date of original issuance of such Bond to the periodic date specified in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Capital Appreciation Subordinated Bond on which interest on such Bond is to be compounded (hereinafter, a "Periodic Compounding Date") next preceding the date of computation or the date of computation if a Periodic Compounding Date, such interest to accrue at the interest rate per annum of the Water and Sewer System Capital Appreciation Subordinated Bonds set forth in the Supplemental Subordinated Resolution authorizing such Subordinated Bonds, compounded periodically on each Periodic Compounding Date, plus, if such date of computation shall not be a Periodic Compounding Date, a portion of the difference between the Accreted Value as of the immediately preceding Periodic Compounding Date (or the date of original issuance if the date of computation is prior to the first Periodic Compounding Date succeeding the date of original issuance) and the Accreted Value as of the immediately succeeding Periodic Compounding Date, calculated based upon an assumption that, unless otherwise provided in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Capital Appreciation Subordinated Bonds, Accreted Value accrues in equal daily amounts on the basis of a year consisting of twelve 30-day months.

Additional Parity Subordinated Indebtedness means any obligation incurred by JEA subsequent to the date of adoption of the Subordinated Water and Sewer System Resolution in respect of amounts payable by JEA in repayment of draws under any surety bond, insurance policy, letter of credit or other similar obligation that is deposited, in lieu of a cash deposit thereto, to any subaccount in the Debt Service Reserve Account in the Debt Service Fund established pursuant to the Water and Sewer System Resolution, and all expenses with respect thereto and interest thereon, and that is designated as such by an Authorized Officer of JEA in a certificate filed with the records of JEA on the date of the deposit of such surety bond, insurance policy, letter of credit or other similar obligation to such subaccount.

Adjusted Aggregate Debt Service shall have the meaning assigned to such term in the Water and Sewer System Resolution.

Adjusted Aggregate Subordinated Debt Service for any period shall mean, as of any date of calculation, the Aggregate Subordinated Debt Service for such period except that (a) if any Refundable Subordinated Principal Installment for any Series of Subordinated Bonds is included in Aggregate Subordinated Debt Service for such period, Adjusted Aggregate Subordinated Debt Service shall mean Aggregate Subordinated Debt Service determined (i) in the case of Refundable Subordinated Principal Installments with respect to Subordinated Bonds other than Commercial Paper Notes and Medium-Term Notes, as if each such Refundable Subordinated Principal Installment had been payable, over a period extending from the due date of such Subordinated Principal Installment through the earlier of (x) the 40th anniversary of the issuance of such Series of Subordinated Bonds or (y) the 30th anniversary of the due date of such Refundable Subordinated Principal Installment, in installments which would have required equal annual payments of principal and interest over such period and (ii) in the case of Refundable Subordinated Principal Installments with respect to Commercial Paper Notes or Medium-Term Notes, in accordance with the then current Commercial Paper Payment Plan or Medium-Term Note Payment Plan, as applicable, with respect thereto and (b) the principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Subordinated Bonds or the Appreciated Value of Water and Sewer System Deferred Income Subordinated Bonds shall be included in the calculation of Adjusted Aggregate Subordinated Debt Service at the times and in the manner provided in the provisions of the Subordinated Water and Sewer System Resolution. Interest deemed payable in any Fiscal Year after the actual due date of any Refundable Subordinated Principal Installment of any Series of Subordinated Bonds shall be calculated at such rate of interest as JEA, or a banking or financial institution or financial advisory firm selected by JEA, determines would be a reasonable estimate of the rate of interest that would be borne on Subordinated Bonds maturing at the times determined in accordance with the provisions of clause (a) of the preceding sentence, determined as of such date of calculation.

Aggregate Subordinated Debt Service for any period shall mean, as of any date of calculation, the sum of the amounts of Subordinated Debt Service for such period with respect to all Series; provided, however, that (a) for purposes of estimating Aggregate Subordinated Debt Service for any future period (i) any Variable Rate Subordinated Bonds, Commercial Paper Notes and Medium-Term Notes Outstanding during such period shall be assumed to bear interest during such period at the Stipulated Interest Rate applicable thereto, determined as of such date of calculation and (ii) any Option Subordinated Bonds Outstanding during such period shall be assumed to mature on the stated maturity date thereof and (b) the principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Subordinated Bonds or the Appreciated Value of Water and Sewer System Deferred Income Subordinated Bonds shall be included in the calculation of Aggregate Subordinated Debt Service at the times and in the manner provided in the Subordinated Water and Sewer System Resolution.

Alternate Variable Rate Taxable Index means such index as, at the time, is in general use as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is not excluded from gross income for federal income tax purposes, as determined by an Authorized Officer of JEA.

Alternate Variable Rate Tax-Exempt Index means such index as, at the time, is in general use as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is excluded from gross income for federal income tax purposes, as determined by an Authorized Officer of JEA.

Appreciated Value means, with respect to any Water and Sewer System Deferred Income Subordinated Bond, (i) as of any date of computation prior to the Current Interest Commencement Date with respect to such Water and Sewer System Deferred Income Subordinated Bond, an amount equal to the principal amount of such Bond plus the interest accrued on such Bond from the date of original issuance of such Bond to the periodic date specified in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Deferred Income Subordinated Bond on which interest on such Bond is to be

compounded (hereinafter, a "Periodic Compounding Date") next preceding the date of computation or the date of computation if a Periodic Compounding Date, such interest to accrue at the interest rate per annum of the Water and Sewer System Deferred Income Subordinated Bonds set forth in the Supplemental Subordinated Resolution authorizing such Subordinated Bonds, compounded periodically on each Periodic Compounding Date, plus, if such date of computation shall not be a Periodic Compounding Date, a portion of the difference between the Appreciated Value as of the immediately preceding Periodic Compounding Date (or the date of original issuance if the date of computation is prior to the first Periodic Compounding Date succeeding the date of original issuance) and the Appreciated Value as of the immediately succeeding Periodic Compounding Date, calculated based upon an assumption that, unless otherwise provided in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Deferred Income Subordinated Bonds, Appreciated Value accrues in equal daily amounts on the basis of a year consisting of twelve 30-day months and (ii) as of any date of computation on and after the Current Interest Commencement Date, the Appreciated Value on the Current Interest Commencement Date.

Average Annual Adjusted Aggregate Debt Service means, as of any date of calculation, the arithmetic average of the Adjusted Aggregate Debt Service for the then current and each future Bond Year.

Average Annual Adjusted Aggregate Subordinated Debt Service means, as of any date of calculation, the arithmetic average of the Adjusted Aggregate Subordinated Debt Service for the then current and each future Bond Year.

Bearer Commercial Paper Note means any Commercial Paper Note that, in accordance with the Supplemental Subordinated Resolution authorizing the Series of which such Commercial Paper Note is a part, is issued in bearer form, not registrable as to principal or face amount.

BMA Municipal Swap Index means the rate determined on the basis of an index based upon the weekly interest rates of tax-exempt variable rate issues included in a database maintained by Municipal Market Data or any successor indexing agent which meets specific criteria established by The Bond Market Association.

Build America Bonds means any Subordinated Bonds with respect to which JEA has irrevocably elected, pursuant to Section 54AA(g) of the Code, or any similar federal program creating subsidies for municipal borrowers for which JEA qualifies, to receive cash subsidy payments from the U.S. Treasury equal to a portion of the interest payable on such Subordinated Bonds.

Code means the Internal Revenue Code of 1986, or any successor, and the applicable regulations (including final, temporary and proposed) promulgated by the United States Department of the Treasury thereunder, including Treasury Regulations issued pursuant to Sections 103 and 141 through 150, inclusive, of said Internal Revenue Code of 1986.

Commercial Paper Note means any Subordinated Bond which (a) has a maturity date which is not more than 365 days after the date of issuance thereof and (b) is designated as a Commercial Paper Note in the Supplemental Subordinated Resolution authorizing such Subordinated Bond.

Commercial Paper Payment Plan means, with respect to any Series of Commercial Paper Notes and as of any time, the then current Commercial Paper Payment Plan for such Notes contained in a certificate of an Authorized Officer of JEA setting forth the sources of funds expected to be utilized by JEA to pay the principal of and interest on such Commercial Paper Notes; provided, however, that if any Commercial Paper Payment Plan provides for the refunding of any Commercial Paper Note with proceeds of (a) Subordinated Bonds other than Commercial Paper Notes or Medium-Term Notes or (b) Water and Sewer System Bonds, in either such case, that JEA intends to pay from Revenues, the principal of such Commercial Paper Notes shall, for purposes of the Commercial Paper Payment Plan, be assumed to come

due over a period commencing with the due date of the Commercial Paper Note and ending not later than the earlier of (x) the 40th anniversary of the first issuance of Commercial Paper Notes of such Series or (y) the 30th anniversary of the due date of the Commercial Paper Note to be refunded, in installments such that the principal and interest payable on such Commercial Paper Notes in each Fiscal Year in such period will be equal to the principal and interest payable on such Commercial Paper Notes in each other Fiscal Year in such period.

Credit Enhancement means, with respect to the Water and Sewer System Bonds of a Series, a maturity within a Series or an interest rate within a maturity or the Subordinated Bonds of a Series, a maturity within a Series or an interest rate within a maturity, the issuance of an insurance policy, letter of credit, surety bond or any other similar obligation, whereby the issuer thereof becomes unconditionally obligated to pay when due, to the extent not paid by JEA or otherwise, the principal of and interest on such Water and Sewer System Bonds or Subordinated Bonds, as the case may be.

Credit Enhancer means any person or entity which, pursuant to a Supplemental Subordinated Resolution, is designated as a Credit Enhancer and which provides Credit Enhancement for the Water and Sewer System Bonds of a Series, a maturity within a Series or an interest rate within a maturity or the Subordinated Bonds of a Series, a maturity within a Series or an interest rate within a maturity.

Current Interest Commencement Date means, with respect to any particular Water and Sewer System Deferred Income Subordinated Bonds, the date specified in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Deferred Income Subordinated Bonds (which date must be prior to the maturity date for such Water and Sewer System Deferred Income Subordinated Bonds) after which interest accruing on such Water and Sewer System Deferred Income Subordinated Bonds shall be payable periodically on dates specified in such Supplemental Subordinated Resolution, with the first such payment date being the first such periodic date immediately succeeding such Current Interest Commencement Date.

Defeasance Securities have the meaning given to such term in the Water and Sewer Resolution except that (a) the references therein to "Bonds of a Series" and "the Supplemental Resolution authorizing such Bonds" shall be deemed to refer to "Subordinated Bonds of a Series" and "the Supplemental Subordinated Resolution authorizing such Subordinated Bonds," respectively and (b) the reference in clause (g) thereof to subsection 6 of Section 1201 of the Water and Sewer Resolution shall be deemed to refer to subsection 6 of Section 12.01 of the Subordinated Water and Sewer Resolution.

Designated Swap Obligation means, to the extent from time to time permitted by law, any interest rate swap transaction (i) which is entered into by JEA for the purpose of converting synthetically the interest rate on any particular Water and Sewer System Bonds or Subordinated Bonds from a fixed rate to a variable rate or from a variable rate to a fixed rate (regardless of whether such Designated Swap Obligation shall have a term equal to the remaining term of such Water and Sewer System Bonds or Subordinated Bonds, as the case may be) and (ii) which has been designated in a certificate of an Authorized Officer of JEA filed with the records of JEA as such (which certificate shall specify the Water and Sewer System Bonds or Subordinated Bonds, as applicable, with respect to which such Designated Swap Obligation is entered into).

Designated Swap Obligation Provider means any person with whom JEA enters into a Designated Swap Obligation.

Event of Default when used with respect to the Subordinated Bonds, shall mean any event specified as such in the Water and Sewer System Resolution and any other event specified as such in the Subordinated Water and Sewer System Resolution.

Existing Parity Subordinated Indebtedness means (i) the Reimbursement Obligations of JEA under (and as defined in) the Debt Service Reserve Fund Policy Agreement, dated as of January 4, 2001, between JEA and Financial Guaranty Insurance Company ("FGIC"), (ii) the Reimbursement Obligations of JEA under (and as defined in) the Debt Service Reserve Fund Policy Agreement, dated as of April 11, 2002, between JEA and FGIC and (iii) the Reimbursement Obligations of JEA under (and as defined in) the Debt Service Reserve Fund Policy Agreement, dated as of October 24, 2002, between JEA and FGIC.

*Initial Subordinated Debt Service Reserve Fund* means the Fund by that name that is established in the Third Supplemental Subordinated Water and Sewer System Resolution.

*Medium-Term Note* means any Subordinated Bond which (a) has a maturity date which is more than 365 days, but not more than 15 years, after the date of issuance thereof and (b) is designated as a Medium-Term Note in the Supplemental Subordinated Resolution authorizing such Subordinated Bond.

Medium-Term Note Payment Plan means, with respect to any Series of Medium-Term Notes and as of any time, the then current Medium-Term Note Payment Plan for such Notes contained in a certificate of an Authorized Officer of JEA setting forth the sources of funds expected to be utilized by JEA to pay the principal of and interest on such Medium-Term Notes; provided, however, that if any Medium-Term Note Payment Plan provides for the refunding of any Medium-Term Note with proceeds of (a) Subordinated Bonds other than Commercial Paper Notes or Medium-Term Notes or (b) Water and Sewer System Bonds, in either such case, that JEA intends to pay from Revenues, the principal of such Medium-Term Notes shall, for purposes of the Medium-Term Note Payment Plan, be assumed to come due over a period commencing with the due date of the Medium-Term Note and ending not later than the earlier of (x) the 40th anniversary of the first issuance of Medium-Term Notes of such Series or (y) the 30th anniversary of the due date of the Medium-Term Notes in each Fiscal Year in such period will be equal to the principal and interest payable on such Medium-Term Notes in each other Fiscal Year in such period.

One-Month LIBOR Rate means, as of any date of determination, the offered rate for deposits in U.S. dollars for a one-month period which appears on the Telerate Page 3750 at approximately 11:00 A.M., London time, on such date, or if such date is not a date on which dealings in U.S. dollars are transacted in the London interbank market, then on the next preceding day on which such dealings were transacted in such market.

Option Subordinated Bonds means Subordinated Bonds which by their terms may be tendered by and at the option of the Holder thereof for payment by JEA prior to the stated maturity thereof, or the maturities of which may be extended by and at the option of the Holder thereof.

Refundable Subordinated Principal Installment means any Subordinated Principal Installment for any Series of Subordinated Bonds which JEA intends to pay with moneys which are not Revenues; provided, however, that (i) in the case of Subordinated Bonds other than Commercial Paper Notes or Medium-Term Notes, such intent shall have been expressed in the Supplemental Subordinated Resolution authorizing such Series of Subordinated Bonds, (ii) in the case of Commercial Paper Notes, such intent shall be expressed in the then current Commercial Paper Payment Plan for such Commercial Paper Notes and (iii) in the case of Medium-Term Notes, such intent shall be expressed in the then current Medium-Term Note Payment Plan for such Medium-Term Notes; and provided, further, that such Subordinated Principal Installment shall be a Refundable Subordinated Principal Installment only through the penultimate day of the month preceding the month in which such Principal Installment comes due or such earlier time as JEA no longer intends to pay such Subordinated Principal Installment with moneys which are not Revenues.

Stipulated Interest Rate means, as of any date of determination:

- (i) with respect to (A) any Commercial Paper Notes or Medium-Term Notes or (B) any Variable Rate Subordinated Bonds maturing on a particular date, in either of the foregoing cases, that were, at the date of the original issuance thereof, the subject of a Counsel's Opinion to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the lesser of (1) the average of the Variable Rate Tax-Exempt Index for the five years preceding such date of determination and (2) the average rate of interest borne by such Commercial Paper Notes, Medium-Term Notes, Variable Rate Subordinated Bonds or Water and Sewer System Variable Rate Bonds, as the case may be, for the 12 months preceding such date of determination; *provided*, *however*, if such Commercial Paper Notes, Medium-Term Notes, Variable Rate Subordinated Bonds or Water and Sewer System Variable Rate Bonds, as the case may be, are then being issued or shall not have been Outstanding for 12 months, then the rate of interest determined pursuant to this clause (i) shall be the rate determined pursuant to the foregoing subclause (1) and
- (ii) with respect to (A) any Commercial Paper Notes or Medium-Term Notes or (B) any Variable Rate Subordinated Bonds maturing on a particular date, in either of the foregoing cases, that were not, at the date of the original issuance thereof, the subject of a Counsel's Opinion to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the lesser of (a) the average of the Variable Rate Taxable Index for the five years preceding such date of determination and (b) the average rate of interest borne by such Commercial Paper Notes, Medium-Term Notes, Variable Rate Subordinated Bonds or Water and Sewer System Variable Rate Bonds, as the case may be, for the 12 months preceding such date of determination; *provided*, *however*, if such Commercial Paper Notes, Medium-Term Notes, Variable Rate Subordinated Bonds or Water and Sewer System Variable Rate Bonds, as the case may be, are then being issued or shall not have been Outstanding for 12 months, then the rate of interest determined pursuant to this clause (ii) shall be the rate determined pursuant to the foregoing subclause (a).

Subordinated Bonds means any bonds, notes or other obligations or evidences of indebtedness, as the case may be, authenticated and delivered under and Outstanding pursuant to the Subordinated Water and Sewer System Resolution, which shall constitute "Subordinated Indebtedness," and shall not constitute "Water and Sewer System Bonds," for purposes of the Water and Sewer System Resolution.

Subordinated Debt Service for any period shall mean, as of any date of calculation and with respect to any Series, an amount equal to the sum of:

- (i) interest accruing during such period on the Subordinated Bonds of such Series, except to the extent that such interest is to be paid from the proceeds of Water and Sewer System Bonds, Subordinated Bonds or other evidences of indebtedness of JEA, provided, that in the event that the Subordinated Bonds of any Series (or any portion thereof) shall constitute Build America Bonds, then in respect of the interest payable on such Subordinated Bonds, for purposes of this definition, the interest on the Subordinated Bonds of such Series shall be calculated net of the amount of cash subsidy payments from the U.S. Treasury in respect of the interest payable on such Subordinated Bonds (other than as a result of the U.S. Treasury reducing a particular payment by offsetting an amount due from JEA to it), for purposes of this definition, the interest on the Subordinated Bonds of such Series shall be calculated without regard to such subsidy, and
- (ii) that portion of each Subordinated Principal Installment for such Series which would accrue during such period if such Subordinated Principal Installment were deemed to accrue daily in equal amounts from the next preceding Subordinated Principal Installment due date for

such Series (or, (x) in the case of Subordinated Bonds other than Subordinated Reimbursement Obligations, if (1) there shall be no such preceding Subordinated Principal Installment due date or (2) such preceding Subordinated Principal Installment due date is more than one year prior to the due date of such Subordinated Principal Installment, then, from a date one year preceding the due date of such Subordinated Principal Installment or from the date of issuance of the Subordinated Bonds of such Series, whichever date is later, and (y) in the case of Subordinated Reimbursement Obligations, in accordance with the terms thereof and the Supplemental Subordinated Resolution authorizing such Subordinated Reimbursement Obligations), except to the extent that such Subordinated Principal Installment is paid or to be paid from the proceeds of Water and Sewer System Bonds, Subordinated Bonds or other evidences of indebtedness of JEA.

Such interest and Subordinated Principal Installments for such Series shall be calculated on the assumption that (x) no Subordinated Bonds (except for Option Subordinated Bonds actually tendered for payment prior to the stated maturity thereof and paid, or to be paid, from Revenues) of such Series Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment of each Subordinated Principal Installment on the due date thereof, (y) the principal amount of Option Subordinated Bonds tendered for payment before the stated maturity thereof, and paid, or to be paid, from Revenues, shall be deemed to accrue on the date required to be paid pursuant to such tender and (z) the principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Subordinated Bonds or the Appreciated Value of Water and Sewer System Deferred Income Subordinated Bonds shall be included in the calculation of Subordinated Debt Service at the times and in the manner provided in the Subordinated Water and Sewer System Resolution.

Notwithstanding anything to the contrary contained in the Subordinated Water and Sewer System Resolution, (a) if JEA has in connection with any Subordinated Bonds entered into a Designated Swap Obligation which provides that, in respect of a notional amount equal to the Outstanding principal amount of such Subordinated Bonds, JEA is to pay to a Designated Swap Obligation Provider an amount determined based upon a variable rate of interest and the Designated Swap Obligation Provider is to pay to JEA an amount determined based upon a fixed rate of interest, then, for purposes of calculating Subordinated Debt Service with respect to such Subordinated Bonds for the purposes of the rates, fees and charges covenant of JEA in the Subordinated Water and Sewer System Resolution and the issuance of additional Subordinated Bonds, it will be assumed that such Subordinated Bonds bear interest at a rate equal to the sum of (1) the lesser of (A) the average of the variable rate payable by JEA pursuant to such Designated Swap Obligation for the five years preceding the date of determination, calculating such rate based upon the method, formula or index with respect thereto set forth in such Designated Swap Obligation and (B) the average of the actual rates paid by JEA pursuant to such Designated Swap Obligation for the 12 months preceding such date of determination; provided, however, if such Designated Swap Obligation shall not have been in effect for 12 months, then the rate of interest determined pursuant to this clause (1) shall be the rate determined pursuant to the foregoing subclause (A) and (2) the difference (whether positive or negative) between (X) the fixed rate of interest on such Subordinated Bonds and (Y) the fixed rate of interest payable to JEA pursuant to such Designated Swap Obligation and (b) if JEA has in connection with any Variable Rate Subordinated Bonds, Commercial Paper Notes or Medium-Term Notes entered into a Designated Swap Obligation which provides that, in respect of a notional amount equal to the Outstanding principal amount of such Variable Rate Subordinated Bonds, Commercial Paper Notes or Medium-Term Notes, as the case may be, JEA is to pay to a Designated Swap Obligation Provider an amount determined based upon a fixed rate of interest and the Designated Swap Obligation Provider is to pay to JEA an amount determined based upon a variable rate of interest, then, for purposes of calculating Subordinated Debt Service with respect to such Variable Rate Subordinated Bonds, Commercial Paper Notes or Medium-Term Notes, as the case may be, it will be assumed that such Variable Rate Subordinated Bonds, Commercial Paper Notes or Medium-Term Notes, as applicable, bear interest at the fixed rate of interest payable by JEA pursuant to such Designated Swap Obligation.

Subordinated Debt Service Reserve Requirement as of any date of calculation and with respect to the Initial Subordinated Debt Service Reserve Fund, shall have the meaning assigned to such term in the Third Supplemental Subordinated Water and Sewer System Resolution hereinafter referred to (see "Initial Subordinated Debt Service Reserve Fund" discussion below).

For the purpose of the calculation of the Subordinated Debt Service Reserve Requirement in the event that the Subordinated Bonds of any Series shall constitute Build America Bonds, then until such time. if any, as JEA, for whatever reason, no longer receives cash subsidy payments from the U.S. Treasury in respect of the interest payable on such Subordinated Bonds (other than as a result of the U.S. Treasury reducing a particular payment by offsetting an amount due from JEA to it), the interest on such Subordinated Bonds shall be calculated net of the amount of such subsidy; provided, however, that if at any time the specified percentage of the interest payable on such Subordinated Bonds represented by such subsidy shall be permanently reduced, then the amount of such Subordinated Debt Service Reserve Requirement shall be increased to reflect the amount of interest payable on such Subordinated Bonds that no longer is payable to JEA by the U.S. Treasury, and the amount of such increase shall be required to be funded in equal semiannual installments over a five (5)-year period, with the first such installment becoming due on the first April 1 or October 1 that is at least six (6) months following the date on which such specified percentage is so reduced, except that if at any time from the commencement of such funding, either (x) any of such Subordinated Bonds shall cease to be Outstanding or (y) the amount of such Subordinated Debt Service Reserve Requirement shall be reduced for any reason whatsoever, then the obligation of JEA to make deposits during the balance of such period shall be redetermined (taking into account the amount (if any) of such Subordinated Bonds that remain Outstanding and the amount (if any) of such reduction in such Subordinated Debt Service Reserve Requirement) and the resulting reduction in the amount required to be deposited to the Initial Subaccount shall be evenly apportioned over the remainder of such five (5)-year period and provided, further, that in the event that JEA, for whatever reason, ceases to receive cash subsidy payments from the U.S. Treasury in respect of the interest payable on any such Subordinated Bonds (other than as a result of the U.S. Treasury reducing a particular payment by offsetting an amount due from JEA to it), then the amount of such Subordinated Debt Service Reserve Requirement shall be increased to reflect the full amount of interest payable on such Subordinated Bonds, and such increase shall be required to be funded in equal semiannual installments over a five (5)-year period, with the first such installment becoming due on the first April 1 or October 1 that is at least six (6) months following the date on which JEA does not receive the first such cash subsidy payment that it theretofore was qualified to receive, except that if at any time from the commencement of such funding, either (x) any of such Subordinated Bonds shall cease to be Outstanding or (y) the amount of such Subordinated Debt Service Reserve Requirement shall be reduced for any reason whatsoever, then the obligation of JEA to make deposits during the balance of such period shall be redetermined (taking into account the amount (if any) of such Subordinated Bonds that remain Outstanding and the amount (if any) of such reduction in such Subordinated Debt Service Reserve Requirement) and the resulting reduction in the amount required to be deposited to the Initial Subaccount shall be evenly apportioned over the remainder of such five (5)-vear period. Notwithstanding any other provision of this resolution, any one or more installments of any increase in the Subordinated Debt Service Reserve Requirement with respect to the Initial Subaccount in the Debt Service Reserve Account in the Sinking Fund provided for in the preceding sentence may be prepaid at any time in whole or in part by JEA by designating in JEA's records that such payment(s) is (or are) to be treated as a prepayment.

Subordinated Principal Installment means, as of any date of calculation and with respect to any Series, so long as any Subordinated Bonds thereof are Outstanding, (i) the principal amount of Subordinated Bonds (including, in the case of any Option Subordinated Bond, the principal amount thereof tendered for payment prior to the stated maturity thereof and paid, or to be paid, from Revenues) of such Series due (or so tendered for payment and paid, or to be so paid) on a certain future date for which no Sinking Fund Installments have been established, or (ii) the unsatisfied balance of any Sinking Fund

Installments due on a certain future date for Subordinated Bonds of such Series, plus the amount of the sinking fund redemption premiums, if any, which would be applicable upon redemption of such Subordinated Bonds on such future date in a principal amount equal to said unsatisfied balance of such Sinking Fund Installments, or (iii) if such future dates coincide as to different Subordinated Bonds of such Series, the sum of such principal amount of Subordinated Bonds and of such unsatisfied balance of Sinking Fund Installments due on such future date plus such applicable redemption premiums, if any.

Subordinated Reimbursement Obligations means all Subordinated Bonds issued pursuant to the Subordinated Water and Sewer System Resolution, concurrently with (a) the issuance of the Water and Sewer System Bonds of a Series authorized pursuant to the provisions of the Water and Sewer System Resolution for which Credit Enhancement or liquidity support is being provided with respect to such Water and Sewer System Bonds (or a maturity or maturities or interest rate within a maturity thereof) by a third-party or (b) the issuance of the Subordinated Bonds of a Series authorized pursuant to the provisions of the Subordinated Water and Sewer System Resolution for which Credit Enhancement or liquidity support is being provided with respect to such Subordinated Bonds (or a maturity or maturities or interest rate within a maturity thereof) by a third-party, for the purpose of evidencing JEA's obligation to repay any advances or loans made to, or on behalf of, JEA in connection with such Credit Enhancement or liquidity support, and any Subordinated Bonds thereafter authenticated and delivered in lieu of or in substitution for such Subordinated Bonds.

Subordinated Water and Sewer System Resolution means the Water and Sewer System Subordinated Revenue Bond Resolution, supplemental to the Water and Sewer System Resolution, as from time to time amended or supplemented by Supplemental Subordinated Resolutions in accordance with the terms of the Water and Sewer System Resolution and the terms of the Water and Sewer System Subordinated Revenue Bond Resolution. The Water and Sewer System Subordinated Revenue Bond Resolution shall constitute a "Supplemental Resolution" within the meaning of the Water and Sewer System Resolution.

Supplemental Subordinated Resolution means any resolution supplemental to the Subordinated Water and Sewer System Resolution adopted by JEA in accordance with the Water and Sewer System Resolution and the Subordinated Water and Sewer System Resolution.

*U.S. Treasury* means the U.S. Treasury or any party designated by the federal government to issue cash subsidy payments on Build America Bonds.

Variable Rate Subordinated Bond means any Subordinated Bond not bearing interest throughout its term at a specified rate or specified rates determined at the time of initial issuance of the Series of Subordinated Bonds of which such Subordinated Bond is one.

Variable Rate Taxable Index means the One-Month LIBOR Rate or, if the One-Month LIBOR Rate no longer shall be available, the Alternate Variable Rate Taxable Index.

Variable Rate Tax-Exempt Index means the BMA Municipal Swap Index or, if the BMA Municipal Swap Index no longer shall be available, the Alternate Variable Rate Tax-Exempt Index.

Water and Sewer System Capital Appreciation Subordinated Bonds means any Subordinated Bonds issued under the Subordinated Water and Sewer System Resolution as to which interest is (i) compounded periodically on dates that are specified in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Capital Appreciation Subordinated Bonds and (ii) payable only at the maturity, earlier redemption or other payment thereof pursuant to the Subordinated Water and Sewer System Resolution or the Supplemental Subordinated Resolution authorizing such Water and Sewer System Capital Appreciation Subordinated Bonds.

Water and Sewer System Deferred Income Subordinated Bonds means any Subordinated Bonds issued under the Subordinated Water and Sewer System Resolution as to which interest accruing prior to the Current Interest Commencement Date is (i) compounded periodically on dates specified in the Supplemental Subordinated Resolution authorizing such Water and Sewer System Deferred Income Subordinated Bonds and (ii) payable only at the maturity, earlier redemption or other payment thereof pursuant to the Subordinated Water and Sewer System Resolution or the Supplemental Subordinated Resolution authorizing such Water and Sewer System Deferred Income Subordinated Bonds.

## Pledge

The Subordinated Bonds are special obligations of JEA payable from and secured as to the payment of the principal or Redemption Price, if any, thereof, and interest thereon, in accordance with their terms and the provisions of the Subordinated Water and Sewer System Resolution by (i) the amounts on deposit in the Subordinated Indebtedness Fund established pursuant to the Water and Sewer System Resolution as may from time to time be available therefor, *subject, however*, to the pledge of the Trust Estate created by the Water and Sewer System Resolution as security for the Water and Sewer System Bonds and (ii) amounts on deposit in the Funds established under the Subordinated Water and Sewer System Resolution, subject only to the provisions of the Water and Sewer System Resolution and the Subordinated Water and Sewer System Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Water and Sewer System Resolution and the Subordinated Water and Sewer System Resolution. The Subordinated Bonds shall be "Subordinated Indebtedness" within the meaning of such term contained in the Water and Sewer System Resolution.

# **Deposit of Revenues**

Pursuant to the Subordinated Water and Sewer System Resolution, as soon as practicable in each month following the payment of the Cost of Operation and Maintenance of the Water and Sewer System and the making of all required deposits pursuant to the Water and Sewer System Resolution in respect of debt service on, and required reserves for, the Water and Sewer System Bonds, JEA is to pay out of the Revenue Fund established under the Water and Sewer System Resolution to the extent permitted by the Water and Sewer System Resolution and to the extent that the amount in the Revenue Fund is available therefor and deposit in the Subordinated Indebtedness Fund established pursuant to the Water and Sewer System Resolution (a) in each month such amounts as shall be provided (i) in the then current annual budget or as otherwise determined by JEA to be deposited in the Subordinated Indebtedness Fund for the payment of the principal or sinking fund redemption price, if any, of, and interest on, the Subordinated Bonds and other Subordinated Indebtedness on the next succeeding payment date with respect to such bonds and indebtedness and (ii) in any event, on any date that any principal or sinking fund redemption price, if any, of, and interest on, any Subordinated Bonds or other Subordinated Indebtedness shall become due and payable, an amount which, together with (A) other amounts then on deposit in such Subordinated Indebtedness Fund, including the proceeds of the sale of the Subordinated Bonds or Subordinated Indebtedness (exclusive of amounts, if any, set aside in said Fund for the payment of interest on Subordinated Indebtedness on a future date or as a reserve for the payment of the principal or redemption price, if any, of, and interest on, Subordinated Indebtedness), (B) in the case of Subordinated Bonds of any Series for which a separate fund or account has been established pursuant to the Subordinated Water and Sewer System Resolution, the amounts then on deposit in such separate account (exclusive of amounts, if any, set aside in said fund or account for the payment of interest on the Subordinated Bonds of such Series on a future date) and (C) in the case of any other issue of Subordinated Indebtedness for which a separate fund or account has been established as a source of moneys for the payment of the Subordinated Indebtedness of such issue, the amounts available in such fund or account (exclusive of amounts, if any, set aside in said fund or account for the payment of interest on the Subordinated Indebtedness of such issue on a future date or as a reserve for the payment of the principal or redemption price, if any, of, and interest on,

the Subordinated Indebtedness of such issue), will be sufficient and available to make such payment in full on such payment date.

During any period in which the Subordinated Debt Service with respect to any Series of Subordinated Bonds containing Build America Bonds shall be calculated in the manner provided in the proviso of the first paragraph of the definition thereof, no later than each interest payment date for such Build America Bonds then Outstanding, JEA shall withdraw from the Revenue Fund and transfer to the Subordinated Bond Fund an amount equal to the amount of the cash subsidy payment payable to JEA by the U.S. Treasury in respect of the interest payable on such Build America Bonds on such interest payment date, without regard to any reduction thereto made by the U.S. Treasury for the purpose of offsetting any amount due from JEA to it. Any cash subsidy payment received by JEA from the U.S. Treasury in respect of the interest payable on any Build America Bonds shall be deposited by JEA upon the receipt thereof in the Revenue Fund, but not such payment shall constitute Revenues for any purpose of the Electric System Resolution or this Subordinated Resolution.

#### **Subordinated Indebtedness Fund**

Subject to the provisions of the Water and Sewer System Resolution, amounts in the Subordinated Indebtedness Fund shall be applied to the payment of the principal or sinking fund Redemption Price, if any, of, and interest on, the Subordinated Bonds. In addition, JEA may apply such amounts to the purchase or redemption of Subordinated Bonds to satisfy sinking fund requirements.

The Subordinated Water and Sewer System Resolution also provides that, in the event of the refunding or defeasance of any Subordinated Bonds, JEA may withdraw from the Subordinated Indebtedness Fund all or any portion of the amounts accumulated therein and deposit such amounts with the Escrow Agent for the Subordinated Bonds being refunded or defeased to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Subordinated Bonds being refunded or defeased; provided, however, that such withdrawal shall not be made unless (a) immediately thereafter the Subordinated Bonds being refunded or defeased shall be deemed to have been paid pursuant to the provisions of the Subordinated Water and Sewer System Resolution, and (b) the amount remaining in the Subordinated Indebtedness Fund, after giving effect to the issuance of any obligations being issued to refund any Subordinated Bonds being refunded and the disposition of the proceeds thereof, shall not be less than the requirement of such Account. In the event of such refunding or defeasance, JEA may also withdraw from the Subordinated Indebtedness Fund all or any portion of the amounts accumulated therein and deposit such amounts in any Fund or Account under the Water and Sewer System Resolution or any fund or account established thereunder; provided, however, that such withdrawal shall not be made unless items (a) and (b) referred to hereinabove have been satisfied; and provided, further, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held under the Water and Sewer System Resolution or any fund or account held under the Subordinated Water and Sewer System Resolution.

## **Subordinated Bond Construction Fund**

The Subordinated Water and Sewer System Resolution establishes a Subordinated Bond Construction Fund into which shall be deposited the amount required to be paid by the provisions of any Supplemental Subordinated Resolution and as may be paid into the Subordinated Bond Construction Fund, at the option of JEA, any moneys received for or in connection with the Water and Sewer System by JEA from any other source, unless required to be otherwise applied as provided by the Water and Sewer System Resolution or the Subordinated Water and Sewer System Resolution. Amounts on deposit in the Subordinated Bond Construction Fund shall be withdrawn, used and applied by JEA solely for the payment of costs of the Water and Sewer System or any other lawful purpose of JEA relating to the Water and Sewer System.

#### **Subordinated Bond Rate Stabilization Fund**

The Subordinated Water and Sewer System Resolution establishes a Subordinated Bond Stabilization Fund. As soon as practicable in each month following the application of Revenues to make the deposits required by the Water and Sewer System Resolution, but in any case not later than the last day of such month, JEA shall pay out of the amounts remaining in the Revenue Fund to the extent permitted by the Water and Sewer System Resolution, and to the extent that the amount in the Revenue Fund is available therefor, for deposit into the Subordinated Bond Rate Stabilization Fund, the amount, if any, budgeted for deposit into such Fund for the then current month as set forth in the then current annual budget, or the amount otherwise determined by JEA to be deposited to such Fund for the month.

Each month JEA shall transfer from the Subordinated Bond Rate Stabilization Fund to the Subordinated Indebtedness Fund the amount budgeted for transfer into such Fund for the then current month as set forth in the then current annual budget, or the amount otherwise determined by JEA to be deposited into such Fund for the month. JEA may also from time to time withdraw amounts currently on deposit in the Subordinated Bond Rate Stabilization Fund and (i) transfer such amounts to any other Fund or Account established under the Water and Sewer System Resolution or any fund or account established under the Subordinated Water and Sewer System Resolution, (ii) use such amounts to purchase or redeem Water and Sewer System Bonds or Subordinated Bonds, (iii) use such amounts to otherwise provide for the payment of Water and Sewer System Bonds or Subordinated Bonds or (iv) use such amounts for any lawful purpose of JEA relating to the Water and Sewer System. If JEA determines that amounts on deposit in the Subordinated Bond Rate Stabilization Fund are to be used to pay the principal or Redemption Price of, or interest on, or to otherwise provide for the payment of, Water and Sewer System Bonds or Subordinated Bonds, JEA may designate the particular Water and Sewer System Bonds or Subordinated Bonds for which such amounts are to be so used, and such amounts shall, subject only to the other provisions of the Subordinated Water and Sewer System Resolution permitting or requiring the application thereof, be used for such purpose.

At any time and from time to time JEA may transfer for deposit in the Subordinated Bond Rate Stabilization Fund from any source such amounts as JEA deems necessary or desirable; such amounts shall be applied for purposes of the Subordinated Bond Rate Stabilization Fund in accordance with the preceding paragraph.

Notwithstanding anything to the contrary contained in the Subordinated Water and Sewer System Resolution, whenever the amounts available therefor under the Water and Sewer System Resolution shall not be sufficient to pay the principal or Redemption Price of, or interest on, the Water and Sewer System Bonds then due, JEA shall withdraw from the Subordinated Bond Rate Stabilization Fund an amount equal to the amount of such deficiency (or the entire amount on deposit therein, if less than the amount of such deficiency), and shall deposit such amount in the Debt Service Fund established under the Water and Sewer System Resolution.

## **Establishment of Additional Funds**

If and to the extent provided in a Supplemental Subordinated Resolution, JEA may establish one or more additional funds or accounts with respect to the Subordinated Bonds of one or more Series as shall be specified in such Supplemental Subordinated Resolution and, if and to the extent provided in any such Supplemental Subordinated Resolution, amounts on deposit in any such fund or account, including the investments, if any, thereof may be pledged for the payment of the principal or Redemption Price, if any, of, and interest on, any or all of such Subordinated Bonds. In such event, deposits to and withdrawals from any such fund or account shall be governed by the provisions of such Supplemental Subordinated Resolution; *provided*, *however*, that in the event that any such Supplemental Subordinated Resolution shall provide for the deposit of Revenues into any such fund or account, such deposit shall not be made in any

month until after the deposits required pursuant to the provisions of the Water and Sewer System Resolution shall have been made for such month, and such deposits shall be made pro rata with the deposits of Revenues to the Subordinated Bond Rate Stabilization Fund provided for in the provisions of the Subordinated Water and Sewer System Resolution; and *provided*, *further*, that if the amount on deposit in the Revenue Fund shall not be sufficient to make all such deposits so required to be made with respect to all such funds and accounts in any month, then such amount on deposit in the Revenue Fund shall be applied ratably, in proportion to the amount necessary for deposit into each such fund and account.

### **Initial Subordinated Debt Service Reserve Fund**

Pursuant to the Third Supplemental Water and Sewer System Revenue Subordinated Bond Resolution adopted by JEA on July 15, 2003 (the "Third Supplemental Subordinated Water and Sewer System Resolution"), authorizing JEA's Water and Sewer System Subordinated Revenue Bonds, 2003 Series C (the "2003 Series C Subordinated Bonds") JEA established an additional fund under the Subordinated Water and Sewer System Resolution, the "Initial Subordinated Debt Service Reserve Fund." The 2003 Series C Subordinated Bonds were additionally secured by amounts on deposit in the Initial Subordinated Debt Service Reserve Fund, including the investments and investment income, if any, thereof, which amounts were pledged as additional security for the payment of the principal or sinking fund redemption price of, and interest on, the 2003 Series C Subordinated Bonds, subject only to the provisions of the Water and Sewer System Resolution and the Subordinated Water and Sewer System Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Water and Sewer System Resolution and the Subordinated Water and Sewer System Resolution. The Initial Subordinated Debt Service Reserve Fund may, at the option of JEA, secure additional Subordinated Bonds of any series thereafter issued. As of the date of the Annual Disclosure Report to which this Appendix is attached, the Initial Subordinated Debt Service Reserve Fund also secures JEA's Water and Sewer System Subordinated Revenue Bonds, 2010 Series A, 2010 Series B, 2012 Series A, 2012 Series B, 2013 Series A and 2017 Series A.

Pursuant to the Subordinated Water and Sewer System Resolution, the Subordinated Bonds of any series are not required to be additionally secured by amounts on deposit in the Initial Subordinated Debt Service Reserve Fund. However, JEA may provide, at its option, in the Supplemental Subordinated Resolution authorizing the Subordinated Bonds of any series that the Subordinated Bonds of such series will be additionally secured by amounts on deposit in any Initial Subordinated Debt Service Reserve Fund. In the event that the Subordinated Bonds of a series hereafter issued are to be additionally secured by amounts on deposit in the Initial Subordinated Debt Service Reserve Fund, it will be a condition to the issuance of such Subordinated Bonds that the amount on deposit in the Initial Subordinated Debt Service Reserve Fund, after giving effect to the issuance of such Subordinated Bonds, equals the Subordinated Debt Service Reserve Requirement.

The Subordinated Water and Sewer System Resolution requires JEA to deposit and maintain in the Initial Subordinated Debt Service Reserve Fund moneys, Investment Securities and/or reserve fund credit instruments (hereinafter defined) in an amount equal to the Subordinated Debt Service Reserve Requirement. The Subordinated Debt Service Reserve Requirement for the Initial Subordinated Debt Service Reserve Fund is defined in the Third Supplemental Subordinated Water and Sewer System Resolution, as of any date of calculation, as an amount equal to the lowest of (a) ten percent of the original principal amount of the Subordinated Bonds of all issues (as defined for federal income tax purposes) secured thereby (or, if the Subordinated Bonds of any such issue are issued at an issue price (as computed for federal income tax purposes) of greater than 102 percent or less than 98 percent of the principal amount thereof, ten percent of such issue price), (b) the maximum Aggregate Subordinated Debt Service on the Subordinated Bonds of all series secured thereby then outstanding for the current or any future Bond Year (excluding interest (other than accrued interest paid in connection with the initial issuance thereof) on such Subordinated Bonds to be paid from deposits in the Subordinated Indebtedness Fund made from the

proceeds of Subordinated Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA) or (c) 125 percent of the average annual Subordinated Debt Service on the Subordinated Bonds of all series secured thereby then outstanding for the then current and each future Bond Year (excluding interest (other than accrued interest paid in connection with the initial issuance thereof) on such Subordinated Bonds to be paid from deposits in the Subordinated Indebtedness Fund made from the proceeds of Subordinated Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); provided, however, that in no event may an increase in the Subordinated Debt Service Reserve Requirement for the Initial Subordinated Debt Service Reserve Fund resulting from the issuance of an additional issue (as defined for federal income tax purposes) of Subordinated Bonds exceed ten percent of the original principal amount of the Subordinated Bonds of such issue (or, if the Subordinated Bonds of such issue are issued at an issue price (as computed for federal income tax purposes) of greater than 102 percent or less than 98 percent of the principal amount thereof, ten percent of such issue price).

Amounts in the Initial Subordinated Debt Service Reserve Fund in excess of the Subordinated Debt Service Reserve Requirement, after giving effect to any reserve fund credit instrument, will be credited to the Revenue Fund.

The Third Supplemental Subordinated Water and Sewer System Resolution provides that in lieu of maintaining moneys or investments in the Initial Subordinated Debt Service Reserve Fund, JEA at any time may cause to be deposited therein for the benefit of the Holders of the Subordinated Bonds secured thereby an irrevocable surety bond, an insurance policy or a letter of credit satisfying the conditions set forth therein (a "reserve fund credit instrument"), in an amount equal to the difference between the Subordinated Debt Service Reserve Requirement and the sums of money or value of Investment Securities then on deposit in the Initial Subordinated Debt Service Reserve Fund, if any. The following is a summary of the provisions of the Third Supplemental Subordinated Water and Sewer System Resolution relating to the deposit of reserve fund credit instruments to the Initial Subordinated Debt Service Reserve Fund:

- (a) A surety bond or insurance policy issued by a company (a "municipal bond insurer") licensed to issue an insurance policy guaranteeing the timely payment of debt service on the Subordinated Bonds that are additionally secured by the Initial Subordinated Debt Service Reserve Fund (the "Initial Subordinated Debt Service Reserve Fund Additionally Secured Bonds") may be deposited in the Initial Subordinated Debt Service Reserve Fund to meet the Subordinated Debt Service Reserve Requirement or if the claims paying ability of the issuer thereof shall be rated "AAA" or "Aaa" by Standard & Poor's Credit Market Services, a business of Standard & Poor's Financial Services LLC, a limited liability company, organized and existing under the laws of the State of Delaware ("S&P"), or Moody's Investors Service ("Moody's"), respectively.
- (b) An unconditional irrevocable letter of credit issued by a bank may be deposited in the Initial Subordinated Debt Service Reserve Fund if the issuer thereof is rated at least "AA" by S&P and if such letter of credit shall be payable in one or more draws upon presentation by the beneficiary thereof of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal or interest on the Subordinated Bonds secured by the Initial Subordinated Debt Service Reserve Fund. The draws shall be payable within two days of presentation of the sight draft. The letter of credit shall be for a term of not less than three years. The issuer of the letter of credit shall be required to notify JEA and the beneficiary thereof, not later than 30 months prior to the stated expiration date of the letter of credit, as to whether such expiration date shall be extended, and if so, shall indicate the new expiration date.

- shall deposit in the Initial Subordinated Debt Service Reserve Fund an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subordinated Debt Service Reserve Fund, together with any other qualifying reserve fund credit instruments, to equal the Subordinated Debt Service Reserve Requirement, such deposit to be paid in equal installments on at least a semi-annual basis over the remaining term of the letter of credit, unless the reserve fund credit instrument is replaced by a reserve fund credit instrument meeting the requirements in either of clauses (a) or (b) above. The letter of credit shall permit a draw in full not less than two weeks prior to the expiration or termination of such letter of credit shall draw upon the letter of credit prior to its expiration or termination unless an acceptable replacement is in place or the Initial Subordinated Debt Service Reserve Fund is fully funded in its required amount.
- The obligation to reimburse the issuer of a reserve fund credit instrument for any fees, expenses, claim or draws upon such reserve fund credit instrument shall be subordinate to the payment of debt service on the Subordinated Bonds. Subject to the second and third succeeding sentences, the right of the issuer of a reserve fund credit instrument to payment or reimbursement for claims or draws under such reserve fund credit instrument and to payment or reimbursement of its fees and expenses shall be on a parity with the cash replenishment of the Initial Subordinated Debt Service Reserve Fund. The reserve fund credit instrument shall provide for a revolving feature under which the amount available thereunder will be reinstated to the extent of any reimbursement of draws or claims paid. If the revolving feature is suspended or terminated for any reason, the right of the issuer of the reserve fund credit instrument to reimbursement will be subordinated to cash replenishment of the Initial Subordinated Debt Service Reserve Fund to an amount equal to the difference between the full original amount available under the reserve fund credit instrument and the amount then available for further draws or claims. If (i) the issuer of a reserve fund credit instrument becomes insolvent or (ii) the issuer of a reserve fund credit instrument defaults in its payment obligations thereunder or (iii) the claimspaying ability of the issuer of the insurance policy or surety bond falls below a S&P "AAA" or a Moody's "Aaa" or (iv) the rating of the issuer of the letter of credit falls below a S&P "AA", the obligation to reimburse the issuer of the reserve fund credit instrument shall be subordinate to the cash replenishment of the Initial Subordinated Debt Service Reserve Fund.
- (e) If (i) the revolving reinstatement feature described in the preceding clause (d) is suspended or terminated or (ii) the rating of the claims paying ability of the issuer of the surety bond or insurance policy falls below a S&P "AAA" or a Moody's "Aaa" or (iii) the rating of the issuer of the letter of credit falls below a S&P "AA", JEA shall either (X) deposit into the Initial Subordinated Debt Service Reserve Fund an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subordinated Debt Service Reserve Fund to equal the Subordinated Debt Service Reserve Requirement, such amount to be paid over the ensuing five years in equal installments deposited at least semi-annually or (Y) replace such instrument with a surety bond, insurance policy or letter of credit meeting the requirements in either of clauses (a) or (b) above within six months of such occurrence. In the event (1) the rating of the claims-paying ability of the issuer of the surety bond or insurance policy falls below "A" or (2) the rating of the issuer of the letter of credit falls below "A" or (3) the issuer of the reserve fund credit instrument defaults in its payment obligations or (4) the issuer of the reserve fund credit instrument becomes insolvent, JEA shall either (X) deposit into the Initial Subordinated Debt Service Reserve

Fund an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subordinated Debt Service Reserve Fund to equal to Subordinated Debt Service Reserve Requirement, such amount to be paid over the ensuing year in equal installments on at least a monthly basis or (Y) replace such instrument with a surety bond, insurance policy or letter of credit meeting the requirements in either of clauses (a) or (b) above within six months of such occurrence. Where applicable, the amount for draws or claims under the reserve fund credit instrument may be reduced by the amount of cash or value of Investment Securities deposited in the Initial Subordinated Debt Service Reserve Fund pursuant to clause (X) of the penultimate sentence of this clause (e).

- (f) In the event that a reserve fund credit instrument shall be deposited into the Initial Subordinated Debt Service Reserve Fund as aforesaid, any amounts owed by JEA to the issuer of such reserve fund credit instrument as a result of a draw thereon or a claim thereunder, as appropriate, shall be included in any calculation of debt service requirements required to be made pursuant to the Subordinated Water and Sewer System Resolution for purposes of the additional bonds test and rate covenant contained in the Subordinated Water and Sewer System Resolution.
- (g) The beneficiary of any reserve fund credit instrument shall ascertain the necessity for a claim or draw upon such reserve fund credit instrument and provide notice to the issuer of the reserve fund credit instrument in accordance with its terms not later than three days (or such longer period as may be necessary depending on the permitted time period for honoring a draw under the reserve fund credit instrument) prior to each interest payment date for the Subordinated Bonds of any Series additionally secured by the Initial Subordinated Debt Service Reserve Fund.
- (h) Cash on deposit in the Initial Subordinated Debt Service Reserve Fund shall be used (or investments purchased with such cash shall be liquidated and the proceeds applied as required) prior to any drawing on any reserve fund credit instrument. If and to the extent that more than one reserve fund credit instrument is deposited in the Initial Subordinated Debt Service Reserve Fund, drawings thereunder and repayments of costs associated therewith shall be made on a pro rata basis, calculated by reference to the maximum amounts available thereunder.

On April 8, 2004, simultaneously with the issuance of JEA's Water and Sewer System Subordinated Revenue Bonds, 2004 Series A, JEA caused FGIC to issue its Municipal Bond Debt Service Reserve Fund Policy (the "FGIC Subordinated Reserve Policy") for deposit to the credit of the Initial Subordinated Debt Service Reserve Fund. The FGIC Subordinated Reserve Policy is in the amount of \$2,292,670.54, is non-cancelable, terminates on October 1, 2034 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Third Supplemental Subordinated Water and Sewer System Resolution at the time of its deposit to the Initial Subordinated Debt Service Reserve Fund. Because of a rating downgrade of FGIC, JEA has made deposits to the Initial Subordinated Debt Service Reserve Fund in the amount of the FGIC Subordinated Reserve Policy.

On September 22, 2004, simultaneously with the issuance of JEA's Water and Sewer System Subordinated Revenue Bonds, 2004 Series B, JEA caused Assured Guaranty Municipal Corp., previously known as Financial Security Assurance Inc. ("FSA") to issue its Debt Service Reserve Insurance Policy (the "FSA Subordinated Reserve Policy") for deposit to the credit of the Initial Subordinated Debt Service Reserve Fund. The FSA Subordinated Reserve Policy is in the amount of \$1,076,155.73, is non-cancelable, terminates on October 1, 2025 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Third Supplemental Subordinated Water and Sewer System Resolution at the time of its deposit to the Initial Subordinated Debt Service Reserve Fund. Because of a rating

downgrade of FSA, JEA has made deposits to the Initial Subordinated Debt Service Reserve Fund in the amount of the FSA Subordinated Reserve Policy.

On June 6, 2005, JEA caused MBIA Insurance Corporation ("MBIA") to issue its Debt Service Reserve Surety Bond (the "Initial MBIA Subordinated Surety Bond") for deposit to the credit of the Initial Subordinated Debt Service Reserve Fund. The Initial MBIA Subordinated Surety Bond is in the amount of \$3,957,054.21, is non-cancelable, terminates on October 1, 2043 and satisfied the requirements with respect to a reserve fund credit instrument contained in the Third Supplemental Subordinated Water and Sewer System Resolution at the time of its deposit to the Initial Subordinated Debt Service Reserve Fund.

On May 25, 2006, simultaneously with the issuance of JEA's Water and Sewer System Subordinated Revenue Bonds, 2006 Series A (the "2006 Series A Bonds"), JEA caused MBIA to issue an additional Debt Service Reserve Surety Bond (the "Second MBIA Subordinated Surety Bond") for deposit to the credit of the Initial Subordinated Debt Service Reserve Fund. The Second MBIA Subordinated Surety Bond is in the amount of \$977,475.00, is non-cancelable, terminates on October 1, 2036 (or upon the earlier retirement of all of the 2006 Series A Bonds) and satisfied the requirements with respect to a reserve fund credit instrument contained in the Third Supplemental Subordinated Water and Sewer System Resolution at the time of its deposit to the Initial Subordinated Debt Service Reserve Fund.

Effective as of January 1, 2009, MBIA Inc., parent company of MBIA, restructured MBIA; such restructuring involved the reinsurance and assignment of MBIA's obligations under the Initial MBIA Subordinated Surety Bond and the Second MBIA Subordinated Surety Bond (collectively, the "MBIA Surety Bonds") to National Public Finance Guarantee Corporation ("NPFGC") which is a subsidiary of MBIA Inc. Because of a rating downgrade of MBIA, JEA has made deposits to the Initial Subordinated Debt Service Reserve Fund in the amount of the MBIA Surety Bonds.

## **Additional Subordinated Bonds; Conditions to Issuance**

JEA may issue additional Subordinated Bonds for any lawful purpose of the Water and Sewer System, including providing funds for the refunding of Outstanding Water and Sewer System Bonds or Outstanding Subordinated Bonds and evidencing JEA's obligation to repay any advances or loans made to, or on behalf of, JEA in connection with Credit Enhancement or liquidity support. All such additional Subordinated Bonds will be payable from amounts on deposit in the Subordinated Indebtedness Fund and secured thereby on a parity with all other Subordinated Bonds. Set forth below are certain conditions applicable to the issuance of additional Subordinated Bonds. The Subordinated Water and Sewer System Resolution provides that a Series of Subordinated Bonds may be issued at one time or from time to time. If the Subordinated Bonds of a Series are to be issued from time to time, the Subordinated Water and Sewer System Resolution requires that the conditions set forth below be satisfied only prior to the issuance of the first Subordinated Bonds of such Series to be issued.

Debt Service Coverage Test: The issuance of any Series of additional Subordinated Bonds (except for Refunding Subordinated Bonds and Subordinated Reimbursement Obligations) is conditioned upon the delivery by an Authorized Officer of JEA of a certificate to the effect that either (a) the difference between Net Revenues and Capacity Charges for each of the three full Bond Years succeeding the date of issuance of the Subordinated Bonds of the Series with respect to which such certificate is being given, as such Net Revenues and Capacity Charges are estimated in accordance with the Subordinated Water and Sewer System Resolution, are at least equal to the sum of (i) the Adjusted Aggregate Debt Service for each such Bond Year, (ii) 120 percent of the Adjusted Aggregate Subordinated Debt Service for each such Bond Year and (iii) all amounts payable by JEA for each such Bond Year with respect to all Existing Parity Subordinated Indebtedness and any Additional Parity Subordinated Indebtedness, or (b) the Net Revenues for any 12 consecutive month period within the 24 consecutive months immediately preceding the date of issuance of the Subordinated Bonds of the Series with respect to which such certificate is being given is at

least equal to the greater of (X) the sum of (i) the Average Annual Adjusted Aggregate Debt Service, (ii) 110 percent of the Average Annual Adjusted Aggregate Subordinated Debt Service and (iii) all amounts payable by JEA during such 12 month period with respect to all Existing Parity Subordinated Indebtedness and any Additional Parity Subordinated Indebtedness and (Y) the sum of (i) the Average Annual Adjusted Aggregate Debt Service, (ii) the Average Annual Adjusted Aggregate Subordinated Debt Service, (iii) all amounts payable by JEA during such 12 month period with respect to all Existing Parity Subordinated Indebtedness and any Additional Parity Subordinated Indebtedness and (iv) the amount most recently determined to be required to be deposited in the Renewal and Replacement Fund for the then current, or a previous, Fiscal Year.

**No Default:** In addition, additional Subordinated Bonds (except for Refunding Subordinated Bonds and Subordinated Reimbursement Obligations) may be issued only if an Authorized Officer of JEA certifies that upon the issuance of such Series JEA will not be in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Water and Sewer System Resolution or in the Subordinated Water and Sewer System Resolution.

# Redemption

In the case of any redemption of Subordinated Bonds, JEA shall give written notice to the Subordinated Bond Registrar(s) therefor and the Subordinated Bond Paying Agents of the redemption date, of the Series, and of the principal amounts of the Subordinated Bonds of each maturity of such Series and of the Subordinated Bonds of each interest rate within a maturity to be redeemed (which Series, maturities, interest rates within a maturity and principal amounts thereof to be redeemed shall be determined by JEA in its sole discretion, subject to any limitations with respect thereto contained in the Subordinated Water and Sewer System Resolution or any Supplemental Subordinated Resolution authorizing the Series of which such Subordinated Bonds are a part). Such notice shall be filed with such Subordinated Bond Registrars and the Subordinated Bond Paying Agents for the Subordinated Bonds to be redeemed at least 35 days prior to the redemption date (or such shorter period (a) as may be specified in the Supplemental Subordinated Resolution authorizing the Series of the Subordinated Bonds to be redeemed or (b) as shall be acceptable to such Subordinated Bond Registrars and Subordinated Bond Paying Agents). In the event notice of redemption shall have been given, and unless such notice shall have been revoked or shall cease to be in effect in accordance with the terms thereof, there shall be paid on or prior to the redemption date to the appropriate Subordinated Bond Paying Agents an amount which, in addition to other moneys, if any, available therefor held by such Subordinated Bond Paying Agents, will be sufficient to redeem on the redemption date at the Redemption Price thereof, plus interest accrued and unpaid to the redemption date, all of the Subordinated Bonds to be redeemed.

## **Rate Covenant**

Under the Subordinated Water and Sewer System Resolution, JEA shall at all times fix, establish, maintain, charge and collect rates, fees and charges for the use or the sale of the output, capacity or service of the Water and Sewer System which shall be sufficient to provide Revenues in each Bond Year in an amount at least equal to the amount required to satisfy either clause (i) or clause (ii) below:

(i) the difference between (a) Net Revenues in each Bond Year and (b) Capacity Charges in such Bond Year shall be at least equal to the sum of (X) the Aggregate Debt Service for such Bond Year; *provided*, *however*, that any Principal Installment which is a Refundable Principal Installment may be excluded from Aggregate Debt Service for purposes of the foregoing but only to the extent that JEA intends to pay such Principal Installment from sources other than Revenues, (Y) the Aggregate Subordinated Debt Service for such Bond Year; *provided*, *however*, that any Subordinated Principal Installment which is a Refundable Subordinated Principal Installment may be

excluded from Aggregate Subordinated Debt Service for purposes of the foregoing but only to the extent that JEA intends to pay such Subordinated Principal Installment from sources other than Revenues and (Z) all amounts payable by JEA during such Bond Year with respect to all Existing Parity Subordinated Indebtedness and any Additional Parity Subordinated Indebtedness; or

(ii) Net Revenues in each Bond Year shall be at least equal to the sum of (X) the Aggregate Debt Service for such Bond Year; provided, however, that any Principal Installment which is a Refundable Principal Installment may be excluded from Aggregate Debt Service for purposes of the foregoing but only to the extent that JEA intends to pay such Principal Installment from sources other than Revenues, (Y) 120 percent of the Aggregate Subordinated Debt Service for such Bond Year; provided, however, that any Subordinated Principal Installment which is a Refundable Subordinated Principal Installment may be excluded from Aggregate Subordinated Debt Service for purposes of the foregoing but only to the extent that JEA intends to pay such Subordinated Principal Installment from sources other than Revenues and (Z) all amounts payable by JEA during such Bond Year with respect to all Existing Parity Subordinated Indebtedness and any Additional Parity Subordinated Indebtedness.

#### **Creations of Liens**

JEA will not issue any bonds, notes, debentures or other evidences of indebtedness of similar nature, other than the Water and Sewer System Bonds and the Subordinated Bonds, payable out of or secured by a security interest in or pledge of the Subordinated Indebtedness Fund, including the funds, moneys and securities contained therein; *provided*, *however*, that nothing contained in the Subordinated Water and Sewer System Resolution shall prevent JEA from issuing or incurring, if and to the extent permitted by law and the Water and Sewer System Resolution, (a) Additional Parity Subordinated Indebtedness and (b) Subordinated Indebtedness that is expressly made subordinate in right of payment to the Subordinated Bonds and for which any pledge of such amounts in the Subordinated Indebtedness Fund as may from time to time be available therefor shall be, and shall be expressed to be, subordinate in all respects to the pledge and lien created under the Subordinated Water and Sewer System Resolution as security for the Subordinated Bonds.

# Amendment of Subordinated Water and Sewer System Resolution

The Subordinated Water and Sewer System Resolution and the rights and obligations of JEA and of the Holders of the Subordinated Bonds may be amended by a Supplemental Subordinated Resolution, with the written consent (i) of the Holders of not less than a majority in principal amount of the Subordinated Bonds affected by such modification or amendment and (ii) in case the modification or amendment changes the terms of any Sinking Fund Installment, of the Holders of not less than a majority in principal amount of the Subordinated Bonds of the particular Series and maturity entitled to such Sinking Fund Installment No such modification or amendment may (A) permit a change in the terms of redemption or maturity of the principal of any Outstanding Subordinated Bond or of any installment of interest thereon or a reduction in the principal amount, Redemption Price or rate of interest thereon without the consent of each affected Holder, or (B) reduce the percentages or otherwise affect the classes of Subordinated Bonds the consent of the Holders of which is required to effect any such modification or amendment. For purposes of the foregoing, (a) a change in the terms of redemption of any Outstanding Subordinated Bond shall be deemed only to affect such Subordinated Bond, and shall be deemed not to affect any other Subordinated Bond and (b) the Holders of Subordinated Bonds may include the initial Holders thereof, regardless of whether such Subordinated Bonds are being held for resale.

The Subordinated Water and Sewer System Resolution provides that, if not in default in respect of any of its obligations with respect to Credit Enhancement for Subordinated Bonds of a Series, or a maturity within a Series, the Credit Enhancer for, and not the actual Holders of, Subordinated Bonds of a Series, or a maturity within a Series, for which such Credit Enhancement is being provide will be deemed to be the Holder of such Subordinated Water and Sewer System Bonds of any Series, or a maturity within a Series, at all times for the purpose of giving any approval or consent to the effectiveness of any Supplemental Subordinated Resolution or any amendment, change or modification of the Subordinated Water and Sewer System Resolution which requires the written approval or consent of Holders, except that the foregoing provisions will not apply to any change in the terms of redemption or maturity of the principal of any Outstanding Subordinated Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon, or shall reduce the percentages or otherwise affect the classes of Subordinated Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. See "Action by Credit Enhancer When Action by Holders of Subordinated Bonds Required" herein.

The Supplemental Subordinated Resolutions authorizing JEA's Variable Rate Water and Sewer System Subordinated Revenue Bonds, 2008 Series A and 2008 Series B (collectively, the "Prior Series Variable Rate Water and Sewer System Subordinated Bonds") provide that in the event that JEA shall adopt any Supplemental Subordinated Resolution making any amendment to the Subordinated Water and Sewer System Resolution for which the consent of the Holders of the Prior Series Variable Rate Water and Sewer System Subordinated Bonds of a particular Series shall be required (hereinafter in this paragraph referred to as an "Amending Resolution"), an authorized officer of JEA may deliver to the Tender Agent for the Prior Series Variable Rate Water and Sewer System Subordinated Bonds of such Series a certificate requiring that the Prior Series Variable Rate Water and Sewer System Subordinated Bonds of such Series be subject to mandatory tender for purchase at the time and in the manner provided in said Supplemental Subordinated Resolutions. Following the date on which such mandatory tender shall occur, all subsequent Holders of the Prior Series Variable Rate Water and Sewer System Subordinated Bonds of such Series shall be deemed to have consented to such Amending Resolution, notwithstanding anything to the contrary contained in the Subordinated Water and Sewer System Resolution. JEA intends to include this provision in each Supplemental Subordinated Resolution it may adopt in the future authorizing the issuance of any Series of additional Variable Rate Subordinated Bonds.

Without the consent of the Holders of the Subordinated Bonds, JEA may adopt a Supplemental Subordinated Resolution which (i) closes the Subordinated Water and Sewer System Resolution against, or provides additional conditions to, the issuance of Subordinated Bonds or other evidences of indebtedness; (ii) adds covenants and agreements of JEA; (iii) adds limitations and restrictions to be observed by JEA; (iv) authorizes Subordinated Bonds of an additional Series; (v) provides for the issuance of Subordinated Bonds in coupon form payable to bearer or in uncertificated form; and makes any modification which is to be effective only after all Subordinated Bonds of each Series Outstanding as of the date of the adoption of such Supplemental Subordinated Resolution cease to be Outstanding.

#### **Defeasance**

The pledge of moneys and securities created by the Subordinated Water and Sewer System Resolution and all covenants, agreements and other obligations of JEA to the Holders of Subordinated Bonds will cease, terminate and become void and be discharged and satisfied whenever all Subordinated Bonds and interest due or to become due thereon are paid in full. If any Subordinated Bonds are paid in full, such Subordinated Bonds shall cease to be entitled to any lien, benefit or security under the Subordinated Water and Sewer System Resolution, and all covenants, agreements and obligations of JEA to the Holders of such Subordinated Bonds will cease, terminate and become void and be discharged and satisfied. Subordinated Bonds are deemed to have been paid and are not entitled to the lien, benefit and

security of the Subordinated Water and Sewer System Resolution whenever the following conditions (or such other conditions as may be set forth in the Supplemental Subordinated Resolution authorizing such Subordinated Bonds) are met: (i) in case any Subordinated Bonds are to be redeemed prior to their maturity, JEA has given to the Escrow Agent therefor instructions to give notice of redemption therefor, (ii) there has been deposited with such Escrow Agent either moneys or Defeasance Securities the principal of and interest on which when due will provide moneys which, together with other moneys, if any, also deposited, will be sufficient to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on such Subordinated Bonds, and (iii) in the event such Subordinated Bonds are not to be redeemed or paid at maturity within the next succeeding 60 days, JEA has given such Escrow Agent instructions to give a notice to the Holders of such Subordinated Bonds that the above deposit has been made and that such Subordinated Bonds are deemed to have been paid and stating the maturity or redemption date upon which moneys are expected to be available for the payment of the principal or Redemption Price, if applicable, on said Subordinated Bonds.

In addition, any Outstanding Subordinated Bonds shall, prior to the maturity or redemption date thereof, be deemed to have been paid if (a) there shall have been deposited with the Escrow Agent therefor, Water and Sewer System Bonds issued pursuant to Article II of the Water and Sewer System Resolution of the type described in Section 12.01, subsection 1 of the Subordinated Water and Sewer System Resolution (hereinafter, "Senior Bonds"), (b) in the event said Subordinated Bonds do not by their terms mature within the next succeeding 60 days, JEA shall have given such Escrow Agent in form satisfactory to it instructions to give, as soon as practicable, by first-class mail, postage paid, to the Holders of such Subordinated Bonds at their last addresses appearing on the books of JEA kept at the office of the Subordinated Bond Registrar(s) therefor a notice that the deposit required by clause (a) above has been made with such Escrow Agent and that said Subordinated Bonds are deemed to have been paid and (c) JEA and such Escrow Agent shall have entered into an agreement in writing whereby such Escrow Agent agrees, among other things, to perform the duties required to be performed by it set forth in the Water and Sewer System Resolution. Senior Bonds deposited for purposes of clause (a) above (i) shall be payable to such Escrow Agent as the registered owner thereof, (ii) shall provide, with respect to the giving of any notice by or on behalf of JEA, for the giving of such notice to such Escrow Agent no later than 2 business days prior to the earliest date required or permitted under the Subordinated Water and Sewer System Resolution for the giving of notice of the corresponding event with respect to the Subordinated Bonds, (iii) shall be payable in immediately available funds and (iv) shall be identical (except as provided in clauses (ii) and (iii) above), as to aggregate principal amount, maturity dates, interest rates and redemption features, to the Subordinated Bonds deemed to have been paid by reason of the deposit of such Senior Bonds.

### **Events of Default; Remedies**

Events of default under the Subordinated Water and Sewer System Resolution include (i) failure to pay the principal or Redemption Price of any Subordinated Bond when due; (ii) failure to pay any installment of interest on any Subordinated Bond on the unsatisfied balance of any Sinking Fund Installment when due; (iii) failure by JEA to perform or observe any other covenants, agreements or conditions contained in the Subordinated Water and Sewer System Resolution or the Subordinated Bonds and continuation thereof for a period of 60 days after written notice thereof; (iv) certain events of bankruptcy or insolvency or (v) an Event of Default pursuant to the provisions of the Water and Sewer System Resolution. Upon the happening of any such Event of Default the Holders of not less than 25 percent in principal amount of the Subordinated Bonds then Outstanding may declare the principal of all the Subordinated Bonds then Outstanding, and the interest accrued thereon, due and payable (subject to a rescission of such declaration upon the curing of such default before the Subordinated Bonds have matured).

The Subordinated Water and Sewer System Resolution provides that, if not in default in respect of any of its obligations with respect to Credit Enhancement for Subordinated Bonds, the Credit Enhancer for, and not the actual Holders of, Subordinated Bonds for which such Credit Enhancement is being provided will be deemed to be the Holder of such Subordinated Bonds at all times for the purposes of giving any approval or consent, exercising any remedies or taking any other actions in respect of the occurrence of an Event of Default. See "Action by Credit Enhancer When Action by Holders of Subordinated Bonds Required" herein.

During the continuance of an Event of Default under the Subordinated Water and Sewer System Resolution, JEA is to apply all moneys, securities and funds held or received by JEA with respect to the Subordinated Bonds as follows and in the following order: (i) to the extent required in the Water and Sewer System Resolution, to the payment of the interest and principal or redemption price due on the Water and Sewer System Bonds and (ii) to the interest and principal or Redemption Price due on the Subordinated Bonds.

## **Subordinated Bond Paying Agents**

The Subordinated Water and Sewer System Resolution requires the appointment by JEA of one or more Subordinated Bond Paying Agent(s) for the Subordinated Bonds of each Series. Any Subordinated Bond Paying Agent may resign on 60 days' notice and may at any time be removed with or without cause by JEA. Successor Subordinated Bond Paying Agents will be appointed by JEA, and will be an officer of JEA, a transfer agent duly registered pursuant to the Securities Exchange Act of 1934, as amended, or a bank, trust company or national banking association having capital stock, surplus and undivided earnings aggregating at least \$25,000,000 if there be such an entity willing to accept appointment.

# **Action by Credit Enhancer When Action by Holders of Subordinated Bonds Required**

Except as otherwise provided in a Supplemental Subordinated Resolution authorizing Subordinated Bonds for which Credit Enhancement is being provided, if not in default in respect of any of its obligations with respect to Credit Enhancement for the Subordinated Bonds of a Series, or a maturity within a Series, the Credit Enhancer for, and not the actual Holders of, the Subordinated Bonds of a Series, or a maturity within a Series, for which such Credit Enhancement is being provided, shall be deemed to be the Holder of Subordinated Bonds of any Series, or maturity within a Series, as to which it is the Credit Enhancer at all times for the purpose of (i) giving any approval or consent to the effectiveness of any Supplemental Subordinated Resolution or any amendment, change or modification of the Subordinated Water and Sewer System Resolution which requires the written approval or consent of Holders; provided, however, that the foregoing shall not apply to any change in the terms of redemption or maturity of the principal of any Outstanding Subordinated Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon, or shall reduce the percentages or otherwise affect the classes of Subordinated Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Subordinated Bond Fiduciary without its written assent thereto and (ii) giving any approval or consent, exercising any remedies or taking any other action following the occurrence of an Event of Default under the Subordinated Water and Sewer System Resolution.

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# Special Provisions Relating to Water and Sewer System Capital Appreciation Subordinated Bonds, Water and Sewer System Deferred Income Subordinated Bonds and Subordinated Reimbursement Obligations

The principal and interest portions of the Accreted Value of Water and Sewer System Capital Appreciation Subordinated Bonds or the Appreciated Value of Water and Sewer System Deferred Income Subordinated Bonds becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments made under the definitions of Subordinated Debt Service, Aggregate Subordinated Debt Service, Adjusted Aggregate Subordinated Debt Service only from and after the date (the "Calculation Date") which is one year prior to the date on which such Accreted Value or Appreciated Value, as the case may be, becomes so due, and the principal and interest portions of such Accreted Value or Appreciated Value shall be deemed to accrue in equal daily installments from the Calculation Date to such due date.

For the purposes of (i) receiving payment of the Redemption Price if a Water and Sewer System Capital Appreciation Subordinated Bond is redeemed prior to maturity, or (ii) receiving payment of a Water and Sewer System Capital Appreciation Subordinated Bond if the principal of all Subordinated Bonds is declared immediately due and payable following an Event of Default or (iii) computing the principal amount of Subordinated Bonds held by the Holder of a Water and Sewer System Capital Appreciation Subordinated Bond in giving to JEA any notice, consent, request, or demand pursuant to the Subordinated Water and Sewer System Resolution for any purpose whatsoever, the principal amount of a Water and Sewer System Capital Appreciation Subordinated Bond shall be deemed to be its then current Accreted Value.

For the purposes of (i) receiving payment of the Redemption Price if a Water and Sewer System Deferred Income Subordinated Bond is redeemed prior to maturity, or (ii) receiving payment of a Water and Sewer System Deferred Income Subordinated Bond if the principal of all Subordinated Bonds is declared immediately due and payable following an Event of Default or (iii) computing the principal amount of Subordinated Bonds held by the Holder of a Water and Sewer System Deferred Income Subordinated Bond in giving to JEA any notice, consent, request, or demand pursuant to the Subordinated Water and Sewer System Resolution for any purpose whatsoever, the principal amount of a Water and Sewer System Deferred Income Subordinated Bond shall be deemed to be its then current Appreciated Value.

Notwithstanding anything to the contrary contained in the Subordinated Water and Sewer System Resolution, in the event that any Variable Rate Subordinated Bonds contain provisions that allow the principal amount thereof to be repaid on an accelerated basis in the event that such Subordinated Bonds are purchased by the Credit Enhancer therefor or the provider of liquidity support therefor and, in either such case, are not remarketed, for purposes of the additional bonds test contained in the Subordinated Water and Sewer System Resolution, such accelerated repayment shall not be taken into account, and compliance with such test shall be determined based upon the scheduled due date(s) of the Subordinated Principal Installments for such Subordinated Bonds, irrespective of any such accelerated repayment.

Except as otherwise provided in the Supplemental Subordinated Resolution authorizing a Series of Subordinated Reimbursement Obligations, for the purposes of (i) receiving payment of a Subordinated Reimbursement Obligation, whether at maturity, upon redemption or if the principal of all Subordinated Bonds is declared immediately due and payable following an Event of Default or (ii) computing the principal amount of Subordinated Bonds held by the Holder of a Subordinated Reimbursement Obligation in giving to JEA any notice, consent, request, or demand pursuant to the Subordinated Water and Sewer System Resolution for any purpose whatsoever, the principal amount of a Subordinated Reimbursement Obligation shall be deemed to be the actual principal amount that JEA shall owe thereon, which shall equal

the aggregate of the amounts advanced to, or on behalf of, JEA in connection with the Water and Sewer System Bonds or Subordinated Bonds, as the case may be, of the Series or maturity or interest rate within a maturity for which such Subordinated Reimbursement Obligation has been issued to evidence JEA's obligation to repay any advances or loans made in respect of the Credit Enhancement or liquidity support provided for such Water and Sewer System Bonds or Subordinated Bonds, as the case may be, less any prior repayments thereof.

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# SUMMARY OF CERTAIN PROVISIONS OF THE DISTRICT ENERGY SYSTEM RESOLUTION

The following is a summary of certain provisions of the District Energy System Resolution. Summaries of certain definitions contained in the District Energy System Resolution are set forth below. Other terms defined in the District Energy System Resolution for which summary definitions are not set forth are indicated by capitalization. The summary does not purport to be a complete description of the terms of the District Energy System Resolution and, accordingly, is qualified by reference thereto and subject to the full text thereof.

The District Energy System Resolution, as heretofore amended, is available for viewing and downloading on JEA's website at <a href="https://www.jea.com/About/Investor\_Relations/Bonds/">https://www.jea.com/About/Investor\_Relations/Bonds/</a>. Copies of the District Energy System Resolution also may be obtained from JEA; provided that a reasonable charge may be imposed for the cost of reproduction. The term "Bonds" as used in the District Energy System Resolution and in this summary has the same meaning as the term "District Energy System Bonds" as used in the Annual Disclosure Report to which this summary is attached.

#### **Excluded Provisions**

The Third Supplemental Resolution provides that solely with respect to the rate covenant set forth in Section 710 of the District Energy System Resolution (summarized below under the caption "Covenant as to Rates, Fees and Charges"), clause (iii) of Section 801, Events of Default, of the District Energy System Resolution shall not be applicable to the 2013 Series A Bonds and shall not be enforceable by the Holders of the 2013 Series A Bonds so long as JEA remains in compliance with its obligations to make deposits to the 2013 Series A Bonds Subaccount in the Debt Service Reserve Account in the Debt Service Reserve Fund from Available Water and Sewer System Revenues as provided in the Third Supplemental Resolution and described below under "Debt Service Fund – Debt Service Reserve Account and 2013 Series A Bonds Subaccount – 2013 Series A Bonds Subaccount".

#### **Definition of Terms**

The following are summaries of certain definitions in the District Energy System Resolution:

Accreted Value shall mean, as of any date of computation with respect to any Capital Appreciation Bond, an amount equal to the principal amount of such Bond plus the interest accrued on such Bond from the date of original issuance of such Bond to the periodic date specified in the Supplemental Resolution authorizing such Capital Appreciation Bond on which interest on such Bond is to be compounded (hereinafter, a "Periodic Compounding Date") next preceding the date of computation or the date of computation if a Periodic Compounding Date, such interest to accrue at the interest rate per annum of the Capital Appreciation Bonds set forth in the Supplemental Resolution authorizing such Bonds, compounded periodically on each Periodic Compounding Date, plus, if such date of computation shall not be a Periodic Compounding Date, a portion of the difference between the Accreted Value as of the immediately preceding Periodic Compounding Date (or the date of original issuance if the date of computation is prior to the first Periodic Compounding Date succeeding the date of original issuance) and the Accreted Value as of the immediately succeeding Periodic Compounding Date, calculated based upon an assumption that, unless otherwise provided in the Supplemental Resolution authorizing such Capital Appreciation Bonds, Accreted Value accrues in equal daily amounts on the basis of a year consisting of twelve 30-day months.

Accrued Aggregate Debt Service shall mean, as of any date of calculation, an amount equal to the sum of the amounts of accrued Debt Service with respect to all Series, calculating the accrued Debt Service with respect to each Series at an amount equal to the sum of (i) interest on the Bonds of such Series accrued and unpaid and to accrue to the end of the then current calendar month, and (ii) Principal Installments due and unpaid and that portion of the Principal Installments for such Series next due which would have accrued (if deemed to accrue in the manner set forth in the definition of Debt Service) to the end of such calendar month; provided, however, that (i) there shall be excluded from the calculation of Accrued Aggregate Debt Service any Principal Installments which are Refundable Principal Installments, (ii) the principal and interest portions of the Accreted Value of Capital Appreciation Bonds or the Appreciated Value of Deferred Income Bonds shall be included in the calculation of Accrued Aggregate Debt Service at the times and in the manner provided in the District Energy System Resolution and (iii) if the calculation of the Debt Service Reserve Requirement for any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund takes into account Accrued Aggregate Debt Service, then, for purposes of such calculation, Accrued Aggregate Debt Service shall be calculated only with respect to the Bonds of the Series secured thereby.

Additionally Secured Series shall mean a Series of Bonds for which the payment of the principal or sinking fund Redemption Price, if any, of, and interest on, the Bonds of such Series shall be secured, in addition to the pledge created pursuant to the District Energy System Resolution in favor of all of the Bonds, by amounts on deposit in a separate subaccount to be designated therefor in the Debt Service Reserve Account in the Debt Service Fund.

Adjusted Aggregate Debt Service for any period shall mean, as of any date of calculation, the Aggregate Debt Service for such period except that (a) if any Refundable Principal Installment for any Series of Bonds is included in Aggregate Debt Service for such period, Adjusted Aggregate Debt Service shall mean Aggregate Debt Service determined (i) in the case of Refundable Principal Installments with respect to Bonds other than Commercial Paper Notes and Medium-Term Notes, as if each such Refundable Principal Installment had been payable, over a period extending from the due date of such Principal Installment through the later of (x) the 30th anniversary of the issuance of such Series of Bonds or (y) the 10th anniversary of the due date of such Refundable Principal Installment, in installments which would have required equal annual payments of principal and interest over such period and (ii) in the case of Refundable Principal Installments with respect to Commercial Paper Notes or Medium-Term Notes, in accordance with the then current Commercial Paper Payment Plan or Medium-Term Note Payment Plan, as applicable, with respect thereto, and (b) the principal and interest portions of the Accreted Value of Capital Appreciation Bonds or the Appreciated Value of Deferred Income Bonds shall be included in the calculation of Adjusted Aggregate Debt Service at the times and in the manner provided in the District Energy System Resolution. Interest deemed payable in any Fiscal Year after the actual due date of any Refundable Principal Installment of any Series of Bonds shall be calculated at such rate of interest as JEA, or a banking or financial institution or financial advisory firm selected by JEA, determines would be a reasonable estimate of the rate of interest that would be borne on Bonds maturing at the times determined in accordance with the provisions of the preceding sentence, determined as of the date of such calculation.

Aggregate Debt Service for any period shall mean, as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all Series; provided, however, that (a) for purposes of estimating Aggregate Debt Service for any future period (i) any Variable Rate Bonds, Commercial Paper Notes and Medium-Term Notes Outstanding during such period shall be assumed to bear interest during such period at the greater of (X) the actual rate of interest then borne by such Variable Rate Bonds or (Y) the Certified Interest Rate applicable thereto and (ii) any Option Bonds Outstanding during such period shall be assumed to mature on the stated maturity date thereof and (b) the principal and interest portions of the Accreted Value of Capital Appreciation Bonds or the Appreciated Value of Deferred

Income Bonds shall be included in the calculation of Aggregate Debt Service at the times and in the manner provided in the District Energy System Resolution; and *provided*, *further*, that if the calculation of the Debt Service Reserve Requirement for any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund takes into account Aggregate Debt Service, then, for purposes of such calculation, Aggregate Debt Service shall be calculated only with respect to the Bonds of the Series secured thereby.

Annual Net Revenues shall mean, with respect to any Fiscal Year, the Revenues during such Fiscal Year, determined on an accrual basis, minus the sum of (a) Operation and Maintenance Expenses during such Fiscal Year, determined on an accrual basis, to the extent paid or to be paid from Revenues, (b) the Aggregate Debt Service with respect to such Fiscal Year, and (c) debt service payable during such Fiscal Year with respect to all other obligations issued by JEA (including, without limitation, Subordinated Indebtedness) in connection with the System, determined on an accrual basis.

Appreciated Value shall mean, with respect to any Deferred Income Bond, (i) as of any date of computation prior to the Current Interest Commencement Date with respect to such Deferred Income Bond, an amount equal to the principal amount of such Bond plus the interest accrued on such Bond from the date of original issuance of such Bond to the periodic date specified in the Supplemental Resolution authorizing such Deferred Income Bond on which interest on such Bond is to be compounded (hereinafter, a "Periodic Compounding Date") next preceding the date of computation or the date of computation if a Periodic Compounding Date, such interest to accrue at the interest rate per annum of the Deferred Income Bonds set forth in the Supplemental Resolution authorizing such Bonds, compounded periodically on each Periodic Compounding Date, plus, if such date of computation shall not be a Periodic Compounding Date, a portion of the difference between the Appreciated Value as of the immediately preceding Periodic Compounding Date (or the date of original issuance if the date of computation is prior to the first Periodic Compounding Date succeeding the date of original issuance) and the Appreciated Value as of the immediately succeeding Periodic Compounding Date, calculated based upon an assumption that, unless otherwise provided in the Supplemental Resolution authorizing such Deferred Income Bonds, Appreciated Value accrues in equal daily amounts on the basis of a year consisting of twelve 30-day months and (ii) as of any date of computation on and after the Current Interest Commencement Date, the Appreciated Value on the Current Interest Commencement Date.

Average Annual Adjusted Aggregate Debt Service shall mean, as of any date of calculation, the arithmetic average of the Adjusted Aggregate Debt Service for the then current and each future Bond Year.

Bond or Bonds shall mean any bonds, notes or other obligations or evidences of indebtedness, as the case may be, authenticated and delivered under and Outstanding pursuant to the District Energy System Resolution but shall not mean Subordinated Indebtedness or Bond Anticipation Notes.

Bond Anticipation Notes shall mean notes or other evidences of indebtedness from time to time issued in anticipation of the issuance of Bonds, the proceeds of which have been or are required to be applied to one or more of the purposes for which Bonds may be issued, the payment of which notes is to be made from the proceeds of the Bonds in anticipation of the issuance of which said notes are issued.

*Bond Year* shall mean the 12 month period commencing on October 1 in any year and ending on September 30 of the following year.

Capital Lease Obligations shall mean all Bonds issued pursuant to the District Energy System Resolution as capital lease obligations and any Bonds thereafter authenticated and delivered in lieu of or in substitution for such Bonds pursuant to the District Energy System Resolution and the Supplemental Resolution authorizing such Capital Lease Obligations.

Certified Interest Rate shall mean, as of any date of determination:

- (i) with respect to (A) any Commercial Paper Notes or Medium-Term Notes or (B) any Variable Rate Bonds maturing on a particular date that were, at the date of the original issuance thereof, the subject of a Counsel's Opinion to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the lesser of (1) the average of the Variable Rate Tax-Exempt Index for the five years preceding such date of determination and (2) the average rate of interest borne by such Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be, for the 12 months preceding such date of determination; *provided*, *however*, if such Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be are then being issued or shall not have been Outstanding for 12 months, then the rate of interest determined pursuant to this clause (i) shall be the rate determined pursuant to the foregoing subclause (1),
- (ii) with respect to (A) any Commercial Paper Notes or Medium-Term Notes or (B) any Variable Rate Bonds maturing on a particular date that were not, at the date of the original issuance thereof, the subject of a Counsel's Opinion to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the lesser of (a) the average of the Variable Rate Taxable Index for the five years preceding such date of determination and (b) the average rate of interest borne by such Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be, for the 12 months preceding such date of determination; *provided*, *however*, if such Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be, are then being issued or shall not have been Outstanding for 12 months, then the rate of interest determined pursuant to this clause (ii) shall be the rate determined pursuant to the foregoing subclause (a); and
- for purposes of calculating the Debt Service Reserve Requirement for any particular subaccount in the Debt Service Reserve Account in the Debt Service Fund and with respect to (A) any Commercial Paper Notes or Medium-Term Notes or (B) any Variable Rate Bonds maturing on a particular date, the interest rate set forth in a certificate of an Authorized Officer of JEA executed on or prior to the date of the initial issuance of such Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may, as determined as follows: a Certified Interest Rate shall be that rate of interest determined by JEA, or a banking or financial institution or financial advisory firm selected by JEA, as the rate of interest such Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be, would bear if, assuming the same maturity date, terms and provisions (other than interest rate) as such proposed Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be, and on the basis of JEA's credit ratings with respect to the Bonds (other than Bonds for which credit enhancement is provided by a third party), such proposed Commercial Paper Notes, Medium-Term Notes or Variable Rate Bonds, as the case may be, were issued at a fixed interest rate.

Commercial Paper Payment Plan shall mean, with respect to any Series of Commercial Paper Notes and as of any time, the then current Commercial Paper Payment Plan for such Notes contained in a certificate of an Authorized Officer of JEA setting forth the sources of funds expected to be utilized by JEA to pay the principal of and interest on such Commercial Paper Notes; provided, however, that if any Commercial Paper Payment Plan provides for the refunding of any Commercial Paper Note with proceeds

of Bonds other than Commercial Paper Notes or Medium-Term Notes that JEA intends to pay from Revenues, the principal of such Commercial Paper Notes shall, for purposes of the Commercial Paper Payment Plan, be assumed to come due over a period commencing with the due date of the Commercial Paper Note and ending not later than the earlier of (x) the 40th anniversary of the first issuance of Commercial Paper Notes of such Series or (y) the 30th anniversary of the due date of the Commercial Paper Note to be refunded, in installments such that the principal and interest payable on such Commercial Paper Notes in each Fiscal Year in such period will be equal to the principal and interest payable on such Commercial Paper Notes in each other Fiscal Year in such period.

Contract Debts shall mean any obligations of JEA under a contract, lease, installment sale agreement, bulk purchase agreement or otherwise to make payments out of Revenues for property, services or commodities whether or not the same are made available, furnished or received.

Costs shall mean, the costs, expenses and liabilities paid or incurred or to be paid or incurred by JEA in connection with the planning, engineering, designing, acquiring, constructing, installing, financing, repairing, extending, improving, reconstructing, retiring and disposing of the System or any part thereof and the obtaining of all governmental approvals, certificates, permits and licenses with respect thereto (including, for this purpose, any acquisition by JEA of an interest in an existing facility), including, but not limited to, any good faith or other similar payment or deposits required in connection with the acquisition or construction of such part of the System, the cost of acquisition by or for JEA of real and personal property or any interests therein, costs of physical construction or acquisition of such part of the System, and costs of JEA incidental to such construction or acquisition, all costs relating to injury and damage claims relating to such part of the System, all costs relating to the settlement or renegotiation of any contract entered into in connection with any such part of the System, the cost of any indemnity or surety bonds and premiums on insurance, preliminary investigation and development costs, engineering fees and expenses, contractors' fees and expenses, the costs of labor, materials, equipment and utility services and supplies, legal and financial advisory fees and expenses, interest and financing costs, including, without limitation, bank commitment and letter of credit fees, bond insurance and indemnity premiums, discounts to the underwriters or other purchasers thereof, if any, amounts required to be paid under any interest rate exchanges or swaps, cash flow exchanges, options, caps, floors or collars, in each case made in connection with the issuance of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA relating to the System, fees and expenses of the Fiduciaries, administration and general overhead expense and costs of keeping accounts and making reports required by the District Energy System Resolution, amounts, if any, required by the District Energy System Resolution to be paid into the Debt Service Fund to provide, among other things, for interest accruing on Bonds and to provide for the Debt Service Reserve Requirement or to be paid into the Revenue Fund or the Renewal and Replacement Fund for any of the respective purposes thereof, payments when due (whether at the maturity of principal or the due date of interest or upon redemption) on any indebtedness of JEA, including Bonds, Bond Anticipation Notes and Subordinated Indebtedness, issued to finance or refinance any of the foregoing, and all federal, state and local taxes and payments in lieu of taxes in connection with the System, or any part thereof, and working capital and reserves for any of the foregoing and shall include reimbursements to JEA for any of the above items theretofore paid by or on behalf of JEA. It is intended that this definition be broadly construed to encompass all costs, expenses and liabilities of JEA related to the System which on the date of the District Energy System Resolution or in the future shall be permitted to be funded with the proceeds of Bonds pursuant to the provisions of Florida law.

*Credit Enhancement* shall mean, with respect to the Bonds of a Series, a maturity within a Series or an interest rate within a maturity, the issuance of an insurance policy, letter of credit, surety bond or any other similar obligation, whereby the issuer thereof becomes unconditionally obligated to pay when due, to the extent not paid by JEA or otherwise, the principal of and interest on such Bonds.

*Credit Enhancer* shall mean any person or entity which, pursuant to a Supplemental Resolution, is designated as a Credit Enhancer and which provides Credit Enhancement for the Bonds of a Series, a maturity within a Series or an interest rate within a maturity.

Current Interest Commencement Date shall mean, with respect to any particular Deferred Income Bonds, the date specified in the Supplemental Resolution authorizing such Deferred Income Bonds (which date must be prior to the maturity date for such Deferred Income Bonds) after which interest accruing on such Deferred Income Bonds shall be payable periodically on dates specified in such Supplemental Resolution, with the first such payment date being the first such periodic date immediately succeeding such Current Interest Commencement Date.

Debt Service for any period shall mean, as of any date of calculation and with respect to any Series, an amount equal to the sum of (i) interest accruing during such period on Bonds of such Series, except to the extent that such interest is to be paid from deposits into the Debt Service Account in the Debt Service Fund made from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA (including amounts, if any, transferred thereto from the Construction Fund) and (ii) that portion of each Principal Installment for such Series which would accrue during such period if such Principal Installment were deemed to accrue daily in equal amounts from the next preceding Principal Installment due date for such Series (or, (x) in the case of Bonds other than Reimbursement Obligations, if (1) there shall be no such preceding Principal Installment due date or (2) such preceding Principal Installment due date is more than one year prior to the due date of such Principal Installment, then, from a date one year preceding the due date of such Principal Installment or from the Date of Issuance of Bonds of such Series, whichever date is later, and (y) in the case of Reimbursement Obligations, in accordance with the terms thereof and the Supplemental Resolution authorizing such Reimbursement Obligations), except to the extent that such Principal Installment is paid or to be paid from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA. Such interest and Principal Installments for such Series shall be calculated on the assumption that (x) no Bonds (except for Option Bonds actually tendered for payment prior to the stated maturity thereof and paid, or to be paid, from Revenues) of such Series Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment of each Principal Installment on the due date thereof, (y) the principal amount of Option Bonds tendered for payment before the stated maturity thereof and paid, or to be paid, from Revenues, shall be deemed to accrue on the date required to be paid pursuant to such tender and (z) the principal and interest portions of the Accreted Value of Capital Appreciation Bonds or the Appreciated Value of Deferred Income Bonds shall be included in the calculation of Debt Service at the times and in the manner provided in the District Energy System Resolution; provided, however, that if the calculation of the Debt Service Reserve Requirement for any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund takes into account Debt Service, then, for purposes of such calculation, Debt Service shall be calculated only with respect to the Bonds of the Series secured thereby.

Notwithstanding anything to the contrary contained in the District Energy System Resolution, (a) if JEA has in connection with any Bonds entered into a Designated Swap Obligation which provides that, in respect of a notional amount corresponding to the principal amount or issue price of such Bonds, JEA is to pay to a Designated Swap Obligation Provider an amount determined based upon a variable rate of interest and the Designated Swap Obligation Provider is to pay to JEA an amount determined based upon a fixed rate of interest, then, for purposes of calculating Debt Service with respect to such Bonds for purposes of the additional bonds test and the rate covenant contained in the District Energy System Resolution, it will be assumed that such Bonds bear interest at a rate equal to the sum of (1) the lesser of (A) the average of the variable rate payable by JEA pursuant to such Designated Swap Obligation for the five years preceding the date of determination, calculating such rate based upon the method, formula or index with respect thereto set forth in such Designated Swap Obligation and (B) the average of the actual rates paid by JEA pursuant to such Designated Swap Obligation for the 12 months preceding such

date of determination; provided, however, if such Designated Swap Obligation shall not have been in effect for 12 months, then the rate of interest determined pursuant to this clause (1) shall be the rate determined pursuant to the foregoing subclause (A) and (2) the difference (whether positive or negative) between (X) the fixed rate of interest on such Bonds and (Y) the fixed rate of interest payable to JEA pursuant to such Designated Swap Obligation and (b) if JEA has in connection with any Variable Rate Bonds, Commercial Paper Notes or Medium-Term Notes entered into a Designated Swap Obligation which provides that, in respect of a notional amount of such Variable Rate Bonds, Commercial Paper Notes or Medium-Term Notes, as the case may be, JEA is to pay to a Designated Swap Obligation Provider an amount determined based upon a fixed rate of interest and the Designated Swap Obligation Provider is to pay to JEA an amount determined based upon a variable rate of interest, then, for purposes of calculating Debt Service with respect to such Variable Rate Bonds, Commercial Paper Notes or Medium-Term Notes, as the case may be, for purposes of the additional bonds test and the rate covenant contained in the District Energy System Resolution, it will be assumed that such Variable Rate Bonds, Commercial Paper Notes or Medium-Term Notes, as the case may be, bear interest at the fixed rate of interest payable by JEA pursuant to such Designated Swap Obligation.

Debt Service Reserve Requirement shall mean, with respect to each separate subaccount in the Debt Service Reserve Account in the Debt Service Fund, unless otherwise specified in the Supplemental Resolution establishing such subaccount, as of any date of calculation, an amount equal to the lesser of (a) 10 percent of the original principal amount of the Bonds of all issues (as defined for federal income tax purposes) secured thereby (or, if the Bonds of any such issue are issued at an issue price (as computed for federal income tax purposes) of greater than 102 percent or less than 98 percent of the principal amount thereof, ten percent of such issue price), and (b) the maximum amount of interest included in Aggregate Debt Service on the Bonds of all Series secured thereby then Outstanding for the current or any future Bond Year (excluding interest (other than accrued interest paid in connection with the initial issuance thereof) on such Bonds to be paid from deposits in the Debt Service Account in the Debt Service Fund made from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); provided, however, that in no event may an increase in the Debt Service Reserve Requirement for any subaccount resulting from the issuance of an additional issue (as defined for federal income tax purposes) of Bonds exceed ten percent of the original principal amount of the Bonds of such issue (or, if the Bonds of such issue are issued at an issue price (as computed for federal income tax purposes) of greater than 102 percent or less than 98 percent of the principal amount thereof, ten percent of such issue price).

Defeasance Securities shall mean, unless otherwise provided with respect to the Bonds of a Series in the Supplemental Resolution authorizing such Bonds, (a) any bonds or other obligations which constitute direct obligations of, or as to principal and interest are unconditionally guaranteed by, the United States of America, including obligations of any of the federal agencies set forth in clause (c) below to the extent unconditionally guaranteed by the United States of America, which shall not be subject to redemption prior to their maturity other than at the option of the holder thereof or as to which an irrevocable notice of redemption of such securities on a specified redemption date has been given and such securities are not otherwise subject to redemption prior to such specified date other than at the option of the holder thereof, (b) any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable prior to maturity, or which have been duly called for redemption by the obligor on a date or dates specified and as to which irrevocable instructions have been given to a trustee in respect of such bonds or other obligations by the obligor to give due notice of such redemption on such date or dates, which date or dates shall be also specified in such instructions, (ii) which are secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or bonds or other obligations of the character described in clause (a) above which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or

the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this clause (b), as appropriate, (iii) as to which the principal of and interest on the bonds and obligations of the character described in clause (a) above on deposit in such fund along with any cash on deposit in such fund are sufficient to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this clause (b) on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this clause (b), as appropriate and (iv) which at the time of their purchase hereunder are rated "AAA" by Standard & Poor's Credit Market Services, a business of Standard & Poor's Financial Services LLC, a limited liability company, organized and existing under the laws of the State of Delaware ("S&P"), and, if rated by Moody's Investors Service ("Moody's"), are rated "Aaa" by such agency, (c) obligations of any state of the United States of America or any political subdivision thereof or any agency or instrumentality of any state or political subdivision which are not callable for redemption prior to maturity, or which have been duly called for redemption by the obligor on a date or dates specified and as to which irrevocable instructions have been given to a trustee in respect of such obligations by the obligor to give due notice of such redemption on such date or dates, which date or dates shall also be specified in such instructions, and which shall be rated in the highest whole rating category by two nationally recognized rating agencies, (d) certificates that evidence ownership of the right to payments of principal and/or interest on obligations described in clauses (a) and (c) of this definition provided that such obligations shall be held in trust by a bank or trust company or a national banking association authorized to exercise corporate trust powers and subject to supervision or examination by federal, state, or territorial or District of Columbia authority and having a combined capital, surplus and undivided profits of not less than \$50,000,000, or obligations described in the foregoing clause (c), in any such case, which shall not be subject to redemption prior to their maturity other than at the option of the holder thereof or as to which an irrevocable notice of redemption of such obligations on a specified redemption date has been given and such obligations are not otherwise subject to redemption prior to such specified date other than at the option of the holder thereof, (e) deposits in interest-bearing time deposits or certificates of deposit which shall not be subject to redemption or repayment prior to their maturity or due date other than at the option of the depositor or holder thereof or as to which an irrevocable notice of redemption or repayment of such time deposits or certificates of deposit on a specified redemption or repayment date has been given and such time deposits or certificates of deposit are not otherwise subject to redemption or repayment prior to such specified date other than at the option of the depositor or holder thereof, and which are fully secured by obligations described in clause (a) or clause (b) of the definition to the extent not insured by the Federal Deposit Insurance Corporation, (f) agreements or contracts with insurance companies or other financial institutions, or subsidiaries or affiliates thereof (hereinafter in this paragraph referred to as "Providers"), (i) whose outstanding unsecured senior indebtedness or claims-paying ability, as the case may be, shall be rated, or who shall have a "financial programs rating" or other equivalent rating, in the highest whole rating category by at least two nationally recognized statistical rating organizations or (ii) whose obligations under such agreements or contracts shall be unconditionally guaranteed by another insurance company or other financial institution, or subsidiary or affiliate thereof, whose outstanding unsecured senior indebtedness or claims-paying ability, as the case may be, shall be rated, or who shall have a "financial programs rating" or other equivalent rating, in the highest whole rating category by at least two nationally recognized statistical rating organizations, pursuant to which agreements or contracts the Provider shall be absolutely, unconditionally and irrevocably obligated to repay the moneys invested by JEA and interest thereon at a guaranteed rate, without any right of recoupment, counterclaim or set off. The Provider may have the right to assign its obligations under any Investment Agreement to any other insurance company or other financial institution, or subsidiary or affiliate thereof; provided, however, that such assignee also shall be an insurance company or other financial institution, or subsidiary or affiliate thereof, satisfying the requirements set forth in either clause (i) or clause (ii) of the preceding sentence, and (g) upon compliance with the applicable provisions of the District Energy System Resolution, such securities (I) as are described in clause (a) of this definition and (II) as are described in clause (d) of this definition so long as such securities evidence ownership of the right to payments of principal and/or

interest on obligations described in clause (a) of such definition; in each case *provided* that, notwithstanding such clauses, such securities which are subject to redemption prior to maturity at the option of the issuer thereof on a specified date or dates.

Deferred Income Bonds shall mean any Bonds issued under the District Energy System Resolution as to which interest accruing prior to the Current Interest Commencement Date is (i) compounded periodically on dates specified in the Supplemental Resolution authorizing such Deferred Income Bonds and (ii) payable only at the maturity, earlier redemption or other payment thereof pursuant to the District Energy System Resolution or the Supplemental Resolution authorizing such Deferred Income Bonds.

Designated Swap Obligation shall mean, to the extent from time to time permitted by law, any interest rate swap transaction (i) which is entered into by JEA for the purpose of converting synthetically the interest rate on any particular Bonds from a fixed rate to a variable rate or from a variable rate to a fixed rate (regardless of whether such Designated Swap Obligation shall have a term equal to the remaining term of such Bonds) and (ii) which has been designated in a certificate of an Authorized Officer of JEA filed with the records of JEA as such (which certificate shall specify the Bonds with respect to which such Designated Swap Obligation is entered into).

Highest Rating Category shall mean (i) if the Bonds are rated by a Rating Agency, that each Rating Agency has assigned a rating in the highest rating given by that Rating Agency for that general category of security or obligation, and (ii) if the Bonds are not rated (and, consequently, there is no Rating Agency), that Standard and Poor's or Moody Ratings Service has assigned a rating in the highest rating given by that rating agency for that general category of security or obligation.

*Investment Securities* shall mean and include any securities, obligations or investments that, at the time, shall be permitted by Florida law for investment of JEA's funds.

Medium-Term Note Payment Plan shall mean, with respect to any Series of Medium-Term Notes and as of any time, the then current Medium-Term Note Payment Plan for such Notes contained in a certificate of an Authorized Officer of JEA delivered pursuant to the District Energy Resolution and setting forth the sources of funds expected to be utilized by JEA to pay the principal of and interest on such Medium-Term Notes; provided, however, that if any Medium-Term Note Payment Plan provides for the refunding of any Medium-Term Note with proceeds of Bonds other than Commercial Paper Notes or Medium-Term Notes, that JEA intends to pay from Revenues, the principal of such Medium-Term Notes shall, for purposes of the Medium-Term Note Payment Plan, be assumed to come due over a period commencing with the due date of the Medium-Term Note and ending not later than the earlier of (x) the 40th anniversary of the first issuance of Medium-Term Notes of such Series or (y) the 30th anniversary of the due date of the Medium-Term Note to be refunded, in installments such that the principal and interest payable on such Medium-Term Notes in each Fiscal Year in such period.

*Net Revenues* shall mean, for any period, the Revenues during such period, determined on an accrual basis, minus the Operation and Maintenance Expenses during such period, determined on an accrual basis, to the extent paid or to be paid from Revenues.

One-Month LIBOR Rate shall mean, as of any date of determination, the offered rate for deposits in U.S. dollars for a one-month period which appears on the Telerate Page 3750 at approximately 11:00 A.M., London time, on such date, or if such date is not a date on which dealings in U.S. dollars are transacted in the London interbank market, then on the next preceding day on which such dealings were transacted in such market.

Operation and Maintenance Expenses shall mean the current expenses, paid or accrued, of operation, maintenance and repair of the System, including administration costs, as calculated in accordance with generally accepted accounting principles, and shall include all Contract Debts. Notwithstanding the foregoing, Operation and Maintenance Expenses shall not include any reserve for renewals or replacements or any allowance for depreciation or amortization and there shall be included in Operation and Maintenance Expenses only that portion of the total administrative, general and other expenses of JEA which are properly allocable to the System.

*Option Bonds* shall mean Bonds which by their terms may be tendered by and at the option of the Holder thereof for payment by JEA prior to the stated maturity thereof, or the maturities of which may be extended by and at the option of the Holder thereof.

Principal Installment shall mean, as of any date of calculation and with respect to any Series, so long as any Bonds thereof are Outstanding, (i) the principal amount of Bonds (including, in the case of any Option Bond, the principal amount thereof tendered for payment prior to the stated maturity thereof and paid, or to be paid, from Revenues) of such Series due (or so tendered for payment and paid, or to be so paid) on a certain future date for which no Sinking Fund Installments have been established, or (ii) the unsatisfied balance (determined as provided in the District Energy System Resolution) of any Sinking Fund Installments due on a certain future date for Bonds of such Series, plus the amount of the sinking fund redemption premiums, if any, which would be applicable upon redemption of such Bonds on such future date in a principal amount equal to said unsatisfied balance of such Sinking Fund Installments, or (iii) if such future dates coincide as to different Bonds of such Series, the sum of such principal amount of Bonds and of such unsatisfied balance of Sinking Fund Installments due on such future date plus such applicable redemption premiums, if any.

Refundable Principal Installment shall mean any Principal Installment for any Series of Bonds which JEA intends to pay with moneys which are not Revenues; provided that (i) in the case of Bonds other than Commercial Paper Notes or Medium-Term Notes, such intent shall have been expressed in the Supplemental Resolution authorizing such Series of Bonds, (ii) in the case of Commercial Paper Notes, such intent shall be expressed in the then current Commercial Paper Payment Plan for such Commercial Paper Notes and (iii) in the case of Medium-Term Notes, such intent shall be expressed in the then current Medium-Term Note Payment Plan for such Medium-Term Notes; and provided, further, that such Principal Installment shall be a Refundable Principal Installment only through the penultimate day of the month preceding the month in which such Principal Installment comes due or such earlier time as JEA no longer intends to pay such Principal Installment with moneys which are not Revenues.

Reimbursement Obligations shall mean all Bonds issued to evidence JEA's obligation to repay any advances or loans made to, or on behalf of, JEA in connection with any Credit Enhancement or liquidity support for the Bonds of a Series (or a maturity or maturities or interest rate within a maturity thereof).

Renewal and Replacement Requirement shall mean, at any date of calculation, either (i) an amount equal to 10 percent of the sum of (a) the aggregate amount of Bonds Outstanding under the District Energy System Resolution, and (b) the aggregate amount of all other obligations issued by JEA in connection with the System (including, without limitation, Subordinated Indebtedness) outstanding and unpaid (or as to which provision for payment has not been made in accordance with the terms thereof) or (ii) such greater or lesser amount as the Consulting Engineer shall certify as reasonable and necessary for the purposes of the Renewal and Replacement Fund.

Revenues shall mean (i) all revenues, income, rents, service fees and receipts properly allocable to the System resulting from ownership and operation of the System, excluding customer deposits and any other deposits subject to refund unless such deposits have become property of JEA, (ii) the proceeds of

any insurance covering business interruption loss relating to the System and (iii) interest received or to be received on any moneys or securities held pursuant to the District Energy System Resolution and paid or required to be paid into the Revenue Fund. For any purpose of the District Energy System Resolution that requires the computation of Revenues with respect to any period of time, "Revenues" shall include such amounts resulting, received or to be received, as the case may be, during such period, determined on an accrual basis, plus (x) the amounts, if any, paid from the Rate Stabilization Fund into the Revenue Fund during such period, but only to the extent provided that such amounts originally were deposited to the Rate Stabilization Fund from Revenues (excluding from (x) amounts included in the Revenues for such period representing interest earnings transferred from the Rate Stabilization Fund to the Revenue Fund pursuant to the District Energy System Resolution and minus (y) the amounts, if any, paid from the Revenue Fund into the Rate Stabilization Fund during such period.

Second Highest Rating Category shall means (i) if the Bonds are rated by a Rating Agency, that each Rating Agency has assigned a rating not lower than the second highest rating category given by that Rating Agency for that general category of security or obligation and (ii) if the Bonds are not rated (and, consequently, there is no Rating Agency), that Standard and Poor's or Moody Ratings Service has assigned a rating not lower than the second highest rating given by that rating agency for that general category of security or obligation.

System shall mean each and every part of the district energy facilities owned and operated by JEA for supply, transmission and distribution of chilled water, process steam or similar thermal energy, now existing or hereafter acquired by lease, contract, purchase or otherwise or constructed, including any interest or participation of JEA in any facilities in connection with said system, together with all additions, betterments, extensions and improvements to said system or any part thereof hereafter constructed or acquired and together with all lands, easements, licenses and rights of way and all other works, property or structures and contract rights and other tangible and intangible assets now or hereafter owned or used in connection with or related to said System; provided, however, that upon compliance with the provisions of the District Energy System Resolution, the term System shall be deemed to include other utility functions added to the System that are, in accordance with Prudent Utility Practice, reasonably related to the services provided by the System. Notwithstanding the foregoing definition of the term System, such term shall not include the existing electric system or water and sewer system owned by JEA or any bulk power supply utilities or systems now owned or hereafter acquired by JEA (other than facilities transferred from the existing system upon establishment of the district energy system as provided by District Energy System Resolution of JEA), nor shall it include any properties or interests in properties of JEA (a) which JEA determines shall not constitute a part of the System for the purpose of the District Energy System Resolution at the time of the acquisition thereof by JEA or (b) as to which there shall be filed with the records of JEA a certificate of the Consulting Engineer stating, in its opinion, that the exclusion of such properties or interests in properties from the System will not materially impair the ability of JEA to comply during the current or any future Fiscal Year with the provisions of Section 710.

*Trust Estate* shall mean (i) the proceeds of the sale of the Bonds, (ii) the Revenues, and (iii) all Funds and Accounts established by the District Energy System Resolution (other than the Debt Service Reserve Account in the Debt Service Fund and the Renewal and Replacement Fund), including the investments and investment income, if any, thereof.

Variable Rate Bond shall mean any Bond not bearing interest throughout its term at a specified rate or specified rates determined at the time of issuance of the Series of Bonds of which such Bond is one.

Variable Rate Taxable Index shall mean the One-Month LIBOR Rate or, if the One-Month LIBOR Rate no longer shall be available, the Alternate Variable Rate Taxable Index.

Variable Rate Tax-Exempt Index shall mean the BMA Municipal Swap Index or, if the BMA Municipal Swap Index no longer shall be available, the Alternate Variable Rate Tax-Exempt Index.

# Pledge

The Bonds are special obligations of JEA payable from and secured by the funds pledged therefor. Pursuant to the District Energy System Resolution, there is pledged for the payment of the principal and Redemption Price of, and interest on, the Bonds in accordance with their terms and the provisions of the District Energy System Resolution, subject only to the provisions of the District Energy System Resolution thereof for the purposes and on the terms and conditions set forth in the District Energy System Resolution, the Trust Estate.

Pursuant to the District Energy System Resolution, there are also pledged, as additional security for the payment of the principal or sinking fund Redemption Price, if any, of, and interest on, the Bonds of each Additionally Secured Series secured thereby, subject only to the provisions of the District Energy System Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the District Energy System Resolution, amounts on deposit in any separate subaccount established in the Debt Service Reserve Account in the Debt Service Fund, including the investments and investment income, if any, thereof.

### **Application of Revenues**

Revenues are pledged by the District Energy System Resolution to payment of principal of and interest and redemption premium on the Bonds of all series, subject to the provisions of the District Energy System Resolution permitting application for other purposes. For application of the Revenues, the District Energy System Resolution establishes a Revenue Fund; Debt Service Fund, which shall consist of a Debt Service Account and a Debt Service Reserve Account, and with in such Debt Service Reserve Account an Initial Subaccount; Subordinated Indebtedness Fund; Rate Stabilization Fund; and Renewal and Replacement Fund; all of such funds are held by JEA; *provided* that if and to the extent provided in a Supplemental Resolution authorizing Subordinated Indebtedness, the Subordinated Indebtedness Fund shall be held by the entity specified in such Supplemental Resolution.

**Revenues and Revenue Fund.** Pursuant to the District Energy System Resolution, Revenues are to be deposited promptly by JEA to the credit of the Revenue Fund.

After payment of Operation and Maintenance Expenses, the District Energy System Resolution provides that the Revenue Fund should be applied monthly to the extent available in the following order:

(a) in the Debt Service Fund, (i) for credit to the Debt Service Account, an amount at least equal to the amount, if any, required so that the balance in said Account shall equal the Accrued Aggregate Debt Service as of the last day of the then current month; provided that (A) for the purposes of computing the amount to be deposited in said Account, there shall be excluded from the balance in said Account the amount, if any, set aside in said Account from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA (including amounts, if any, transferred thereto from the Construction Fund) for the payment of interest on Bonds less that amount of such proceeds to be applied in accordance with the District Energy System Resolution to the payment of interest accrued and unpaid and to accrue on Bonds to the last day of the then current calendar month; and (B) any amount deposited into said Account during any month that is in excess of the minimum amount required to be deposited therein during such month may, upon written determination of an Authorized Officer of JEA, be deemed to be accumulated therein with respect to

- (1) any Sinking Fund Installment or (2) any principal amount of Bonds (including, in the case of any Option Bond, the principal amount thereof tendered for payment prior to the stated maturity thereof) due (or so tendered for payment) on a certain future date for which no Sinking Fund Installments have been established or (3) some combination of (1) and (2), and interest thereon; and (ii) thereafter, for deposit in each separate subaccount in the Debt Service Reserve Account, the amount, if any, required so that the balance in each such subaccount shall equal the Debt Service Reserve Requirement related thereto as of the last day of the then current month (or, if the amount on deposit in the Revenue Fund shall not be sufficient to make the deposits required to be made pursuant to this clause (ii) with respect to all of the separate subaccounts in the Debt Service Reserve Account, then such amount on deposit in the Revenue Fund shall be applied ratably, in proportion to the amount necessary for deposit into each such subaccount);
- (b) in the Subordinated Indebtedness Fund, an amount at least equal to the amount, if any, as shall be required to be deposited therein in the then current month to pay principal or sinking fund installments of and premiums, if any, and interest on each issue of Subordinated Indebtedness coming due in such month, whether as a result of maturity or prior call for redemption, and to provide reserves therefor, as required by the Supplemental Resolution authorizing such issue of Subordinated Indebtedness;
- (c) in the Rate Stabilization Fund, the amount, if any, budgeted for deposit into such Fund for the then current month as set forth in the then current Annual Budget or the amount otherwise determined by JEA to be credited to such Fund for the month; and
- (d) in the Renewal and Replacement Fund, an amount at least equal to the sum of (i) one-twelfth (1/12th) of 10 percent of the Annual Net Revenues of the System for the preceding Fiscal Year and (ii) such additional amount as shall make the total annual payment into such Fund during the Fiscal Year of which such month shall be a part equal to at least five percent of the Revenues of the System for the preceding Fiscal Year; provided, however, that so long as there shall be held in the Renewal and Replacement Fund an amount which shall be at least equal to the Renewal and Replacement Requirement, no deposits shall be required to be made into the Renewal and Replacement Fund; and provided, further, however, that the failure of JEA to make such payment into the Renewal and Replacement Fund in any month shall not constitute an Event of Default under the District Energy System Resolution; provided that any deficiencies therefor shall have been restored prior to the end of the Fiscal Year of which such month shall be a part; and provided, further, that the full amount required to be deposited in said Renewal and Replacement Fund in such Fiscal Year shall have been deposited therein by the end of such Fiscal Year.

The balance of any moneys remaining in the Revenue Fund after the above required payments have been made may be used by JEA for any lawful purpose of JEA (including, but not limited to, (a) the purchase, redemption or provision for payment of any of the Bonds and (b) transfers to any utility system owned and/or operated by JEA currently or in the future) not otherwise prohibited by the District Energy System Resolution; *provided*, *however*, that none of the remaining moneys shall be used for any purpose other than those specified above unless all current payments, including all deficiencies in prior payments, if any, have been made in full and unless JEA shall have complied fully with all the covenants and provisions of the District Energy System Resolution.

Notwithstanding the provisions above, so long as there shall be held in the Debt Service Fund an amount sufficient to pay in full all Outstanding Bonds in accordance with their terms (including the maximum amount of principal or applicable sinking fund Redemption Price and interest which could become payable thereon), no deposits shall be required to be made into the Debt Service Fund.

Construction Fund. There shall be paid into the Construction Fund the amounts required to be so paid by the provisions of any Supplemental Resolution and there may be paid into the Construction Fund, at the option of JEA, any moneys received for or in connection with the System by JEA from any other source, unless required to be otherwise applied as provided by the District Energy System Resolution. Amounts in the Construction Fund shall be applied to the payment of the Costs of the System in the manner provided in the District Energy System Resolution or for any other lawful purpose of JEA relating to the System.

The proceeds of insurance maintained pursuant to the District Energy System Resolution against physical loss of or damage to the System or of contractors' performance bonds or other assurances of completion with respect thereto, pertaining to the period of construction or acquisition thereof, shall, upon receipt by JEA, be paid into the Construction Fund.

JEA shall withdraw amounts from the Construction Fund for the payment of amounts due and owing on account of the Costs of the System upon determination of an Authorized Officer of JEA (or such officer's designee) that an obligation in the amount to be paid from the Construction Fund has been incurred by JEA and that each item thereof is a proper and reasonable charge against the Construction Fund, and that such amount has not been paid theretofore.

To the extent that other moneys are not available therefor, amounts in the Construction Fund shall be applied to the payment of the principal of and interest on the Bonds when due.

Amounts credited to the Construction Fund which JEA determines at any time to be in excess of the amounts required for the purposes thereof shall be deposited in the Debt Service Reserve Account in the Debt Service Fund, if and to the extent necessary to make the amount in any separate subaccount therein equal to the Debt Service Reserve Requirement related thereto (or, if such excess shall be less than the amount necessary to make up the deficiencies with respect to all of the separate subaccounts in the Debt Service Reserve Account, then such excess shall be applied ratably, in proportion to the deficiency in each such subaccount), and any balance of such excess, upon written determination of an Authorized Officer of JEA, shall be deposited in the Revenue Fund and may be used by JEA for any lawful purpose of JEA, subject to the limitations contained in the District Energy System Resolution; *provided*, *however*, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the District Energy System Resolution.

JEA may permanently discontinue the acquisition or construction of any portion of the System, the Costs of which are at the time being paid out of the Construction Fund, if the Governing Body determines by resolution that such discontinuance is necessary or desirable in the conduct of the business of JEA and not disadvantageous to the Holders of the Bonds.

#### Debt Service Fund - Debt Service Reserve Account and 2013 Series A Bonds Subaccount

Debt Service Reserve Account

There shall be established in the Debt Service Reserve Account in the Debt Service Fund one or more separate subaccounts, each of which subaccounts shall be for the benefit and security of one or more Series of Bonds, in the manner and to the extent provided in the District Energy System Resolution or the Supplemental Resolution establishing such subaccount, as the case may be.

If on any day on which the principal or sinking fund Redemption Price of or interest on the Bonds shall be due the amount on deposit in the Debt Service Account in the Debt Service Fund (exclusive of amounts, if any, set aside in said Account from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA (including amounts, if any, transferred thereto from the Construction Fund) for the payment of interest on Bonds on a future date) shall be less than the amount required to pay such principal, Redemption Price or interest, then JEA shall apply amounts from each separate subaccount in the Debt Service Reserve Account to the extent necessary to cure the deficiency that exists with respect to the Additionally Secured Series of the Bonds secured thereby.

Whenever the moneys on deposit in any subaccount established in the Debt Service Reserve Account shall exceed the Debt Service Reserve Requirement related thereto, and after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation that may be credited to such subaccount in accordance with the provisions of the Supplemental Resolution establishing such subaccount or the District Energy System Resolution, as the case may be, such excess shall be deposited in the Revenue Fund and applied for any lawful purpose of JEA, subject to the limitations contained in the District Energy System Resolution; *provided*, *however*, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the District Energy System Resolution.

Whenever the amount in the Debt Service Reserve Account, together with the amount in the Debt Service Account, is sufficient to pay in full all Outstanding Bonds in accordance with their terms (including the maximum amount of principal or applicable sinking fund Redemption Price and interest which could become payable thereon), the funds on deposit in the Debt Service Reserve Account shall be transferred to the Debt Service Account. Prior to said transfer, all investments held in the Debt Service Reserve Account shall be liquidated to the extent necessary in order to provide for the timely payment of principal or Redemption Price, if applicable, and interest on the Bonds.

In the event of the refunding or defeasance of any Bonds of an Additionally Secured Series, JEA may withdraw from the separate subaccount in the Debt Service Reserve Account established for the benefit of the Bonds of such Additionally Secured Series all or any portion of the amounts accumulated therein and deposit such amounts with the Escrow Agent for the Bonds being refunded or defeased to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Bonds being refunded or defeased; provided that such withdrawal shall not be made unless (a) immediately thereafter the Bonds being refunded or defeased shall be deemed to have been paid pursuant to the District Energy System Resolution, and (b) the amount remaining in such separate subaccount in the Debt Service Reserve Account, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation that may be credited to such subaccount in accordance with the provisions of the Supplemental Resolution establishing such subaccount, and after giving effect to the issuance of any obligations being issued to refund any Bonds being refunded and the disposition of the proceeds thereof, shall not be less than the Debt Service Reserve Requirement related thereto. In the event of such refunding or defeasance, JEA may also withdraw from such separate subaccount in the Debt Service Reserve Account all or any portion of the amounts accumulated therein and deposit such amounts in any Fund or Account under the District Energy System Resolution; provided that such withdrawal shall not be made unless items (a) and (b) referred to above have been satisfied; and *provided*, *further*, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held under the District Energy System Resolution.

In addition to or in lieu of maintaining moneys or investments in a subaccount in the Debt Service Reserve Account JEA, in the Supplemental Resolution or Supplemental Resolutions authorizing the Series of Bonds additionally secured by such subaccount, may provide for the deposit into such subaccount of other available monies of JEA, from the sources and otherwise subject to such limitations as shall be provided in such Supplemental Resolution or Supplemental Resolutions.

#### 2013 Series A Bonds Subaccount

The payment of the principal of and interest on the 2013 Series A Bonds is additionally payable from amounts on deposit in the 2013 Series A Bonds Subaccount established in the Debt Service Reserve Account. Amounts on deposit in the 2013 Series A Bonds Subaccount shall be pledged solely for the benefit of the 2013 Series A Bonds. The 2013 Series A Bonds Subaccount will be funded under the circumstances described below solely from amounts on deposit in the Revenue Fund established under the Water and Sewer System Resolution and available for use by JEA pursuant to the provisions of the Water and Sewer System Resolution from the amounts remaining in the Revenue Fund (as defined in the Water and Sewer System Resolution) (collectively, "Available Water and Sewer System Revenues").

JEA has covenanted to deposit into the 2013 Series A Bonds Subaccount from Available Water and Sewer System Revenues an amount equal to the Aggregate DES Debt Service Deficiency that exists with respect to the 2013 Series A Bonds, in the event that the amount on deposit in the Debt Service Account in the Debt Service Fund in accordance with the District Energy System Resolution is less than Accrued Aggregate Debt Service as of the last Business Day of the then current month. "Aggregate DES Debt Service Deficiency" is defined under the Third Supplemental Resolution to mean an amount equal to Accrued Aggregate Debt Service for the 2013 Series A Bonds less the sum of (a) the amount on deposit in the Debt Service Account in the Debt Service Fund to be applied to the payment of Debt Service on the 2013 Series A Bonds and (b) the amount on deposit in the 2013 Series A Bonds Subaccount in the Debt Service Reserve Account in the Debt Service Fund.

If on the last Business Day of the month preceding any date on which principal or Sinking Fund Installments of and Redemption Price, including premium, if any, and interest on 2013 Series A Bonds is due and payable the amount on deposit in the Debt Service Account in the Debt Service Fund shall be less than Accrued Aggregate Debt Service with respect to the 2013 Series A Bonds, JEA shall withdraw from the 2013 Series A Bonds Subaccount for transfer to the Debt Service Account in the Debt Service Fund monies in an amount sufficient to make the balance in said Debt Service Account equal the Accrued Aggregate Debt Service as of the last day of the then current month.

The Third Supplemental Resolution provides that Section 710 of the District Energy System Resolution (summarized below under the caption "Covenant as to Rates, Fees and Charges") is not applicable to the 2013 Series A Bonds so long as JEA is obligated under the Third Supplemental Resolution and remains in compliance with its obligations to make deposits of Available Water and Sewer System Revenues to the 2013 Series A Bonds Subaccount in the Debt Service Reserve Account of the Debt Service Fund.

There is no Debt Service Reserve Requirement with respect to the 2013 Series A Bonds, and the 2013 Series A Bonds do not constitute an Additionally Secured Series under the District Energy System Resolution.

# Establishment of Initial Subaccount in the Debt Service Reserve Account and Application Thereof

The District Energy System Resolution establishes an Initial Subaccount in the Debt Service Reserve Account in the Debt Service Fund. Amounts held by JEA in the Initial Subaccount shall constitute a trust fund for the benefit of the Holders of the Bonds of any Series, if and to the extent that the Supplemental Resolution authorizing such Bonds provides that such Bonds shall be additionally secured by amounts on deposit in the Initial Subaccount; *provided*, *however*, that if the Bonds of any Series hereafter issued are to be additionally secured by amounts on deposit in the Initial Subaccount, then it shall be a condition precedent to the authentication and delivery of such Bonds that the amount on deposit in the Initial Subaccount, after giving effect to any surety bond, insurance policy or letter of credit

that may be credited to the Initial Subaccount in accordance with the provisions of paragraph 3 of this Section, and after giving effect to the issuance of such Bonds, shall not be less than the Debt Service Reserve Requirement for the Initial Subaccount. The Bonds of any Series that are additionally secured by amounts on deposit in the Initial Subaccount as aforesaid are referred to collectively as the "Initial Subaccount Additionally Secured Bonds."

The 2013 Series A Bonds are not additionally secured by amounts on deposit in the Initial Subaccount.

If on any day on which the principal or sinking fund Redemption Price of or interest on the Bonds shall be due the amount on deposit in the Debt Service Account in the Debt Service Fund (exclusive of amounts, if any, set aside in said Account from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA (including amounts, if any, transferred thereto from the Construction Fund) for the payment of interest on Bonds on a future date) shall be less than the amount required to pay such principal, Redemption Price or interest, then JEA shall apply amounts from the Initial Subaccount to the extent necessary to cure the deficiency that exists with respect to the Initial Subaccount Additionally Secured Bonds.

In lieu of maintaining moneys or investments in the Initial Subaccount, JEA at any time may cause to be deposited into the Initial Subaccount for the benefit of the Holders of the Initial Subaccount Additionally Secured Bonds an irrevocable surety bond, an insurance policy or a letter of credit (referred to in the District Energy System Resolution as a "reserve fund credit instrument") satisfying the requirements set forth below in an amount equal to the difference between the Debt Service Reserve Requirement for the Initial Subaccount and the sums of moneys or value of Investment Securities then on deposit in the Initial Subaccount, if any.

- (a) A surety bond or insurance policy issued by a company licensed to issue an insurance policy guaranteeing the timely payment of debt service on the Initial Subaccount Additionally Secured Bonds (a "municipal bond insurer") may be deposited in the Initial Subaccount to meet the Debt Service Reserve Requirement for the Initial Subaccount if the claims paying ability of the issuer thereof shall be rated in the Highest Rating Category by each Rating Agency.
- (b) A surety bond or insurance policy issued by an entity other than a municipal bond insurer may be deposited in the Initial Subaccount to meet the Debt Service Reserve Requirement for the Initial Subaccount.
- (c) An unconditional irrevocable letter of credit issued by a bank may be deposited in the Initial Subaccount to meet the Debt Service Reserve Requirement for the Initial Subaccount if the issuer thereof is rated at least the Second Highest Rating Category by each Rating Agency. The letter of credit shall be payable in one or more draws upon presentation by the beneficiary thereof of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal or interest on the Initial Subaccount Additionally Secured Bonds. The draws shall be payable within two days of presentation of the sight draft. The letter of credit shall be for a term of not less than three years. The issuer of the letter of credit shall be required to notify JEA and the beneficiary thereof, not later than 30 months prior to the stated expiration date of the letter of credit, as to whether such expiration date shall be extended, and if so, shall indicate the new expiration date.

- (d) If such notice indicates that the expiration date shall not be extended, JEA shall deposit in the Initial Subaccount an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subaccount, together with any other qualifying reserve fund credit instruments, to equal the Debt Service Reserve Requirement for the Initial Subaccount, such deposit to be paid in equal installments on at least a semi-annual basis over the remaining term of the letter of credit, unless the reserve fund credit instrument is replaced by a reserve fund credit instrument meeting the requirements in any of clauses (a) through (c) above. The letter of credit shall permit a draw in full not less than two weeks prior to the expiration or termination of such letter of credit shall draw upon the letter of credit prior to its expiration or termination unless an acceptable replacement is in place or the Initial Subaccount is fully funded in its required amount.
- (e) The use of any reserve fund credit instrument pursuant to this paragraph 3 shall be subject to receipt of an opinion of counsel to JEA as to the due authorization, execution, delivery and enforceability of such instrument in accordance with its terms, subject to applicable laws affecting creditors' rights generally, and, in the event the issuer of such credit instrument is not a domestic entity, an opinion of foreign counsel. In addition, the use of an irrevocable letter of credit shall be subject to receipt of an opinion of counsel acceptable to JEA and the Credit Enhancer, if any, for the Bonds Additionally Secured by the Initial Subaccount and in form and substance satisfactory to JEA and the Credit Enhancer, if any, for the Bonds Additionally Secured by the Initial Subaccount to the effect that payments under such letter of credit would not constitute avoidable preferences under Section 547 of the U.S. Bankruptcy Code or similar state laws with avoidable preference provisions in the event of the filing of a petition for relief under the U.S. Bankruptcy Code or similar state laws by or against JEA.
- The obligation to reimburse the issuer of a reserve fund credit (f) instrument for any fees, expenses, claim or draws upon such reserve fund credit instrument shall be subordinate to the payment of debt service on the Bonds. Subject to the second and third succeeding sentences, the right of the issuer of a reserve fund credit instrument to payment or reimbursement for claims or draws under such reserve fund credit instrument and to payment or reimbursement of its fees and expenses shall be on a parity with the cash replenishment of the Initial Subaccount. The reserve fund credit instrument shall provide for a revolving feature under which the amount available thereunder will be reinstated to the extent of any reimbursement of draws or claims paid. If the revolving feature is suspended or terminated for any reason, the right of the issuer of the reserve fund credit instrument to reimbursement will be subordinated to cash replenishment of the Initial Subaccount to an amount equal to the difference between the full original amount available under the reserve fund credit instrument and the amount then available for further draws or claims. If (i) the issuer of a reserve fund credit instrument becomes insolvent or (ii) the issuer of a reserve fund credit instrument defaults in its payment obligations thereunder or (iii) the claims-paying ability of the issuer of the insurance policy or surety bond falls below the Highest Rating Category (as rated by any Rating Agency) or (iv) the rating of the issuer of the letter of credit falls below the Second Highest Rating Category (as rated by any Rating Agency), the obligation to reimburse the issuer of the reserve fund credit instrument shall be subordinate to the cash replenishment of the Initial Subaccount.

- If (i) the revolving reinstatement feature described in the preceding (g) clause (f) is suspended or terminated or (ii) the rating of the claims paying ability of the issuer of the surety bond or insurance policy falls below the Highest Rating Category (as rated by any Rating Agency) or (iii) the rating of the issuer of the letter of credit falls below the Second Highest Rating Category (as rated by any Rating Agency), JEA shall either (X) deposit into the Initial Subaccount an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subaccount to equal the Debt Service Reserve Requirement for the Initial Subaccount, such amount to be paid over the ensuing five years in equal installments deposited at least semi-annually or (Y) replace such instrument with a surety bond, insurance policy or letter of credit meeting the requirements in any of clauses (a) through (c) above within six months of such occurrence. In the event (1) the rating of the claims-paying ability of the issuer of the surety bond or insurance policy falls below "A" or (2) the rating of the issuer of the letter of credit falls below "A" or (3) the issuer of the reserve fund credit instrument defaults in its payment obligations or (4) the issuer of the reserve fund credit instrument becomes insolvent, JEA shall either (X) deposit into the Initial Subaccount an amount sufficient to cause the cash or Investment Securities on deposit in the Initial Subaccount to equal to Debt Service Reserve Requirement for the Initial Subaccount, such amount to be paid over the ensuing year in equal installments on at least a monthly basis or (Y) replace such instrument with a surety bond, insurance policy or letter of credit meeting the requirements in any of clauses (a) through (c) above within six months of such occurrence.
- (h) Where applicable, the amount available for draws or claims under the reserve fund credit instrument may be reduced by the amount of cash or value of Investment Securities deposited in the Initial Subaccount pursuant to clause (X) of the final sentence of the preceding clause (g).
- (i) In the event that a reserve fund credit instrument shall be deposited into the Initial Subaccount as aforesaid, any amounts owed by JEA to the issuer of such reserve fund credit instrument as a result of a draw thereon or a claim thereunder, as appropriate, shall be included in any calculation of debt service requirements required to be made pursuant to the District Energy System Resolution for purposes of the additional bonds test and the rate covenant contained in the District Energy System Resolution.
- (j) The beneficiary of any reserve fund credit instrument shall ascertain the necessity for a claim or draw upon such reserve fund credit instrument and provide notice to the issuer of the reserve fund credit instrument in accordance with its terms prior to each interest payment date for the Bonds of any Initial Subaccount Additionally Secured Bonds.
- (k) Cash on deposit in the Initial Subaccount shall be used (or investments purchased with such cash shall be liquidated and the proceeds applied as required) prior to any drawing on any reserve fund credit instrument. If and to the extent that more than one reserve fund credit instrument is deposited in the Initial Subaccount, drawings thereunder and repayments of costs associated therewith shall be made on a pro rata basis, calculated by reference to the maximum amounts available thereunder.

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#### **Rate Stabilization Fund**

Each month JEA shall transfer from the Rate Stabilization Fund to the Revenue Fund the amount budgeted for transfer into such Fund for the then current month as set forth in the then current Annual Budget or the amount otherwise determined by JEA to be deposited into such Fund for the month.

At any time and from time to time JEA may transfer for deposit in the Rate Stabilization Fund from any source such amounts as JEA deems necessary or desirable; such amounts to be applied for purposes of the Rate Stabilization Fund in accordance with the District Energy System Resolution; provided, however, any such amounts deposited into the Rate Stabilization Fund pursuant to this paragraph shall not constitute or be deemed to constitute Revenues for any purpose of the District Energy System Resolution.

JEA may, from time to time, withdraw amounts on deposit in the Rate Stabilization Fund and (i) transfer such amounts to any other Fund or Account established under the District Energy System Resolution, (ii) use such amounts to purchase or redeem Bonds, or (iii) use such amounts to otherwise provide for the payment of Bonds or interest thereon.

#### **Renewal and Replacement Fund**

Amounts in the Renewal and Replacement Fund shall be applied to the Costs of the System, the payment of extraordinary operation and maintenance costs and contingencies and payments with respect to the prevention or correction of any unusual loss or damage in connection with all or part of the System, all to the extent not paid as Operation and Maintenance Expenses or from the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA. Amounts in the Renewal and Replacement Fund also may be applied (a) to the purchase, redemption, payment or provision for payment of Bonds or interest thereon or (b) upon determination of the Governing Body, to the payment of the costs of enlargements, extensions, improvements and replacements of capital assets of any other utility system owned and operated by JEA and not constituting a part of the System.

If and to the extent provided in the Supplemental Resolution authorizing Bonds of a Series or Subordinated Indebtedness, amounts from the proceeds of such Bonds or Subordinated Indebtedness may be deposited in the Renewal and Replacement Fund for any purpose of such Fund.

No payments shall be made from the Renewal and Replacement Fund if and to the extent that the proceeds of insurance or other moneys recoverable as the result of damage, if any, are available to pay the costs otherwise payable from such Fund.

If at any time the amounts in the Debt Service Account or any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund shall be less than the current requirements of such Account or subaccount, respectively, then JEA shall transfer from the Renewal and Replacement Fund for deposit in the Debt Service Account or such separate subaccount(s) in the Debt Service Reserve Account, as the case may be, the amount necessary to make up such deficiency (or, if the amount in said Fund shall be less than the amount necessary to make up the deficiencies with respect to the Debt Service Account and all of the separate subaccounts in the Debt Service Reserve Account, then the amount in said Fund shall be applied first to make up the deficiency in the Debt Service Account, and any balance remaining shall be applied ratably to make up the deficiencies with respect to the separate subaccounts in the Debt Service Reserve Account, in proportion to the deficiency in each such subaccount).

If at any time the amounts in the Subordinated Indebtedness Fund shall be less than the current requirement of such Fund and the amounts on deposit in the Debt Service Account and each separate subaccount in the Debt Service Reserve Account in the Debt Service Fund shall equal the current

requirements of such Account and subaccounts, respectively, and such amounts are not required for the payment of Operation and Maintenance Expenses, then JEA shall transfer from the Renewal and Replacement Fund for deposit in the Subordinated Indebtedness Fund the amount necessary (or all the moneys in the Renewal and Replacement Fund if less than the amount necessary) to make up such deficiency.

#### **Additional Bonds**

JEA may issue one or more series of additional Bonds for any lawful purpose of JEA relating to the System. All such Bonds will be payable from the Trust Estate pledged pursuant to the District Energy System Resolution and secured thereby on a parity with all other Bonds. In addition, each series of Bonds may be additionally secured by amounts on deposit in a separate subaccount in the Debt Service Reserve Account in the Debt Service Fund established under the District Energy System Resolution (which may be the Initial Subaccount therein). Set forth below are certain conditions applicable to the issuance of additional Bonds:

Certificates of Authorized Officers. The issuance of each series of additional Bonds (other than Refunding Bonds and Reimbursement Obligations) is conditioned upon the execution by an Authorized Officer of JEA of a certificate: (1) setting forth the amounts of Net Revenues for any 12 consecutive month period within the 24 consecutive months immediately preceding the date of issuance of the additional Bonds of the series with respect to which such certificate is being given; and (2) stating that such Net Revenues for such 12 consecutive month period is at least equal to the greater of (X) 115 percent of the Average Annual Aggregate Adjusted System Debt Service (calculating such Average Annual Aggregate Adjusted System Debt Service with respect to the Bonds of all series then Outstanding and the additional Bonds of the series with respect to which such certificate is given) or (Y) the sum of (i) the Average Annual Aggregate Adjusted Debt Service (calculated as aforesaid) and (ii) the amount most recently determined to be required to be deposited in the Renewal and Replacement Fund for the then current, or a previous, Fiscal Year; provided, however, that the Net Revenues for such 12 month period may be adjusted for the purposes of such certificate (a) to reflect for such period revisions in the rates, fees, rentals and other charges of JEA for the product and services of the System made after the commencement of such period and preceding the date of issuance of such additional Bonds; (b) to reflect any increase in Net Revenues due to any new facilities of the System having been placed into use and operation subsequent to the commencement of such period and prior to the date of issuance of such additional Bonds; and (c) to include an amount equal to the average annual contribution to Net Revenues for the first three full Fiscal Years commencing after the date of acquisition thereof, estimated to be made by facilities anticipated to be acquired and expected to be placed into use and operation within two years of the date of such certificate.

**Debt Service Reserve.** If, at JEA's option, any series of additional Bonds is to be additionally secured by amounts on deposit in the Initial Subaccount in the Debt Service Reserve Account in the Debt Service Fund established under the District Energy System Resolution, the issuance of the additional Bonds of such series is further conditioned upon the deposit to the Initial Subaccount of moneys or reserve fund credit instruments, or a combination thereof, in an amount such that the balance in such Subaccount equals the Debt Service Reserve Requirement for such Subaccount calculated immediately after the delivery of such Bonds.

**No Default**. In addition, Bonds of any series other than Refunding Bonds may be issued only if JEA certifies that upon the issuance of such series JEA will not be in default in the performance of any of the covenants, conditions, agreements or provisions contained in the District Energy System Resolution.

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#### **Subordinated Indebtedness**

JEA may, at any time, or from time to time, issue Subordinated Indebtedness for any lawful purpose of JEA related to the System, which Subordinated Indebtedness shall be payable out of, and may be secured by a pledge of, such amounts in the Subordinated Indebtedness Fund as may from time to time be available for the purpose of payment thereof; *provided*, *however*, that any pledge shall be, and shall be expressed to be, subordinate in all respects to the pledge of the Trust Estate created by the District Energy System Resolution as security for the Bonds.

#### **Investment of Certain Funds**

Unless further limited as to maturity by the provisions of a Supplemental Resolution, moneys held in the Funds and Accounts established under the District Energy System Resolution may be invested and reinvested by JEA in Investment Securities which will provide moneys not later than such times as shall be needed for payments to be made from such Funds and Accounts. In making any investment in any Investment Securities with moneys in any Fund or Account established under the District Energy System Resolution and held by JEA, JEA may combine such moneys with moneys in any other Fund or Account held by JEA, but solely for purposes of making such investment in such Investment Securities.

Interest (net of that which represents a return of accrued interest paid in connection with the purchase of any investment) earned on any moneys or investments in such Funds and Accounts, other than the Construction Fund, shall be paid into the Revenue Fund. Interest earned on any moneys or investments in the Construction Fund shall be held in such Fund for the purposes thereof or, upon written determination of an Authorized Officer of JEA, paid into the Revenue Fund.

Nothing contained in the District Energy System Resolution shall prevent JEA, to the extent permitted by law, from entering into securities lending agreements or bonds borrowed agreements ("lending agreements") with banks which are members of the Federal Deposit Insurance Corporation, having capital stock, surplus and undivided earnings aggregating at least \$25,000,000 and government bond dealers recognized as primary dealers by the Federal Reserve Bank of New York, secured by securities, which are obligations described in the definition of Investment Securities; provided that each such lending agreement (i) is in commercially reasonable form and is for a commercially reasonable period, and (ii) results in a transfer to JEA of legal title to, or a grant to JEA of a prior perfected security interest in, identified securities which are obligations described in the definition of Investment Securities and which are free and clear of any claims by third parties and are segregated in a custodial or trust account held by a third party (other than the borrower) as the agent solely of, or in trust solely for the benefit of, JEA; provided that such securities acquired or pledged pursuant to such lending agreements shall have a current market value not less than 102 percent of the market value of the securities loaned by JEA under such agreement. Any Investment Securities loaned by JEA under any such agreement shall be released from the lien of the pledge of the Trust Estate created under the District Energy System Resolution, but only if all rights of JEA under the lending agreement (including, but not limited to, the monetary obligations to JEA of the bank and/or government bond dealer party to such agreement) and any related collateral agreement and all rights of JEA to the identified securities transferred or pledged to JEA in connection therewith are substituted for the securities loaned, and such rights of JEA are declared to be subject to the lien of the pledge of the Trust Estate created under the District Energy System Resolution to the same extent that the loaned Investment Securities formerly were subject.

#### Redemption

In the case of any redemption of Bonds, JEA shall give written notice to the Bond Registrar(s) therefor and the Paying Agents of the redemption date, of the Series, and of the principal amounts of the Bonds of each maturity of such Series and of the Bonds of each interest rate within a maturity to be

redeemed (which Series, maturities, interest rates within a maturity and principal amounts thereof to be redeemed shall be determined by JEA in its sole discretion, subject to any limitations with respect thereto contained in the District Energy System Resolution or any Supplemental Resolution authorizing the Series of which such Bonds are a part). Such notice shall be filed with such Bond Registrars and the Paying Agents for the Bonds to be redeemed at least 40 days prior to the redemption date (or such shorter period (a) as shall be specified in the Supplemental Resolution authorizing the Series of the Bonds to be redeemed or (b) as shall be acceptable to such Bond Registrars and Paying Agents). In the event notice of redemption shall have been given, and unless such notice shall have been revoked or shall cease to be in effect in accordance with the terms thereof, there shall be paid on or prior to the redemption date to the appropriate Paying Agents an amount which, in addition to other moneys, if any, available therefor held by such Paying Agents, will be sufficient to redeem on the redemption date at the Redemption Price thereof, plus interest accrued and unpaid to the redemption date, all of the Bonds to be redeemed.

#### Covenant as to Rates, Fees and Other Charges

JEA shall at all times fix, establish, maintain, charge and collect rates, fees and charges for the use or the sale of the output, capacity or service of the System which shall be sufficient to provide Net Revenues in each Bond Year which shall be at least equal to the greater of (i) 115 percent of the Aggregate Debt Service for such Bond Year; provided, however, that any Principal Installment which is a Refundable Principal Installment may be excluded from Aggregate Debt Service for purposes of the foregoing but only to the extent that JEA intends to pay such Principal Installment from sources other than Revenues, and (ii) the amount which, together with other available funds, shall be sufficient for the payment of: (a) the amount to be paid during such Bond Year into the Debt Service Account in the Debt Service Fund (other than amounts required to be paid into such Account out of the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); (b) the amount, if any, to be paid during such Bond Year into each separate subaccount in the Debt Service Reserve Account in the Debt Service Fund (other than amounts required to be paid into any such subaccount out of the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); (c) the amount, if any, to be paid during such Bond Year into the Subordinated Indebtedness Fund (other than amounts required to be paid into such Fund out of the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); (d) the amount, if any, to be paid during such Bond Year into the Renewal and Replacement Fund (other than amounts required to be paid into such Fund out of the proceeds of Bonds, Subordinated Indebtedness or other evidences of indebtedness of JEA); and (e) all other charges and liens whatsoever payable out of Revenues during such Bond Year.

JEA will not furnish or supply or cause to be furnished or supplied any use, output, capacity or service of the System, free of charge to any person, firm or corporation, public or private. However, JEA shall not be required to charge the City, including its departments, agencies or instrumentalities, for any use, output, capacity or service of the System to the extent (and only to the extent) that the cost of such use, output, capacity or service is included in the rates, fees or charges imposed by JEA on all customers of the System or a specified class or classes or category or categories thereof. Except as provided in the preceding sentence, whenever the City, including its departments, agencies and instrumentalities, shall avail itself of the product, facilities or services provided by the System, or any part thereof, the same rates, fees or charges applicable to other customers receiving like services under similar circumstances shall be charged to the City and any such department, agency or instrumentality. Such charges shall be paid as they accrue, and the City shall transfer to JEA sufficient sums to pay such charges. Such charges shall be paid as they accrue, and the City shall transfer to JEA sufficient sums to pay such charges. Whenever JEA shall avail itself of the product, facilities or services provided by the System, or any part thereof, for the use or benefit of another of JEA's utility systems JEA shall fairly allocate the costs of such product, facilities or services and charge to such other utility system such costs. The revenues so received from the City or charged by JEA to such other utility system shall be

deemed to be Revenues derived from the operation of the System, and shall be applied, deposited and accounted for in the same manner as other Revenues derived from operation of the System.

The rate covenant provision of the District Energy System Resolution described above will not apply to the 2013 Series A Bonds prior to certain events. See "Excluded Provisions" herein.

#### **Certain Other Covenants**

Creation of Liens and Sales and Lease of Property. JEA shall not issue any bonds, notes, debentures or other evidences of indebtedness of similar nature, other than the Bonds, payable out of or secured by a security interest in or pledge of the Trust Estate or any portion thereof, any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund or other moneys, securities or funds held or set aside by JEA or by the Fiduciaries under the District Energy System Resolution and shall not create or cause to be created any lien or charge on the Trust Estate or any portion thereof, any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund or such moneys, securities or funds; provided, however, that nothing contained in the District Energy System Resolution shall prevent JEA from issuing, if and to the extent permitted by law, (a) Bond Anticipation Notes or other evidences of indebtedness payable out of, and which may be secured by a pledge of (i) the proceeds of sale of Bonds or investment income therefrom, or (ii) amounts in the Construction Fund derived from the proceeds of sale of said Bond Anticipation Notes or investment income therefrom as may from time to time be available for payment of such Bond Anticipation Notes or other evidences of indebtedness (including redemption premiums, if any, and interest thereon) as part of the Costs of the System, or (iii) Revenues to be derived on and after such date as the pledge of the Revenues provided in the District Energy System Resolution shall be discharged and satisfied as provided in the District Energy System Resolution, or (b) Subordinated Indebtedness.

No part of the System shall be sold, mortgaged, leased or otherwise disposed of, except as follows:

- (a) JEA may dispose of, sell or exchange at any time and from time to time any property or facilities constituting part of the System only if (i) JEA shall determine that such property or facilities are not needed or useful in the operation of the System, or (ii) the net book value of the property or facilities disposed of, sold or exchanged is not more than 15 percent of the net book value of the property and facilities of the System, or (iii) there shall be filed with the records of JEA a certificate of the Consulting Engineer stating, in its opinion, that the disposal, sale or exchange of such property or facilities will not materially impair the ability of JEA to comply during the current or any future Fiscal Year with the rate covenant described under "Covenant as to Rates, Fees and Other Charges." The proceeds of any sale or exchange of any property or facilities constituting a part of the System not used to acquire other property necessary or desirable for the safe or efficient operation of the System shall forthwith be deposited in the Revenue Fund; *provided*, *however*, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the District Energy System Resolution;
- (b) JEA may lease or make contracts or grant licenses for the operation of, or make arrangements for the use of, or grant easements or other rights with respect to, any part of the System; *provided* that any such lease, contract, license, arrangement, easement or right (i) does not impede the operation by JEA or its agents of the System and (ii) does not materially adversely affect the rights or security of the Holders of the Bonds under the District Energy System Resolution. Any payments received by JEA

under or in connection with any such lease, contract, license, arrangement, easement or right in respect of the System or any part thereof shall constitute Revenues.

- The limitations imposed upon JEA by clauses (a) and (b) above shall not apply to any disposition of property by JEA where: (i) such property is leased back to JEA under a lease having a term of years (including renewal options) (X) of not less than 75 percent of the remaining useful life of the property as estimated by JEA computed from the date of disposition and lease if such property is disposed of by sale or a lease for more than 90 percent of the remaining estimated useful life or any other means of disposition except as set forth in the following clause (Y), or (Y) 75 percent of the term of the lease out by JEA if such property is disposed of by a lease for less than 90 percent of the useful life of the property so estimated, (ii) fair value to JEA (as determined by JEA) is received by JEA for the property subject to such transaction, and (iii) there shall have been delivered to the Governing Body a Counsel's Opinion to the effect that the disposition and lease will not have a material adverse effect on the interests of the Holders of Outstanding Bonds (in rendering such opinion, such counsel may rely on such certifications of (a) any banking or financial institution serving as financial advisor to JEA, as to financial and economic matters, (b) the Consulting Engineer, as to matters within its field of expertise and (c) such other experts, as to matters within their fields of expertise as it, in its reasonable judgment, determines necessary or appropriate). The proceeds of any such transaction not used to acquire other property necessary or desirable for the safe or efficient operation of the System shall forthwith be deposited in the Revenue Fund; provided, however, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the District Energy System Resolution;
- (d) JEA may permanently discontinue the acquisition or construction of any portion of the System as provided in the District Energy System Resolution; and
- (e) JEA may acquire by lease or lease purchase additions and improvements to the System. The agreement pursuant to which such lease or lease purchase is made may provide that upon termination of such lease or lease purchase JEA shall be obligated to return the property subject to such lease or lease purchase, or such portion thereof as has not been fully paid for, to the lessor or its designee.

Insurance. JEA shall at all times keep or cause to be kept the properties of the System which are of an insurable nature and of the character usually insured by those operating properties similar to such properties of the System insured against loss or damage by fire and from other causes customarily insured against and in such relative amounts as are usually obtained. JEA shall at all times maintain or cause to be maintained insurance or reserves against loss or damage from such hazards and risks to the person and property of others as are usually insured or reserved against by those operating properties similar to the properties of the System. JEA shall also use its best efforts to maintain or cause to be maintained any additional or other insurance which it shall deem necessary or advisable to protect its interests and those of the Holders of the Bonds. Any such insurance shall be in the form of policies or contracts for insurance with insurers of good standing and shall be payable to JEA.

**Reconstruction; Application of Insurance Proceeds; Condemnation Awards.** If any useful portion of the System shall be damaged or destroyed or taken by any governmental authority under the power of eminent domain or otherwise ("Condemnation"), JEA shall, as expeditiously as possible, continuously and diligently prosecute or cause to be prosecuted the reconstruction or replacement thereof, unless there shall be filed with the records of JEA a certificate of an Authorized Officer of JEA setting forth a determination by JEA that, taking into account all relevant facts and circumstances, including, if

and to the extent JEA deems appropriate, the advice of the Consulting Engineer as to engineering matters, its attorneys as to legal matters and other consultants and advisors, such reconstruction or replacement is not in the interest of JEA and the Holders of the Bonds. Except as provided in the District Energy System Resolution, the proceeds of any insurance paid or award received on account of such damage, destruction (other than any business interruption loss insurance or insurance proceeds deposited in the Construction Fund pursuant to the District Energy System Resolution) or Condemnation shall be held by JEA in a special account and made available for, and to the extent necessary be applied to, the cost of such reconstruction or replacement. Pending such application, such proceeds may be invested by JEA in Investment Securities which mature not later than such times as shall be necessary to provide moneys when needed to pay such costs of reconstruction or replacement. Interest earned on such account or investments shall be deposited in the Revenue Fund. Any such proceeds not applied within 36 months after receipt thereof by JEA to repairing or replacing damaged, destroyed or taken property, or in respect of which notice in writing of intention to apply the same to the work of repairing or replacing the property damaged, destroyed or taken shall not have been filed with the records of JEA within such 36 months, or which JEA shall at any time determine are not to be so applied, unless otherwise applied, shall, upon written determination of an Authorized Officer of JEA, be deposited in the Revenue Fund; provided, however, that the amount of any such deposit to the Revenue Fund shall not constitute or be deemed to constitute Revenues for any purpose of the District Energy System Resolution. Notwithstanding the foregoing, in the event that payments for any such repairing or replacing of property damaged, destroyed or taken prior to the availability of proceeds of insurance or Condemnation therefor are made from the Renewal and Replacement Fund, or from other funds of JEA not held in any Fund or Account established pursuant to the District Energy System Resolution, such proceeds when received shall be deposited in the Renewal and Replacement Fund to the extent of such payments therefrom, or shall be paid over to JEA, free and clear of any trust, lien or pledge securing the Bonds or otherwise existing under the District Energy System Resolution, as appropriate.

If the proceeds of insurance or Condemnation authorized by this Section to be applied to the reconstruction or replacement of any portion of the System are insufficient for such purpose, the deficiency may be supplied out of moneys in the Renewal and Replacement Fund.

The proceeds of business interruption loss insurance, if any, shall be paid into the Revenue Fund.

Additional Utility Functions. JEA may expand the utility functions of the System as permitted by the proviso contained in the definition of "System," only if JEA files with the books and records of JEA a certified copy of resolutions of the Governing Body to the effect that the addition of such utility functions (a) will not impair the ability of JEA to comply during the current or any future Fiscal Year with the provisions of the District Energy System Resolution, including specifically the rate covenant described under "Covenant as to Rates, Fees and other Charges" above and (b) will not materially adversely affect the rights of the Holders of the Bonds. In making the determinations to be set forth in such resolutions, the Governing Body may rely upon such certificates and opinions of its Consulting Engineer, independent certified public accountants, bond counsel, financial advisors or other appropriate advisors as the Governing Body shall deem necessary or appropriate.

#### **Events of Defaults; Remedies**

If one or more of the following Events of Default shall happen: (i) if default shall be made in the due and punctual payment of the principal or Redemption Price of any Bond when and as the same shall become due and payable, whether at maturity or by call for redemption, or otherwise (determined without giving effect to any payments made with funds provided by any Credit Enhancer pursuant to any Credit Enhancement); (ii) if default shall be made in the due and punctual payment of any installment of interest on any Bond or the unsatisfied balance of any Sinking Fund Installment therefor (except when such Sinking Fund Installment is due on the maturity date of such Bond), when and as such interest installment

or Sinking Fund Installment shall become due and payable (determined without giving effect to any payments made with funds provided by any Credit Enhancer pursuant to any Credit Enhancement) and such default shall continue for a period of 30 days; (iii) if default shall be made by JEA in the performance or observance of any other of the covenants, agreements or conditions on its part in the District Energy System Resolution or in the Bonds contained, and such default shall continue for a period of 60 days after written notice thereof to JEA by the Holders of not less than 10 percent in principal amount of the Bonds Outstanding; (iv) if there shall occur the dissolution (without a successor being named to assume the rights and obligations) or liquidation of JEA or the filing by JEA of a voluntary petition in bankruptcy, or adjudication of JEA as a bankrupt, or assignment by JEA for the benefit of its creditors, or the entry by JEA into an agreement of composition with its creditors, or the approval by a court of competent jurisdiction of a petition applicable to JEA in any proceeding for its reorganization instituted under the provisions of the Bankruptcy Code, as amended, or under any similar act in any jurisdiction which may now be in effect or hereafter enacted; or (v) if an order or decree shall be entered, with the consent or acquiescence of JEA, appointing a receiver or receivers of the System, or any part thereof, or of the rents, fees, charges or other revenues therefrom, or if such order or decree, having been entered without the consent or acquiescence of JEA, shall not be vacated or discharged or stayed within 90 days after the entry thereof; then, and in each and every such case, so long as such Event of Default shall not have been remedied, unless the principal of all the Bonds shall have already become due and payable, the Holders of not less than 25 percent in principal amount of the Bonds Outstanding (by notice in writing to JEA), may declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable, anything contained to the contrary in the District Energy System Resolution or in any of the Bonds notwithstanding; provided, however, that in the event that a Supplemental Resolution authorizing Bonds for which Credit Enhancement is being provided provides that the principal of such Bonds, and the accrued interest thereon, may not be declared due and payable immediately (nor such declaration be rescinded and annulled, as provided in the following sentence) without the consent in writing of the Credit Enhancer therefor, then such Bonds, and the interest accrued thereon, shall not become due and payable immediately as aforesaid (nor may such declaration be rescinded and annulled, as provided in the following sentence) without such written consent, and, in that event, the remedies available to the Holders of such Bonds (or such Credit Enhancer, on behalf of such Holders) shall be limited to those set forth in the District Energy System Resolution. The right of the Holders of not less than 25 percent in principal amount of the Bonds to make such declaration as aforesaid, however, is subject to the condition that if, at any time after such declaration, but before the Bonds shall have matured by their terms, all overdue installments of interest upon the Bonds, together with interest on such overdue installments of interest to the extent permitted by law and all other sums then payable by JEA under the District Energy System Resolution (except the principal of, and interest accrued since the next preceding interest date on, the Bonds due and payable solely by virtue of such declaration) shall either be paid by or for the account of JEA or provision shall be made for such payment, and all defaults under the Bonds or under the District Energy System Resolution (other than the payment of principal and interest due and payable solely by reason of such declaration) shall be made good or adequate provision shall be made therefor, then and in every such case the Holders of 25 percent in principal amount of the Bonds Outstanding, by written notice to JEA, may rescind such declaration and annul such default in its entirety, but no such rescission or annulment shall extend to or affect any subsequent default or impair or exhaust any right or power consequent thereon. See "Action by Credit Enhancer When Action by Holders of Bonds Required" herein.

During the continuance of an Event of Default, JEA, shall apply all moneys, securities, funds and Revenues held or received by JEA under the District Energy System Resolution (other than amounts on deposit in any separate subaccount in the Debt Service Reserve Account in the Debt Service Fund) as follows and in the following order: (i) to the payment of the amounts required for Operation and Maintenance Expenses and for the reasonable renewals, repairs and replacements of the System necessary

in the judgment of JEA to prevent a loss of Revenues; (ii) to the payment of the interest and principal or Redemption Price then due on the Bonds, as follows: (a) unless the principal of all the Bonds shall have become or have been declared due and payable (1) first to the payment to the persons entitled thereto of all installments of interest then due in the order of the maturity of such installments, together with accrued and unpaid interest on the Bonds theretofore called for redemption, and, if the amount available shall not be sufficient to pay in full any installment or installments maturing on the same date, then to the payment thereof ratably, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and (2) second to the payment to the persons entitled thereto of the unpaid principal or Redemption Price of any Bonds which shall have become due, whether at maturity or by call for redemption, in the order of their due dates, and, if the amount available shall not be sufficient to pay in full all the Bonds due on any date, then to the payment thereof ratably, according to the amounts of principal or Redemption Price due on such date, to the persons entitled thereto, without any discrimination or preference; or (b) if the principal of all the Bonds shall have become or have been declared due and payable, to the payment of the principal and interest then due and unpaid upon the Bonds without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds; and (iii) to the payment of principal, redemption price and interest then due on Subordinated Indebtedness in accordance with the Supplemental Resolution(s) authorizing such Subordinated Indebtedness.

During the continuance of an Event of Default, JEA shall apply all amounts on deposit in each separate subaccount in the Debt Service Reserve Account in the Debt Service Fund as follows and in the following order: (a) unless the principal of all of the Bonds shall have become or have been declared due and payable, (1) first to the payment to the persons entitled thereto of all installments of interest then due on the Bonds of each Additionally Secured Series secured by such separate subaccount in the order of the maturity of such installments, together with accrued and unpaid interest on the Bonds of such Additionally Secured Series theretofore called for redemption, and, if the amount available shall not be sufficient to pay in full any such installment or installments maturing on the same date, then to the payment thereof ratably, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and (2) second to the payment to the persons entitled thereto of the unpaid principal or sinking fund Redemption Price of any Bonds of such Additionally Secured Series which shall have become due, whether at maturity or by call for redemption, in the order of their due dates, and, if the amount available shall not be sufficient to pay in full all such Bonds due on any date, then to the payment thereof ratably, according to the amounts of principal or sinking fund Redemption Price due on such date, to the persons entitled thereto, without any discrimination or preference; or (b) if the principal of all of the Bonds shall have become or have been declared due and payable, to the payment of the principal and interest then due and unpaid upon the Bonds of each Additionally Secured Series secured by such separate subaccount without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any such Bond over any other such Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or preference except as to any difference in the respective rates of interest specified in such Bonds.

If and whenever all overdue installments of interest on all Bonds, together with the reasonable and proper charges, expenses and liabilities of the Fiduciaries, and all other sums payable by JEA under the District Energy System Resolution including the principal and Redemption Price of and accrued unpaid interest on all Bonds which shall then be payable by declaration or otherwise, shall either be paid by or for the account of JEA, and all defaults under the District Energy System Resolution or the Bonds shall be made good, JEA and the Holders shall be restored, respectively, to their former positions and

rights under the District Energy System Resolution. No such restoration of JEA and the Holders to their former positions and rights shall extend to or affect any subsequent default under the District Energy System Resolution or impair any right consequent thereon.

#### **Powers of Amendment**

Any modification or amendment of the District Energy System Resolution and of the rights and obligations of JEA and of the Holders of the Bonds thereunder, in any particular, may be made by a Supplemental Resolution, with the written consent given as provided in the District Energy System Resolution (i) of the Holders of not less than a majority in principal amount of the Bonds affected by such modification or amendment Outstanding at the time such consent is given, and (ii) in case the modification or amendment changes the terms of any Sinking Fund Installment, of the Holders of not less than a majority in principal amount of the Bonds of the particular Series and maturity entitled to such Sinking Fund Installment and Outstanding at the time such consent is given; provided, however, that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like Series and maturity remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this Section. No such modification or amendment shall permit a change in the terms of redemption or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. For the purpose of this Section, a Series shall be deemed to be affected by a modification or amendment of the District Energy System Resolution if the same adversely affects or diminishes the rights of the Holders of Bonds of such Series. JEA may in its discretion determine whether or not in accordance with the foregoing powers of amendment Bonds of any particular Series or maturity or any particular Commercial Paper Notes or Medium-Term Notes would be affected by any modification or amendment of the District Energy System Resolution and any such determination shall, absent manifest error, be binding and conclusive on JEA and all Holders of Bonds. For the purpose of this Section, a change in the terms of redemption of any Outstanding Bond shall be deemed only to affect such Bond, and shall be deemed not to affect any other Bond. For the purpose of this Section, the Holders of any Bonds may include the initial Holders thereof, regardless of whether such Bonds are being held for resale. See "Action by Credit Enhancer When Action by Holders of Bonds Required" herein.

#### **Amendment to District Energy System Resolution**

For any one or more of the following purposes and at any time or from time to time, a Supplemental Resolution of JEA may be adopted, which, upon its adoption and compliance with the applicable provisions of the District Energy System Resolution, shall be fully effective in accordance with its terms: (a) to close the District Energy System Resolution against, or provide limitations and restrictions in addition to the limitations and restrictions contained in the District Energy System Resolution on, the authentication and delivery of Bonds or the issuance of other evidences of indebtedness; (b) to add to the covenants and agreements of JEA in the District Energy System Resolution other covenants and agreements to be observed by JEA which are not contrary to or inconsistent with the District Energy System Resolution as theretofore in effect; (c) to add to the limitations and restrictions in the District Energy System Resolution other limitations and restrictions to be observed by JEA which are not contrary to or inconsistent with the District Energy System Resolution as theretofore in effect; (d) to authorize Bonds of a Series and, in connection therewith, specify and determine the matters and things referred to in Article II, and also any other matters and things relative to such Bonds which are not contrary to or inconsistent with the District Energy System Resolution as theretofore in effect, or to amend, modify or rescind any such authorization, specification or

determination at any time prior to the first authentication and delivery of such Bonds; (e) to provide for the issuance, execution, delivery, authentication, payment, registration, transfer and exchange of Bonds in coupon form payable to bearer or in uncertificated form, and, in connection therewith, to specify and determine any matters and things relative thereto; (f) to confirm, as further assurance, any security interest or pledge under, and the subjection to any security interest or pledge created or to be created by, the District Energy System Resolution of the Revenues or of any other moneys, securities or funds; (g) if and to the extent authorized in a Supplemental Resolution authorizing an Additionally Secured Series of Bonds, to specify the qualifications of any provider of an obligation similar to a surety bond, insurance policy or letter of credit for deposit into the particular subaccount in the Debt Service Reserve Account securing the Bonds of such Additionally Secured Series; (h) to modify any of the provisions of the District Energy System Resolution in any other respect whatever; provided that (i) such modification shall be, and be expressed to be, effective only after all Bonds of each Series Outstanding at the date of the adoption of such Supplemental Resolution shall cease to be Outstanding, and (ii) such Supplemental Resolution shall be specifically referred to in the text of all Bonds of any Series authenticated and delivered after the date of the adoption of such Supplemental Resolution and of Bonds issued in exchange therefor or in place thereof; and (j) to authorize Subordinated Indebtedness and, in connection therewith, specify and determine any matters and things relative to such Subordinated Indebtedness which are not contrary to or inconsistent with the District Energy System Resolution as theretofore in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first authentication and delivery of such Subordinated Indebtedness.

## Supplemental Resolutions Effective Upon Delivery of Counsel's Opinion as to No Material Adverse Effect

For any one or more of the following purposes and at any time or from time to time, a Supplemental Resolution may be adopted, which, upon (i) delivery of a Counsel's Opinion to the effect that the provisions of such Supplemental Resolution will not have a material adverse effect on the interests of the Holders of Outstanding Bonds (in rendering such opinion, such counsel may rely on such certifications of (a) any banking or financial institution serving as financial advisor to JEA, as to financial and economic matters, (b) the Consulting Engineer, as to matters within its field of expertise and (c) such other experts, as to matters within their fields of expertise as it, in its reasonable judgment, determines necessary or appropriate) and (ii) compliance with the applicable provision of the District Energy System Resolution, shall be fully effective in accordance with its terms: to cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the District Energy System Resolution; to insert such provisions clarifying matters or questions arising under the District Energy System Resolution as are necessary or desirable and are not contrary to or inconsistent with the District Energy System Resolution as theretofore in effect; or to make any other modification to or amendment of the District Energy System Resolution which such counsel in its reasonable judgment shall determine will not have a material adverse effect on the interests of Holders of the Bonds.

Notwithstanding any other provision of the District Energy System Resolution, in determining whether the interests of the Holders of Outstanding Bonds are materially adversely affected, such counsel shall consider the effect on the Holders of any Bonds for which Credit Enhancement has been provided without regard to such Credit Enhancement.

#### **Defeasance**

The pledge of moneys and securities created by the District Energy System Resolution and all covenants, agreements and other obligations of JEA to the Holders will cease, terminate and become void and be discharged and satisfied whenever all Bonds and interest due or to become due thereon are paid in full. If any Bonds are paid in full, such Bonds shall cease to be entitled to any lien, benefit or security under the District Energy System Resolution, and all covenants, agreements and obligations of

JEA to the Holders of such Bonds will cease, terminate and become void and be discharged and satisfied. Bonds are deemed to have been paid and are not entitled to the lien, benefit and security of the District Energy System Resolution whenever the following conditions (or such other conditions as may be set forth in the Supplemental Subordinated Resolution authorizing such Bonds) are met: (i) in case any Bonds are to be redeemed prior to their maturity, JEA has given to the Escrow Agent therefor instructions to give notice of redemption therefor, (ii) there has been deposited with such Escrow Agent either moneys or Defeasance Securities the principal of and interest on which when due will provide moneys which, together with other moneys, if any, also deposited, will be sufficient to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on such Bonds, and (iii) in the event such Bonds are not to be redeemed or paid at maturity within the next succeeding 60 days, JEA has given such Escrow Agent instructions to give a notice to the Holders of such Bonds that the above deposit has been made and that such Bonds are deemed to have been paid and stating the maturity or redemption date upon which moneys are expected to be available for the payment of the principal or Redemption Price, if applicable, on said Bonds.

For purposes of determining whether Variable Rate Bonds shall be deemed to have been paid prior to the maturity or redemption date thereof, as the case may be, by the deposit of moneys, or Defeasance Securities and moneys, if any, in accordance with the provisions of the District Energy System Resolution, the interest to come due on such Variable Rate Bonds on or prior to the maturity date or redemption date thereof, as the case may be, shall be calculated at the maximum rate permitted by the terms thereof; *provided*, *however*, that if on any date, as a result of such Variable Rate Bonds having borne interest at less than such maximum rate for any period, the total amount of moneys and Defeasance Securities on deposit with the Escrow Agent for the payment of interest on such Variable Rate Bonds is in excess of the total amount which would have been required to be deposited with the Escrow Agent on such date in respect of such Variable Rate Bonds in order to satisfy the provisions of the District Energy System Resolution, the Escrow Agent shall, if requested by JEA, pay the amount of such excess to JEA free and clear of any trust, lien or pledge securing the Bonds or otherwise existing under the provisions of the District Energy System Resolution.

Option Bonds shall be deemed to have been paid in accordance with the provisions of the District Energy System Resolution only if, in addition to satisfying the requirements described in clauses (i) and (ii) of the first paragraph hereof, there shall have been deposited with the Escrow Agent moneys in an amount which shall be sufficient to pay when due the maximum amount of principal of and premium, if any, and interest on such Bonds which could become payable to the Holders of such Bonds upon the exercise of any options provided to the Holders of such Bonds; *provided*, *however*, that if, at the time a deposit is made with the Escrow Agent pursuant to provisions of the District Energy System Resolution, the options originally exercisable by the Holder of an Option Bond are no longer exercisable, such Bond shall not be considered an Option Bond for purposes of this paragraph. If any portion of the moneys deposited with the Escrow Agent for the payment of the principal of and premium, if any, and interest on Option Bonds is not required for such purpose the Escrow Agent shall, if requested by JEA, pay the amount of such excess to JEA free and clear of any trust, lien or pledge securing said Bonds or otherwise existing under the Subordinated Electric System.

## Action by Credit Enhancer When Action by Holders of Bonds Required

Except as otherwise provided in a Supplemental Resolution authorizing Bonds for which Credit Enhancement is being provided, if not in default in respect of any of its obligations with respect to Credit Enhancement for the Bonds of a Series, or a maturity within a Series, the Credit Enhancer for, and not the actual Holders of, the Bonds of a Series, or a maturity within a Series or an interest rate within a maturity, for which such Credit Enhancement is being provided, shall be deemed to be the Holder of Bonds of any Series, or maturity within a Series or an interest rate within a maturity, as to which it is the Credit Enhancer at all times for the purpose of (i) giving any approval or consent to the effectiveness of

any Supplemental Resolution or any amendment, change or modification of the District Energy System Resolution, which requires the written approval or consent of Holders; *provided*, *however*, that the provisions of this Section shall not apply to any change in the terms of redemption or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto and (ii) giving any approval or consent, exercising any remedies or taking any other action following the occurrence of an Event of Default under the District Energy System Resolution.

### Special Provisions Relating to Capital Appreciation Bonds, Deferred Income Bonds and Reimbursement Obligations

The principal and interest portions of the Accreted Value of Capital Appreciation Bonds or the Appreciated Value of Deferred Income Bonds becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments made under the definitions of Debt Service, Accrued Aggregate Debt Service, Adjusted Aggregate Debt Service and Aggregate Debt Service only from and after the date (the "Calculation Date") which is one year prior to the date on which such Accreted Value or Appreciated Value, as the case may be, becomes so due, and the principal and interest portions of such Accreted Value or Appreciated Value shall be deemed to accrue in equal daily installments from the Calculation Date to such due date.

For the purposes of (i) receiving payment of the Redemption Price if a Capital Appreciation Bond is redeemed prior to maturity, or (ii) receiving payment of a Capital Appreciation Bond if the principal of all Bonds is declared immediately due and payable following an Event of Default or (iii) computing the principal amount of Bonds held by the Holder of a Capital Appreciation Bond in giving to JEA any notice, consent, request, or demand pursuant to the District Energy System Resolution for any purpose whatsoever, the principal amount of a Capital Appreciation Bond shall be deemed to be its then current Accreted Value.

For the purposes of (i) receiving payment of the Redemption Price if a Deferred Income Bond is redeemed prior to maturity, or (ii) receiving payment of a Deferred Income Bond if the principal of all Bonds is declared immediately due and payable following an Event of Default or (iii) computing the principal amount of Bonds held by the Holder of a Deferred Income Bond in giving to JEA any notice, consent, request, or demand pursuant to the District Energy System Resolution for any purpose whatsoever, the principal amount of a Deferred Income Bond shall be deemed to be its then current Appreciated Value.

Except as otherwise provided in a Supplemental Resolution authorizing a Series of Reimbursement Obligations, for the purposes of (i) receiving payment of a Reimbursement Obligation, whether at maturity, upon redemption or if the principal of all Bonds is declared immediately due and payable following an Event of Default or (ii) computing the principal amount of Bonds held by the Holder of a Reimbursement Obligation in giving to JEA any notice, consent, request, or demand pursuant to the District Energy System Resolution for any purpose whatsoever, the principal amount of a Reimbursement Obligation shall be deemed to be the actual principal amount that JEA shall owe thereon, which shall equal the aggregate of the amounts advanced to, or on behalf of, JEA in connection with the Bonds of the Series or maturity or interest rate within a maturity for which such Reimbursement Obligation has been issued to evidence JEA's obligation to repay any advances or loans made in respect of the Credit Enhancement or liquidity support provided for such Bonds, less any prior repayments thereof.

# JEA WATER AND SEWER SYSTEM AND DISTRICT ENERGY SYSTEM BONDS SUBJECT TO CONTINUING DISCLOSURE UNDERTAKINGS\*

JEA has entered into continue disclosure undertakings with respect to the following bonds to provide certain information to the Municipal Securities Rulemaking Board not later than the June 1 following the end of each Fiscal Year.

#### WATER AND SEWER SYSTEM REVENUE BONDS

#### Water and Sewer System Revenue Bonds, 2006 Series B

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$5,740,000	Variable	46613P SX5	2021	\$4,860,000	Variable	46613P SZ0
2020	9,195,000	Variable	46613P SY3	2022	5,055,000	Variable	46613P TA4

## Water and Sewer System Revenue Bonds, 2009 Series B

Maturity Date (October 1)	Principal Amount	Interest Rate			
2019	\$8.915.000	3.750%	46613P XJ0		

## Water and Sewer System Revenue Bonds, 2010 Series A

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2033	\$27,550,000	6.210%	46613P XS0
2044	55,565,000	6.310	46613P XT8

#### Water and Sewer System Revenue Bonds, 2010 Series B

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$1,730,000	5.200%	46613P YB6	2023	\$1,730,000	5.600%	46613P YF7
2020	1,730,000	5.300	46613P YC4	2024	1,730,000	5.650	46613P YG5
2021	1,730,000	5.400	46613P YD2	2025	1,730,000	5.700	46613P YH3
2022	1,730,000	5.500	46613P YE0				

#### Water and Sewer System Revenue Bonds, 2010 Series D

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$5,015,000	5.000%	46613P YU4	2026	\$ 3,190,000	4.000%	46613P 5C6
2023	1,110,000	5.000	46613P 5F9	2027	330,000	4.000	46613P 5G7
2024	1,165,000	5.000	46613P 5H5	2039	13,315,000	5.000	46613P 5D4

<sup>\*</sup> Note: The CUSIP numbers listed in this APPENDIX E are provided for the convenience of bondholders. JEA is not responsible for the accuracy or completeness of such numbers.

## Water and Sewer System Revenue Bonds, 2010 Series E

Maturity	Maturity									
Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Date (October 1)	Principal Amount	Interest Rate	CUSIP Number			
2023	\$1,235,000	5.000%	46613P 6M3	2029	\$ 115,000	4.125%	46613P 6C5			
2025	675,000	5.000	46613P 5Y8	2029	955,000	5.000	46613P 6J0			
2027	75,000	4.000	46613P 6A9	2030	155,000	4.200	46613P 6D3			
2027	690,000	5.000	46613P 6G6	2030	740,000	5.000	46613P 6K7			
2028	65,000	4.000	46613P 6B7	2039	2,895,000	4.500	46613P 5Z5			
2028	970.000	5,000	46613P 6H4							

#### Water and Sewer System Revenue Bonds, 2010 Series F

Maturity				Maturity			
Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
				•			
2019	\$2,395,000	3.900%	46613P C46	2025	\$ 1,385,000	5.000%	46613P D29
2020	1,035,000	4.000	46613P C53	2026	2,975,000	5.287	46613P D60
2021	330,000	4.150	46613P C61	2027	3,070,000	5.487	46613P D78
2022	490,000	4.300	46613P C79	2030	5,360,000	5.637	46613P D52
2023	250,000	4.550	46613P C87	2040	24,305,000	5.887	46613P D37
2024	500,000	4.700	46613P C95				

## Water and Sewer System Revenue Bonds, 2012 Series A

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$ 1.070.000	4.000%	46613P H66	2029	\$ 5,420,000	5.000%	46613P 7Z3
2023	4,345,000	4.000	46613P 7J9	2029	250,000	3.625	46613P J80
2024	2,205,000	3.000	46613P J31	2030	95,000	4.000	46613P 7S9
2024	4,410,000	5.000	46613P 7T7	2030	4,655,000	5.000	46613P 8A7
2025	970,000	4.000	46613P 7M2	2030	325,000	3.750	46613P J98
2025	1,450,000	5.000	46613P 7U4	2031	50,000	4.000	46613P L46
2026	5,000	4.000	46613P 7N0	2031	11,105,000	5.000	46613P 8B5
2026	3,270,000	5.000	46613P 7V2	2031	65,000	3.800	46613P K21
2027	195,000	3.375	46613P 7P5	2032	2,915,000	4.000	46613P K39
2027	4,730,000	4.250	46613P 7X8	2032	9,190,000	5.000	46613P 7W0
2028	95,000	4.000	46613P 7Q3	2033	4,160,000	5.000	46613P 8C3
2028	5,095,000	4.250	46613P 7Y6	2037	7,510,000	4.125	46613P K88
2028	140,000	3.500	46613P 7K6	2037	21,085,000	4.500	46613P 8D1
2029	20,000	4.000	46613P 7R1	2041	58,350,000	4.250	46613P 7L4

# Water and Sewer System Revenue Bonds, 2012 Series B

Maturity				Maturity			
Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$1,280,000	4.000%	46613P P91	2027	\$ 1,700,000	3.000%	46613P Q90
2021	1,365,000	2.250	46613P Q33	2032	1,175,000	3.375	46613P R24
2022	1,400,000	2.500	46613P Q41	2032	960,000	5.000	46613P 8L3
2023	1,445,000	2.750	46613P Q58	2034	20,000,000	3.700	46613P R57
2024	545,000	5.000	46613P 8J8	2034	6,565,000	5.000	46613P 8M1
2025	575,000	5.000	46613P 8K5	2037	34,610,000	3.850	46613P R65
2026	1,650,000	3.000	46613P Q82				

## Water and Sewer System Revenue Bonds, 2013 Series A

Maturity		Maturity									
Date	Principal	Interest	CUSIP	Date	Principal	Interest	CUSIP				
(October 1)	Amount	Rate	Number	(October 1)	Amount	Rate	Number				
2019	\$12,580,000	5.000%	46613P T97	2025	\$490,000	4.500%	46615S AH1				
2023	3,005,000	5.000	46615S AF5	2026	510,000	4.500	46615S AJ7				
2024	460,000	4.500	46615S AG3	2027	530,000	4.500	46615S AK4				

# Water and Sewer System Revenue Bonds, 2014 Series A

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2010	A A 0= 7 000	<b>-</b> 00001	144100 004	2020	<b>44.22</b> 0.000		144150 555
2019	\$ 2,875,000	5.000%	46613P 2R6	2029	\$11,250,000	5.000%	46615S BE7
2019	2,750,000	4.000	46613P Y34	2029	560,000	3.500	46615S BL1
2020	5,610,000	2.000	46613P Y42	2030	17,505,000	4.000	46613P 2L9
2021	5,255,000	2.250	46613P Y59	2030	85,000	3.625	46615S BM9
2022	4,415,000	2.500	46613P Y67	2031	8,010,000	4.000	46613P 2S4
2023	2,585,000	5.000	46613P 2D7	2031	70,000	3.625	46613P Z74
2023	3,535,000	2.750	46613P Y75	2032	8,025,000	4.000	46613P 2T2
2024	14,980,000	5.000	46613P 2E5	2032	445,000	3.750	46613P Z82
2024	3,850,000	3.000	46615S BF4	2033	8,385,000	4.000	46613P 2U9
2025	8,860,000	5.000	46615S BA5	2033	500,000	3.800	46613P Z90
2025	2,065,000	3.125	46615S BG2	2034	9,180,000	4.000	46613P 2V7
2026	9,825,000	5.000	46615S BB3	2034	145,000	3.850	46613P 2A3
2026	450,000	3.250	46615S BH0	2035	10,450,000	4.000	46613P 2W5
2027	9,875,000	5.000	46615S BC1	2036	2,935,000	4.000	46615S AZ1
2027	685,000	3.300	46615S BJ6	2040	27,620,000	4.000	46613P 2C9
2028	10,490,000	5.000	46615S BD9	2040	18,970,000	4.000	46613P 2M7
2028	720,000	3.375	46615S BK3				

# Water and Sewer System Revenue Bonds, 2017 Series A

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2022	\$14.005.000	5.000%	46613P 3B0	2033	\$11.230.000	4.000%	46613P 3N4
2023	23,905,000	5.000	46613P 3C8	2034	1,900,000	3.125	46613P 3P9
2024	15,480,000	5.000	46613P 3D6	2034	9,000,000	4.000	46613P 3Q7
2025	23,215,000	5.000	46613P 3E4	2035	8,940,000	3.250	46613P 3R5
2026	23,490,000	5.000	46613P 3F1	2035	10,545,000	4.000	46613P 3S3
2027	24,780,000	5.000	46613P 3G9	2036	23,235,000	3.250	46613P 3T1
2028	24,665,000	5.000	46613P 3H7	2037	16,160,000	3.375	46613P 3U8
2029	26,025,000	5.000	46613P 3J3	2037	1,625,000	4.000	46613P 3V6
2030	11,435,000	5.000	46613P 3K0	2039	29,305,000	4.000	46613P 3W4
2031	17,455,000	5.000	46613P 3L8	2041	15,000,000	3.500	46613P 4P8
2032	16,175,000	5.000	46613P 3M6	2041	13,205,000	3.375	46613P 3X2

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#### WATER AND SEWER SYSTEM SUBORDINATED REVENUE BONDS

## Water and Sewer System Subordinated Revenue Bonds, 2010 Series A

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$2,790,000	5.000%	46613P B39

#### Water and Sewer System Subordinated Revenue Bonds, 2010 Series B

Maturity Date (October 1)	Principal	Interest	CUSIP
	Amount	Rate	Number
2023	\$490,000	5.000%	46615S BW7
2024	780,000	5.000	46615S BX5
2025	300,000	4.000	46615S BY3
2025	490,000	5.000	46615S BZ0

#### Water and Sewer System Subordinated Revenue Bonds, 2012 Series B

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	
2020	Ф. 565.000	2.2500/	46612B B00	
2030	\$ 565,000	3.250%	46613P R99	
2030	1,335,000	5.000	46615S CD8	
2032	525,000	3.500	46613P S23	
2032	600,000	5.000	46615S CE6	
2034	1,455,000	5.000	46615S CF3	
2037	13,605,000	3.875	46613P S31	
2043	11,600,000	4.000	46613P 2Y1	

## Water and Sewer System Subordinated Revenue Bonds, 2013 Series A

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$2,595,000	2.125%	46613P V78	2025	\$2,475,000	4.000%	46615S CT3
2019	2,770,000	5.000	46613P W85	2026	700,000	4.125	46615S CU0
2021	5,310,000	5.000	46613P X27	2027	1,335,000	4.250	46615S CV8
2022	5,120,000	5.000	46613P X35	2028	1,350,000	5.000	46615S CW6
2023	1,795,000	3.375	46615S CR7	2029	1,410,000	5.000	46615S CX4
2024	350,000	3.750	46615S CS5				

#### Water and Sewer System Subordinated Revenue Bonds, 2017 Series A

Maturity				Maturity			
Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2021	\$ 950,000	5.000%	46613P 3Y0	2028	\$3,770,000	5.000%	46613P 4G8
2022	2,975,000	5.000	46613P 3Z7	2029	5,930,000	5.000	46613P 4H6
2023	8,170,000	5.000	46613P 4A1	2030	2,125,000	5.000	46613P 4J2
2024	5,500,000	5.000	46613P 4B9	2031	1,745,000	5.000	46613P 4K9
2025	3,500,000	2.750	46613P 4D5	2032	3,595,000	5.000	46613P 4L7
2025	8,050,000	5.000	46613P 4C7	2033	5,815,000	5.000	46613P 4M5
2026	1,920,000	5.000	46613P 4E3	2034	1,190,000	3.250	46613P 4N3
2027	3,705,000	5.000	46613P 4F0				

# DISTRICT ENERGY SYSTEM BONDS

# <u>District Energy System Refunding Revenue Bonds, 2013 Series A (Federally Taxable)</u>

Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number	Maturity Date (October 1)	Principal Amount	Interest Rate	CUSIP Number
2019	\$1,690,000	2.065%	46615M AJ0	2024	\$ 1,930,000	3.394%	46615M AP6
2020	1,725,000	2.415	46615M AK7	2025	1,995,000	3.544	46615M AQ4
2021	1,770,000	2.694	46615M AL5	2026	2,065,000	3.694	46615M AR2
2022 2023	1,815,000 1,870,000	3.000 3.244	46615M AM3 46615M AN1	2030 2034	9,135,000 10,830,000	4.238 4.538	46615M AS0 46615M AT8

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