

treatment plant (the "Murphree Plant") possessing a rated peak day capacity of 54 Mgd. Treatment processes include lime-softening, recarbonation, filtration, chlorination and fluoridation. The Murphree Plant's design allows for expansion to at least 60 Mgd of capacity at the plant site without interruption of treatment or service. The System renewed its consumptive use permit ("CUP") in September 2014 which will expire on September 10, 2034. The water system also includes a total of 19.5 million gallons of water storage capacity, comprised of pumped ground storage and elevated tanks.

Service Area

The water system serves customers within the City limits and in the immediate surrounding unincorporated area. Comprehensive land use plans for the Gainesville urban area mandate connection of new construction to the water system for all but very low density residential developments. Much of the water system's growth is in areas served by Clay for electricity or redevelopment of areas with higher density development. The area presently served includes approximately 118 square miles and approximately 74% of the County's total population. The University of Florida and a small residential development in Alachua are the only wholesale water sales customers.

Customers

The System has experienced average customer growth of 1.0% per year over the last five years. The System has extension policies and connection fees for providing water supply services to new developments appropriately designed to assure that new customers do not impose rate pressure on existing customers. The following tabulation shows the average number of water customers for the fiscal years ended September 30, 2014 through and including 2018.

	Fiscal Years ended September 30,				
	2014	2015	2016	2017	2018
Customers (Average)	70,300	70,903	71,546	72,136	73,043

Most of the System's individual water customers are residential. Commercial and industrial customers comprised approximately 8.7% of the 72,136 average customers in the fiscal year ended September 30, 2018, and 61% of all water sales revenues were from residential customers.

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Below are the top ten water customers of the System are outlined in the table below.

<u>Rank</u>	<u>Customer</u>	<u>% of Water Revenue</u>
1	University of Florida	5.2%
2	GRU	1.4
3	North Florida Regional Medical Center	0.8
4	Alachua County Public Schools	0.7
5	VA Medical Center	0.6
6	City of Gainesville	0.6
7	UF Health/Shands Teaching Hospital and Clinics	0.6
8	Celebration Pointe Holdings LLC	0.6
9	Alachua County Board of Commissioners	0.5
10	Sivance LLC	0.4
	Top 10 Water Customers	11.4%
	Fiscal Year 2018 Water Revenue* (000)	\$36,868

*Management prepared breakout of each business unit revenues (unaudited).

Water Treatment and Supply

The System's water supply is groundwater obtained from a well field that includes 16 wells which tap into a confined portion of the Floridan aquifer. Groundwater is treated at the Murphree Plant prior to distribution and eventual use. Water treatment and supply facilities are planned based on the need to provide reserve capacity under extreme conditions of extended drought, with attendant maximum demands for water and lowered aquifer water levels. Under these design conditions, current water treatment and supply facilities are adequate through at least 2034. No limitation of supply imposed by the aquifer's sustained yield has been identified by groundwater studies to date.

Water treatment at the Murphree Plant consists of softening to protect the distribution system and improve customer satisfaction, fluoridation for improved cavity protection in young children, filtration, and chlorination for protection from microbial contamination. Specific treatment processes include sulfide oxidation, lime softening, pH stabilization, filtration, fluoridation, and chlorination. The plant is permitted for a maximum daily flow of 54 Mgd. Treated water is collected in a clearwell for transfer to ground storage reservoirs prior to distribution. The filter system has been upgraded with two additional filter cells to provide additional treatment capacity. The System has been upgrading plant components that are outdated or at or near the end of the operating lives in order to ensure the reliability and longevity of the plant. One such upgrade is replacing the electrical system at the water plant. This project will replace the original large electrical equipment, generator, conductors, and construct a new electrical building at the plant. The original equipment which was installed in 1974 has reached the end of its serviceable life and requires replacement to ensure the continued reliable operation of the Murphree Plant. The project will be completed in fiscal year 2019 costing approximately \$11 million and is included in the System's 6 year capital budget.

Raw water requirements for the water system are supplied by sixteen (16) deep wells drilled into the Floridan aquifer. Vertical turbine pumps raise the water and deliver it to the Murphree Plant for treatment. In 2000, the System, along with the local water management districts, purchased a conservation easement over 7,000 acres of silvicultural property immediately to the north and northwest of the Murphree

Plant. The conservation easement provides protection to the System's sixteen (16) existing wells and will accommodate the construction of additional wells. Existing and future wells within the conservation easement are anticipated to yield a minimum of 60 Mgd of water supply to match the long-term future treatment capacity of the Murphree Plant site.

The System's groundwater withdrawals are permitted through the St. Johns River Water Management District ("SJRWMD") and Suwannee River Water Management District ("SRWMD"). The SJRWMD and the SRWMD have adopted a 20-year water supply plan through 2035. The intent of the water supply planning process is to ensure adequate water supply on a long-term basis while protecting natural resources. Computer groundwater modeling performed to date by the water management districts indicates that there may be future constraints on groundwater supplies. One of the regulatory constraints used by the water management districts and the Florida Department of Environmental Protection ("FDEP") to protect water bodies is the "minimum flows and levels" ("MFL") program. The water management districts and the FDEP have developed and are continuing to develop MFLs for individual springs, lakes and rivers to ensure that they are not adversely impacted by groundwater withdrawals. The water management districts are developing refined groundwater models to better define and evaluate potential constraints for both water supply planning and the MFL program. The System is participating in both the model development and MFL development efforts. The System is required to comply with existing and future MFLs and with water supply plans which may result in increased costs to the System. The System will comply with its consumptive use permit and meet the System's future water supply needs primarily through a combination of increased water conservation efforts and an increased use of reclaimed water.

The Cabot/Koppers Superfund site is located approximately 2 miles to the southwest of the Murphree Plant. The site includes two properties: The Cabot Carbon area, covering 50 acres on the eastern side of the site and The Koppers area, covering 90 acres on the western side of the site. The Cabot property was used primarily for producing charcoal and pine products. The Koppers property was used for wood treating. Both production facilities are owned by corporations unrelated to the System.

The EPA placed the site on the National Priorities List under the Superfund program in 1984 because of contaminated soil and groundwater resulting from facility operations. The EPA then issued a Record of Decision ("ROD") for the site in 1990 which described the plan for cleaning up the site. Actions were taken in the 1990's to contain and partially remove contamination at the site. The presence of protective geologic confining layers over the aquifer has greatly impeded the migration of contamination. However, additional investigations of the site since 2001, conducted at the urging of the System, the County and members of the community, have indicated that additional measures are needed to contain the contamination and clean up the site to ensure that the water supply is protected. Although the System is not a potentially responsible party ("PRP") for this site, it has been and intends to continue being highly proactive in protecting the City's water supply. The System has actively participated as a stakeholder working with the EPA and the PRPs for the site (Beazer East, Inc. and Cabot Corporation) to develop remediation plans. The System has assembled a team of experts in the groundwater contamination field to assist and advise the System, and to assist the System in interacting with the EPA and the PRPs to ensure that the appropriate steps are taken. The System regularly tests both the raw and finished water at the well field and there has been no trace of contamination. Based on the System's request, an extensive Floridan aquifer groundwater monitoring network has been constructed at the Koppers portion of the site and is routinely monitored.

In February 2011, the EPA issued a second ROD which described additional cleanup actions needed at the site. The ROD includes a multiple barrier approach for containing contamination at the

Koppers portion of the site: (1) areas containing creosote will be treated with two different in situ treatment technologies to immobilize the creosote; (2) a slurry wall will be constructed around the most contaminated areas; and (3) contaminated groundwater from the Floridan aquifer below the site is being pumped and treated. The EPA and Beazer East, Inc., the PRP for the Koppers portion of the site, have entered into a consent decree which requires the PRP to implement the remediation described in the ROD. The consent decree has been approved by the federal district court. The consent decree has not had a material adverse effect on the System or its financial condition. Beazer is currently implementing the cleanup plan per the ROD and it is anticipated that the cleanup of the Koppers portion of the site will be completed by 2021. The System and its expert consultants are continuing to be highly engaged in the design and implementation of the cleanup site.

Additional cleanup measures will also be implemented for the Cabot portion of the site. These measures will include construction of subsurface slurry walls around contaminated areas and may include additional soil removal. It is anticipated that remediation of this site will also be completed by 2021.

The System performs routine monitoring of drinking water quality at the Murphree Plant and in the water distribution system in accordance with the EPA and state regulations including EPA Lead and Copper Rule. The System has been in compliance with the Lead and Copper Rule since its inception 26 years ago. The drinking water supply does not contain lead. Also, since the drinking water supply comes from a limestone aquifer, the water is naturally non-corrosive which protects against lead leaching into the water from plumbing fixtures.

Transmission and Distribution

The water transmission system consists primarily of cast and ductile iron water mains from 10 to 36 inches in diameter providing a hydraulically looped system. The Murphree Plant high service pumps and the Santa Fe Repump station and two elevated storage tanks provide water flow and pressure stabilization throughout the service area. The water distribution system consists primarily of cast iron, ductile iron, and polyvinyl chloride ("PVC") water mains from 2 to 8 inches in diameter and covers a service area of approximately 118 square miles. The System not only installs new water distribution system additions, but also approves plans for and inspects private developers' water distribution systems which ultimately are deeded over to the System to become an integral part of the System's overall distribution system. The System monitors pressure in several locations throughout the distribution system to ensure that adequate pressures are maintained. In addition, the System utilizes a computer model to assess future conditions and to ensure that system improvements are constructed to ensure adequate pressures in the future.

Capital Improvement Program

The System's current five-year water capital improvement program requires approximately \$46.1 million in capital expenditures for the fiscal years of September 30, 2018 through and including 2023. A breakdown of the categories included in the five-year capital improvement program is outlined below and reflects the approved program from the fiscal year 2018 budget process. See "--Funding the Capital

Improvement Program - Additional Financing Requirements" below for more information regarding funding.

Water Capital Improvement Program

	Fiscal Years ended September 30,					
	2019	2020	2021	2022	2023	Total
Plant Improvements	\$4,600,000	\$3,950,000	\$4,215,000	\$4,215,000	\$2,445,000	\$19,425,000
Transmission and Distribution	4,120,000	4,655,000	5,355,000	5,145,000	5,395,000	24,670,000
Miscellaneous and Contingency	294,600	499,000	400,000	400,000	400,000	1,993,600
Total	\$9,014,600	\$9,104,000	\$9,970,000	\$9,760,000	\$8,240,000	\$46,088,600

The Wastewater System

The wastewater system serves most of the Gainesville urban area and consists of 673 miles of gravity sewer collection system, 170 pump stations with 153 miles of associated force main, and two major wastewater treatment plants with a combined treatment capacity of 22.4 Mgd AADF.

All of the effluent from the plants is beneficially reused either for aquifer recharge through recharge wells or groundwater recharge systems, environmental restoration, irrigation, or industrial cooling. The System is continuing to expand its reuse systems at both of its treatment plants in order to conserve groundwater resources and provide additional effluent disposal capacity expansion.

Service Area

The wastewater system service area is essentially the same as the water system service area. Similar to the water system, extension policies and connection fees for providing wastewater facilities and service to new customers are appropriately designed to protect existing customers from rate pressure that would result from adding new customers to the wastewater system. Comprehensive land use plans for the Gainesville urban area mandate connection of new construction to the wastewater system for all but very low density residential developments. Much of the wastewater system's growth is in areas served by Clay for electricity or redevelopment of areas with higher density development. The System also provides wholesale wastewater service to the City of Waldo. The wastewater system does not serve the majority of the University of Florida campus. The wastewater system hauls and treats all the biosolids generated at the University of Florida.

Customers

The System has experienced average customer growth of 1.2% per year over the last five years. The following tabulation shows the average number of wastewater customers, including reclaimed water customers, for the fiscal years ended September 30, 2014 through and including 2018.

	Fiscal Years ended September 30,				
	2014	2015	2016	2017	2018
Customers (Average)	63,501	64,121	64,781	65,591	66,483

The composition of the System's wastewater customers is predominantly residential. Commercial and industrial customers comprised approximately 6.8% of the 66,483 average customers in the fiscal year

ended September 30, 2018, and residential customers were the source of 66% of all the wastewater system's revenues in the fiscal year ended September 30, 2018.

In 2011, the System executed an agreement with the City of Waldo, Florida ("Waldo") to provide Waldo with wastewater service on a wholesale basis. Waldo currently provides wastewater service to approximately 850 of its residents. Waldo constructed a lift station and force main which collects Waldo's raw wastewater and discharges it to one of the System's existing lift stations. The facilities provide adequate capacity for Waldo to more than double its service population with future growth, which will in turn result in more revenue opportunities for the System.

Below are the top ten wastewater customers of the System are outlined in the table below.

<u>Rank</u>	<u>Customer</u>	<u>% of Wastewater Revenue</u>
1	University of Florida	1.1%
2	State of Florida Department of Children and Family Services	0.8
3	Alachua County Public Schools	0.7
4	North Florida Regional Medical Center	0.6
5	Sivance LLC	0.6
6	UF Health/Shands Teaching Hospital and Clinics	0.6
7	City of Gainesville	0.6
8	Cabot Carbon Oper Jump Start	0.5
9	VA Medical Center	0.5
10	Alachua County Board of Commissioners	0.5
	Top 10 Wastewater Customers	6.6%
	Fiscal Year 2018 Wastewater Revenue* (000)	\$46,155

*Management prepared breakout of each business unit revenues (unaudited).

Treatment

The wastewater system currently includes two major wastewater treatment facilities, the Main Street Water Reclamation Facility (the "MSWRF") and the Kanapaha Water Reclamation Facility (the "KWRF"). Currently, these facilities have a combined capacity of 22.4 Mgd AADF, which is sufficient capacity to meet projected demands through at least 2034. Although these facilities receive flow from adjacent but distinct collection areas, a pump station that allows wastewater to be routed to either the MSWRF or KWRF allows treatment capacity at both facilities to be fully utilized.

The MSWRF has a treatment capacity of 7.5 Mgd AADF and was upgraded in 1992 to include advanced tertiary activated sludge treatment process units. The plant includes influent screening and grit removal, activated sludge treatment, filtrations and disinfection. Biosolids from the plant are treated via aerobic digestion and are hauled to the KWRF facility where it is combined with KWRF sludge for beneficial reuse and/or disposal. Existing sludge treatment facilities are adequate to meet current federal sludge regulations. Effluent from the MSWRF is discharged to the Sweetwater Branch and must meet requirements of the FDEP for discharge to Class III surface waters. The MSWRF is in compliance with its National Pollutant Discharge Elimination System ("NPDES") permit. The MSWRF NPDES permit is a 5-year permit that expires March 18, 2020.

In addition, the MSWRF includes a reclaimed water pumping station and distribution system. The reclaimed water distribution system currently includes a pipeline, which provides reclaimed water to the South Energy Center where it is then used for process cooling and irrigation. See "-- The Electric System – Energy Supply System – *Generating Facilities – South Energy Center*" above. This pipeline also provides reclaimed water for pond augmentation and irrigation at the Depot Park Project (MGP remediation site) (see "- The Natural Gas System – Manufactured Gas Plant" below) and at the System's Innovation Energy Center chilled water facility (see "- Management's Discussion of System Operations – Competition" herein). The pipeline will also provide reclaimed water for other irrigation and cooling uses that develop near the pipeline corridor.

The MSWRF East Train rehabilitation and headworks projects are scheduled to be completed in or before fiscal year 2022 at an estimated cost of \$13 million, and is part of the five-year capital improvements program. The east train is the oldest treatment train at the MSWRF, originally installed in the 1960's. The mechanical components in the east train have signs of deterioration and the aerators are nearly 40 years old. This rehabilitation project will replace the clarifier mechanism, electrical gears, control panels, programmed logic control system (PLC), aerators, and rehabilitate the concrete basin structure. The existing headworks will remain operational until construction is completed and prepared for cutover. In addition, a transfer pump station will be constructed to assist in transferring wastewater flow between the two water reclamation facilities.

Under the FDEP Total Maximum Daily Load ("TMDL") regulations, FDEP assesses the water quality in water bodies and sets requirements for reduction in pollutant sources. FDEP adopted a TMDL in January 2006 which requires reductions in total nitrogen discharges from the MSWRF and other nitrogen sources. Florida's TMDL regulations allow the FDEP to negotiate basin management plans involving all of the parties affecting the water bodies. Subsequent to the adoption of this TMDL, the FDEP promulgated its Numeric Nutrient Criteria ("NNC") Rule effective September 17, 2014. The System has implemented a cooperative environmental restoration project known as the Paynes Prairie Sheetflow Restoration project in order to achieve its TMDL limits and comply with the NNC Rule. The combination of the project and the reclaimed water distribution (described above) will allow the System to beneficially reuse 100% of the MSWRF effluent.

The MSWRF NPDES permit requires the Paynes Prairie Sheetflow Restoration project be fully operational and comply with TMDL requirements by April 2019. Construction of the project was completed in 2016 and is in the start-up phase of operation, which is anticipated to last for five years. It is expected to be fully compliant with all criteria, as required, by April 2019. In conjunction with the project, the System is currently working with the FDEP to establish site specific criteria for the Sweetwater Branch Creek in accordance with the NNC Rule. The System is following established procedures for developing site specific criteria. However, the System also has a backup plan in the unlikely event that it was not able to obtain site specific criteria. The backup plan would consist of the construction of an \$8 million pipeline which would meet numeric nutrient criteria.

Another regulatory change that the System has responded to is the reuse of biosolids generated from the wastewater treatment process. Prior to 2016, the System beneficially reused its biosolids through Class B land application in accordance with FDEP and EPA requirements. However, changes in local land use ordinances made it necessary to transition to a new program that includes biosolids dewatering and use of a contractor that will process the biosolids to produce a fertilizer product. The System has completed construction on the dewatering facilities and other plant improvements to facilitate dewatering at a cost of \$17 million and is currently in full operation. In addition, enhanced screening facilities at the KWRF were

replaced to reduce solids entering the plant and thereby reducing wear and tear on the new dewatering equipment.

The KWRF is permitted to discharge into a potable zone of the Floridan aquifer. The plant was originally constructed in 1977. A capacity expansion project was completed in June 2004 to provide a total capacity of 14.9 Mgd AADF. The plant includes influent screening, grit removal, activated sludge treatment, filtration and high level disinfection. The KWRF has two distinct treatment processes incorporated into its design: a modified Ludzack-Ettinger Treatment process and a carrousel advanced wastewater treatment activated sludge system. The treatment processes conclude with filtration and disinfection prior to discharge into aquifer recharge wells and a reclaimed water distribution system. The disinfection system was recently modified to meet more stringent regulatory limits. The System consistently meets the required primary and secondary drinking water standards for discharge to recharge wells as set forth in its NPDES permit.

The Southwest Reuse Project distributes reclaimed water from the KWRF to commercial and residential customers for landscape irrigation and golf course irrigation. The System also has numerous "aesthetic water features," which provide a public amenity and wildlife habitat in addition to recharging the aquifer. All reclaimed water not reused directly recharges the Floridan aquifer through deep recharge wells that discharge to a depth of 1,000 feet.

In the fiscal years ended September 30, 2018 and 2017, the System delivered approximately 2.7 Mgd AADF and 2.9 Mgd AADF, respectively, of reclaimed water. The regional water management districts encourage the use of reclaimed water to reduce demands on groundwater. The FDEP encourages reuse as an environmentally appropriate means of effluent disposal.

Wastewater Collection

The wastewater gravity collection system consists of 15,524 manholes with 730 miles of gravity sewer, 50% of which consists of vitrified clay pipe. New facilities are primarily constructed of PVC high density polyethylene ("HDPE") pipe. The System maintains three television sealing and inspection units which are routinely employed in inspecting new additions to the System to ensure they meet specifications of the System and in inspecting older lines. The television inspections allow the System to identify segments of piping which have high infiltration and inflow or structural concerns. These pipes are restored through a process known as slip-lining, in which a cured in place fiberglass sleeve is installed in the pipe. The System performs slip-lining using its own crews. In addition, the System routinely utilizes contractors to perform slip-lining of longer segments of piping. As a result of the use of slip-lining, infiltration and inflow to the System are not excessive. The System is undergoing a comprehensive inflow and infiltration remediation effort which will include a comprehensive assessment of the System's wastewater collection system and assist in prioritizing sewer system rehabilitation projects in order to reduce inflow and infiltration into the collection system and ensure reliability of the collection system.

The force main system which routes flow to the treatment plant consists of 170 pump stations and over 153 miles of pipe. Existing lines less than 12 inches in diameter are generally constructed of PVC pipe and existing lines 12 inches in diameter and over are generally constructed of ductile iron pipe. For new construction, force mains 16 inches and smaller are generally constructed of PVC or HDPE. The System has instituted a preventative maintenance program to assure long life and efficiency at all pumping stations.

Capital Improvement Program

The System's current five-year wastewater capital improvement program requires approximately \$98.9 million in capital expenditures for the fiscal years ending September 30, 2018 through and including 2023. A breakdown of the categories included in the five-year capital improvement program is outlined below and reflects the approved program from the fiscal year 2018 budget process. See "--Funding the Capital Improvement Program - Additional Financing Requirements" below for more information regarding funding.

Wastewater Capital Improvement Program

	Fiscal Years ended September 30,					
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>Total</u>
Plant Improvements	\$6,250,000	\$7,160,000	\$8,495,000	\$3,495,000	\$3,085,000	\$28,485,000
Reclaimed Water	180,000	780,000	230,000	240,000	240,000	1,670,000
Collection System	10,178,000	9,543,000	8,474,000	7,849,000	8,449,000	44,493,000
Miscellaneous and Contingency	2,500,000	6,000,000	6,500,000	4,250,000	5,000,000	24,250,000
Total	\$19,108,000	\$23,483,000	\$23,699,000	\$15,834,000	\$16,774,000	\$98,898,000

The Natural Gas System

The natural gas system was acquired in January 1990 and since then has met the System's customers' preferences for natural gas as a cooking and heating fuel as well as provided a cost-effective DSM program alternative. The natural gas system consists primarily of underground gas distribution and service lines, six points of delivery or interconnections with FGT, and metering and measuring equipment. Liquid propane ("LP") systems are utilized for new developments that are beyond the existing natural gas distribution network. As the natural gas system is expanded, the LP systems and customer appliances are converted from LP to natural gas.

Service Area

The natural gas system services customers within the City limits and in the surrounding unincorporated area. The natural gas system covers approximately 115 square miles and provides service to 30% of the County's population. In addition, the natural gas system serves customers within the city limits of Alachua and High Springs. Service provided to Alachua represents approximately 5.9% of total retail gas sales of the System. A franchise agreement with both Alachua and Newberry were approved during fiscal year 2018. The System has also entered into franchise agreements to provide natural gas to the City of Archer ("Archer") and Hawthorne. To date, there are no budgeted funds or anticipated timelines for capital infrastructure developments into Archer or Hawthorne.

Customers

The following tabulation shows the average number of natural gas customers for the fiscal years ended September 30, 2014 through and including 2018. The majority of new single family developments in the Gainesville urban area have been connected to the System over this period.

	Fiscal Years ended September 30,				
	2014	2015	2016	2017	2018
Customers (Average)	33,780	34,152	34,496	34,942	35,389

The composition of the System's natural gas customers is predominantly residential. Commercial and industrial customers comprised approximately 4.7% of the 35,389 average customers served in the fiscal year ended September 30, 2018, while approximately 95.3% were residential customers.

Below are the top ten natural gas customers of the System are outlined in the table below.

<u>Rank</u>	<u>Customer</u>	<u>% of Gas Revenue</u>
1	University of Florida	4.4%
2	Ology Bioservices Inc.	1.4
3	Alachua County Board of Commissioners	1.3
4	UF Health/Shands Teaching Hospital and Clinics	1.1
5	Alachua County Public Schools	1.0
6	North Florida Regional Medical Center	0.8
7	RTI Biologics Inc.	0.7
8	State of Florida Department of Children and Family Services	0.6
9	Santa Fe College	0.5
10	Anderson Columbia Co. Inc.	0.4
	Top 10 Gas Customers	12.3%
	Fiscal Year 2018 Gas Revenue* (000)	\$21,279

*Management prepared breakout of each business unit revenues (unaudited).

Natural Gas Supply

Natural gas is procured and delivered in much the same manner as the System's electric generation operations. TEA purchases the commodity, optimizes pipeline capacity entitlements, and executes physical and financial hedging strategies on behalf of the System as it does for electric operations. The non-coincident occurrences of electric system and gas retail distribution ("LDC") system peak demands provide opportunities to switch electric fuels to free up pipeline capacity for the LDC and/or manage pipeline entitlements to enhance the reliability and cost performance of the gas system. The average cost of gas delivered to the System for the natural gas distribution system in the fiscal year ended September 30, 2018 was \$3.61/MMBtu. Fuel costs for the natural gas system differ from those of the electric system only in that the gas system has no fuel switching capability and must carry sufficient pipeline reserve capacity to meet peak demands, resulting in higher delivered fuel costs.

Natural Gas Distribution

The natural gas system consists of 783 miles of gas distribution mains. The predominant and standard pipe materials in service are polyethylene (591 miles) and coated steel (186 miles). All coated steel pipelines are cathodically protected using magnesium anodes. The balance of the distribution system is comprised of uncoated steel and black plastic. The replacement of these two pipeline materials has been programmed within the immediate planning/construction horizon and will be completed by the end of fiscal year 2019.

Manufactured Gas Plant

The City's natural gas system originally distributed blue water gas, which was produced in town by gasification of coal using distillate oil. Although manufactured gas was replaced by pipeline gas around 1960, coal residuals and spilt fuel contaminated soils at and adjacent to the manufactured gas plant ("MGP") site. When the natural gas system was purchased, the System assumed responsibility for the investigation and remediation of environmental impacts related to the operation of the former MGP. The System has pursued recovery for the MGP from past insurance policies and, to date, has recovered \$2.2 million from such policies. Site investigations on properties affected by MGP residuals have been completed and the System has completed limited removal actions. The System has received final approval of its proposed overall Remedial Action Plan which will entail the excavation and landfilling of impacted soils at a specially designed facility. This plan was implemented pursuant to a Brownfield Site Rehabilitation Agreement with the State. Following remediation, the property was redeveloped by the City as a park with stormwater ponds, nature trails, and recreational space, all of which were considered in the remediation plan's design. The duration of the groundwater monitoring program and that timeframe is open to the results of what the sampling data shows.

Based upon GRU's analysis of the cost to clean up this site, GRU has accrued a liability to reflect the costs associated with the cleanup effort. During fiscal years ended September 30, 2018 and 2017, expenditures which reduced the liability balance were approximately \$1.1 million each year. The reserve balance at September 30, 2018 and 2017 was approximately \$641,000 and \$814,000, respectively.

GRU is recovering the costs of this cleanup through customer charges. A regulatory asset was established for the recovery of remediation costs from customers. Through fiscal years ended September 30, 2018 and 2017, customer billings were \$1.1 million each year and the regulatory asset balance was \$11 million and \$12 million, respectively.

Although some uncertainties associated with environmental assessment and remediation activities remain, GRU believes that the current provision for such costs is adequate and additional costs, if any, will not have an adverse material effect on GRU's financial position, results of operations, or liquidity.

Capital Improvement Program

The System's current five-year natural gas capital improvement program requires approximately \$13.4 million in capital expenditures during the fiscal years ended September 30, 2018 through and including 2023. A breakdown of the categories included in the five-year capital improvement program is outlined below and reflects the approved program from the fiscal year 2018 budget process. See "--Funding the Capital Improvement Program - Additional Financing Requirements" below for more information regarding funding.

Gas Capital Improvement Program

	Fiscal Years ended September 30,					
	2019	2020	2021	2022	2023	Total
Distribution Mains	\$1,540,742	\$1,430,086	\$1,757,334	\$1,797,387	\$1,805,674	\$8,331,223
Meters, Services and Regulators	767,724	724,879	1,267,871	1,328,723	852,299	4,941,496
Miscellaneous and Contingency	25,923	25,923	32,218	33,185	34,181	151,430
Total	\$2,334,389	\$2,180,888	\$3,057,423	\$3,159,295	\$2,692,154	\$13,424,149

GRUCom

The System has been providing retail telecommunications services since 1995 under the brand "GRUCom." Services provided by GRUCom include Internet and data transport services to local businesses, government agencies, multiple dwelling units ("MDU") housing communities, various Internet service providers, and other telecommunications carriers. Additional services provided by GRUCom include tower space leases for wireless personal communications (cellular telephone) providers, public safety radio services for all the major public safety agencies operating in the County and collocation services in the System's central office. GRUCom is licensed by the FPSC as an Alternative Access Vendor and as an Alternative Local Exchange Carrier.

Service Area

GRUCom provides telecommunications and related services to customers located primarily in the Gainesville urban area and holds telecommunications licenses that allow it to provide telecommunication services throughout the state. GRUCom operates network connections to interface with all major Interexchange Carriers ("IXC") who maintain facilities in the County, as well as interconnections with both of the County's two incumbent local exchange carriers. The System, through interlocal agreements, also provides public safety radio services across the entire County.

Services Provided

The services provided by GRUCom fall primarily into the following five major product lines: telecommunications services; Internet access services; communication tower antenna space leasing; public safety radio services; and collocation services.

The telecommunications services provided by GRUCom are primarily Private Line and Special Access transport circuits (both described below) delivered in whole, or in part, on the GRUCom fiber optic network. These high bandwidth circuits are capable of carrying voice, data or video communications. Private Line circuits are point-to-point, unswitched channels connecting two or more customer locations with a dedicated communication path. Special Access circuits are also unswitched and provide a dedicated communication path, but these circuits connect a customer location to the Point of Presence of another telecommunications company. GRUCom transport services are provided at various levels ranging from 1.5 megabits per second ("Mbps") to 10 gigabit per second ("Gbps"). Part of GRUCom's business strategy is to use unbundled network elements from the incumbent local exchange carrier, AT&T, in anticipation of fiber extensions to specific service locations. GRUCom also uses the fiber optic network to provide high speed Internet access services. Business Internet and Dedicated Internet Access ("DIA") class service connections are offered at access speeds ranging from 10 Mbps up to 10 Gbps and bulk residential Internet access service is provided to participating MDU communities at speeds up to 1 Gbps under the brand name

GATOR NET. In 2017, GRUCom upgraded its bulk GATORNET services to deliver Symmetrical bandwidth, a first in the Gainesville area. GRUCom operates eleven communications towers in the Gainesville area and leases antenna space on these towers as well as on two of the System's water towers, for a total of thirteen antenna attachment sites. Two of the five transmitter sites for the countywide public safety radio system are also located on these communications towers. Wireless communications service providers lease space on the towers and, in most cases, also purchase fiber transport services from GRUCom to receive and deliver traffic at the towers. GRUCom provides transport services that carry a substantial portion of cell phone traffic in the Gainesville urban area. The GRUCom public safety radio system began operation in 2000. These services are provided over Federal Communications Commission ("FCC")-licensed 800 MHz frequencies, utilizing a trunked radio system that is compliant with the current frequency allocations enacted by the FCC in 2010 to accommodate personal communication services ("PCS") providers. The trunked radio system meets current industry standards for interagency operability. The trunked radio system consists of 22 trunked voice frequencies. Antenna sites are linked to the network controller and various dispatch centers utilizing GRUCom's transport services.

Customers

GRUCom's customer base is growing as the fiber optic network is expanded and new product offerings are introduced. Customer types vary for each GRUCom business activity.

GRUCom's fiber transport customers include other land-line telecommunications companies, cellular telecommunications companies, private commercial and industrial businesses, federal, state and local governmental agencies, public and private schools, public libraries, Santa Fe College, the University of Florida, UF Health and the University of Florida Health Science Center. As of September 30, 2018, GRUCom had a total of 499 transport circuits in service.

Internet access services are provided to other Internet service providers, local businesses, government agencies, and participating MDU housing communities. As of September 30, 2018, GRUCom had 333 Business Internet access customer connections and bulk residential Internet agreements with 41 MDU communities. GRUCom tower space leasing services are used primarily by wireless providers, which include cellular telephone and PCS companies. As of September 30, 2018, GRUCom executed 32 tower leases, for space on eleven of its thirteen antenna attachment sites with eight different lessees, including national and regional cellular service providers.

Public safety radio system customers consist solely of government entities due to restrictions on the use of the frequencies allocated to the System under licenses issued by the FCC. The primary radio system users include: the System, the Gainesville Police Department, the Gainesville Fire Rescue Department, the Gainesville Regional Transit System, the City's Public Works Department, the University of Florida Police Department, the Santa Fe College Police Department, the City of Alachua Police Department, the City of High Springs Police Department, the County's Sheriff's Office, the County's Fire Rescue Operations and the County's Public Works Departments. These users have entered into service agreements which are valid through 2020, with minimum commitments for the number of users and monthly fees per user established for voice and dispatch subscriber units. The public safety radio system is operated by GRUCom on an enterprise basis, but an interagency Radio Management Board has been established to govern user protocols, monitor system service levels, and review system changes that could increase rates. As of September 30, 2018, the public safety radio system had 2,599 subscriber units in service.

GRUCom Projected Revenue and Customer Count

	2019	2020	2021	2022	2023	2024
Telecom and Data Service Sales	\$7,733,558	\$7,964,792	\$8,117,296	\$8,514,959	\$9,080,145	\$9,648,284
TRS Sales	1,718,952	1,706,112	2,451,453	2,451,453	2,451,453	2,451,453
Tower Leasing Sales	1,767,692	1,817,517	1,868,807	1,921,609	1,975,966	2,031,927
Non-Standard Sales (Non-Recurring)	35,000	35,000	35,000	35,000	35,000	35,000
Total Revenue	\$11,255,202	\$11,523,421	\$12,472,557	\$12,923,020	\$13,542,565	\$14,166,665

Below are the top ten GRUCom customers of for the System are outlined in the table below.

<u>Rank</u>	<u>Customer</u>	<u>% of GRUCom Revenue</u>
1	GRU	12.2%
2	Alachua County Board of Commissioners	9.0
3	Verizon Wireless Personal Communications	7.3
4	Alachua County Public Schools	6.0
5	C of G	5.8
6	AT&T Wireless	4.2
7	Interstate Fibernet Inc.	4.0
8	T-Mobile USA Inc.	3.7
9	Florida Phone Systems	3.2
10	UF Health/Shands Teaching Hospital and Clinics	2.3
	Top 10 GRUCom Customers	57.8%
	Fiscal Year 2018 GRUCom Revenue* (000)	\$11,210

*Management prepared breakout of each business unit revenues (unaudited).

Description of Facilities

As of September 30, 2018, GRUCom had 543 miles of fiber optic cable installed throughout Gainesville and the County. The fiber strand count included in the cable depends on service requirements for the particular area and ranges from 12 to 144 strands. The fiber is installed in a ringed topology consisting of a backbone loop and several subtending rings. Service is provisioned on the network in two ways: for services requiring transmission through Synchronous Optical Network standard protocol, GRUCom has deployed equipment manufactured by Ciena (primarily); and for services requiring transmission through Ethernet standard protocol, GRUCom uses equipment manufactured by Cisco and Telco System. GRUCom is in the process of retiring the Cisco Systems equipment and migrating all Ethernet to the Telco System's transmission platform. The Telco Systems equipment will enable GRUCom to provide multi-protocol line switching functionality and reduce network infrastructure equipment complexity. The Ethernet protocol provides GRUCom with increased flexibility for managing bandwidth delivered to the customer. The maximum transport speed currently utilized in the fiber optic network is 10 Gbps, which is enough bandwidth to deliver more than 125,000 simultaneous phone calls (as an illustration). Bandwidth on this network is a function of the electronic equipment utilized and, with technologies such as dense wave division multiplexing, expansion of the transport capability of the

network is virtually unlimited. To exchange network traffic, GRUCom also is interconnected with other major telecommunications companies serving the Gainesville area.

The public radio system employs a Motorola 800 MHz simulcast system configured with six transmit and receive tower sites including 22 simulcast voice and two additional mutual aid channels. GRUCom is completing the process of migrating to the P25 protocol.

GRUCom maintains a point-of-presence at the Digital Realty Trust, Inc. collocation and interconnection facility located in Atlanta, Georgia (the "ATL1 data center"). The ATL1 data center provides access to hundreds of leading domestic and international carriers as well as physical connection points to the world's telecommunications networks and internet backbones. Atlanta, Georgia is a major fiber interconnection point from Florida to New York and the ATL1 data center sits on top of most of the fiber. GRUCom maintains an ultra-high bandwidth backbone transmission interconnection on diverse routes between Gainesville and the ATL1 data center to provide highly reliable Internet access to customers in Gainesville. GRUCom is also a member of the Digital Realty Internet Exchange (the "Internet Exchange"), a separate peering point in the ATL1 data center. The Internet Exchange allows GRUCom to quickly and easily exchange Internet protocol ("IP") traffic directly with over 60 of the world's largest Internet Service Providers ("ISPs"), Content Providers, Gaming Providers and Enterprises, including companies such as Google, Netflix, Apple, McAfee Akami, Hurricane Electric (a major Internet service), Sprint, Level 3 and several other Internet service providers. The Internet Exchange participants can route IP traffic efficiently, providing faster, more reliable and lower-latency internet or voice over Internet protocol ("VoIP") access to their customers, by bypassing intermediate router points so that Internet traffic may have direct access to destination networks.

GRUCom maintains a second point-of-presence at the Equinix, Inc. Network Access Point of the Americas ("NOTA") collocation and interconnection facility which is located in Miami, Florida. NOTA is one of the most significant telecommunications projects in the world. The Tier-IV facility was the first purpose-built, carrier-neutral Network Access Point and is the only facility of its kind specifically designed to link Latin America with the rest of the world. NOTA is located in downtown Miami in close proximity to numerous other telecommunications carrier facilities, fiber loops, international cable landings and multiple power grids. More than 160 global carriers exchange data at NOTA including seven Tier-1 world-wide Internet service providers. GRUCom maintains an ultra-high bandwidth backbone transmission interconnection between Gainesville and NOTA, separate from the ATL1 data center interconnection circuits, which allows GRUCom to maintain a second, fully diverse data gateway and exchange to further enhance the reliability of the Internet services provided to customers in Gainesville. In Miami, GRUCom is also connected to the FL-IX Peering facility to provide additional and duplicate peering points with various ISPs including Content Providers, Gaming Providers and enterprises similar to the Internet Exchange connection in Atlanta.

Capital Improvement Program

The System's current five-year GRUCom capital improvement program requires approximately \$10 million in capital expenditures for years ended September 30, 2018 through and including 2023. A breakdown of the categories included in the five-year capital improvement program is outlined below and reflects the approved program from the fiscal year 2018 budget process. See "--Funding the Capital

Improvement Program - Additional Financing Requirements" below for more information regarding funding.

GRUCom Capital Improvement Program

	Fiscal Years ended September 30,					<u>Total</u>
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	
GRUCom Systems	\$1,237,660	\$693,763	\$1,170,260	\$1,714,189	\$2,244,413	\$7,060,285
Special Project	500,000	-	-	-	-	500,000
Miscellaneous and Contingency	442,817	470,272	405,640	514,386	621,631	2,454,746
Total GRUCom	\$2,180,477	\$1,164,035	\$1,575,900	\$2,228,575	\$2,866,044	\$10,015,031

Rates

General

In general, the rates of municipal electric utilities in Florida are established by the governing bodies of such utilities. The governing bodies of municipal water, wastewater and natural gas utilities in Florida have exclusive jurisdiction over the setting of rates for said systems, subject only to certain statutory restrictions upon water and wastewater rates outside the municipal corporate limits. The City Commission's sole authority to set the level of the rates and charges of the System is constrained by the Resolution to set rates that comply with the rate covenant in the Resolution and takes into account recommendations of the Utilities Advisory Board regarding proposed changes in fees, rates, or charges for utility services. See "—Utilities Advisory Board" above and "SECURITY FOR THE BONDS – Rates, Fees and Charges " herein. Future projected revenue requirement changes provided in this Official Statement have been developed by the System's staff based on the most recent forecasts and operation projections available. Under Chapter 366, Florida Statutes, the FPSC has jurisdiction over municipal electric utilities only to prescribe uniform systems and classifications of accounts, to require electric power conservation and reliability, to regulate electric impact fees, to establish rules and regulations regarding cogeneration, to approve territorial agreements, to resolve territorial disputes, to prescribe rate structures, to prescribe and enforce safety standards for transmission and distribution facilities and to prescribe and require the periodic filing of reports and other data. Pursuant to the rules of the FPSC, rate structure is defined as the classification system used in justifying different rates and, more specifically the rate relationship between various customer classes, as well as the rate relationship between members of a customer class." However, the FPSC and the Florida Supreme Court have determined that, except as to rate structure, the FPSC does not have jurisdiction over municipal electric utility rates. The FPSC also has the authority to determine the need for certain new transmission and generation facilities.

Although the rates of the System are not subject to federal regulation, the National Energy Act of 1978 contains provisions which require the City to hold public proceedings to consider and determine the appropriateness of adopting certain enumerated federal standards in connection with the establishment of its retail electric rates. Such proceedings have been completed and the results currently are reflected in the System's policies and electric rate structure.

Electric System

Each of the System's various rates for electric service consists of a "base rate" component and a "fuel and purchased power adjustment" component. The base rates are evaluated annually and adjusted as required to fund projected revenue requirements for each fiscal year. The fuel and purchased power

adjustment clause provides for increases or decreases in the charge for electric energy to cover increases or decreases in the cost of fuel and purchased power to the extent such cost varies from a predetermined base of 6.5 mills per kWh. The current fuel and purchased power adjustment formula is a one-month forward-looking projected formula which is based on a true-up calculation, from the second month preceding the billing month, based on actual fuel costs valued on a weighted average accounting basis, including purchased power, and the upcoming month's estimates of fuel and purchased power costs.

The table below presents electric system base rate revenue requirements, fuel and purchased power adjustment and total residential bill changes since 2013 and Management's most recent projections of future base rate revenue requirements, fuel and purchased power adjustment and total residential bill changes.

**Electric System
Base Rate Revenue Requirements, Fuel and Purchased Power
Adjustment and Total Bill Changes⁽⁴⁾**

	Percentage Base Rate Revenue Requirements Increase/(Decrease) ⁽¹⁾	Percentage Fuel and Purchased Power Adjustment Increase/(Decrease) ⁽²⁾	Total Residential Bill Percentage Increase/(Decrease) ⁽³⁾
Historical (Fiscal Year Beginning):			
October 1, 2013	(5.60)%	37.20%	6.20%
October 1, 2014	(8.50)	17.00	0.70
October 1, 2015	0.00	(6.70)	10.00
October 1, 2016	0.00	(3.70)	(2.00)
October 1, 2017	2.00	0.00	0.90
February 1, 2018 ⁽⁴⁾	31.40	(50.00)	(8.00)
October 1, 2018	2.00	2.00	1.50
Projected (Fiscal Year Beginning): ⁽⁵⁾			
October 1, 2019	4.00%	2.00%	3.70%
October 1, 2020	2.65	2.00	2.80
October 1, 2021	2.25	2.00	2.60
October 1, 2022	3.00	2.00	2.70
October 1, 2023	2.00	2.00	2.40

(1) Change in overall system-wide non-fuel revenue requirement. Increases or decreases are applied to billing elements to reflect the most recent cost of service studies and to yield the overall revenue requirement.

(2) Historical change in weighted average retail fuel adjustment.

(3) Based on residential monthly bill at 1,000 kWh.

(4) Changes resulting from the acquisition of the DHR Biomass Plant.

(5) All changes in the System's revenue requirements are subject to approval by the City Commission, which usually occurs in conjunction with its approval of the System's annual budget.

The electric and natural gas systems use amounts on deposit in a reserve known as the "fuel adjustment levelization balance" that the System accumulates. The balance of the reserve as of September 30, 2018, was negative \$2,376,941 for both electric and natural gas combined. The balance of this fund is anticipated to carry a balance of approximately 5% of the annual fuel expense budget on an average year.

In 2014, the City Commission approved the addition of an Economic Development Rate for new and existing general service demand and large power commercial electric customers of the System in an effort to attract large, regionally competitive new commercial customers and incentivize local growth. Approval of the applicable changes to the City Code of Ordinances occurred in November 2014. The Economic Development rate allows for a 5-year, 20% discount to the base rate portion of the electric bill of a new customer who adds a load of at least 100,000 kWh per month or a 15% discount to the base rate portion of the electric bill of an existing customer who increases its baseline usage by a minimum of 20%. There is no discount on the fuel adjustment portion of the bill under this program, but the addition of load will distribute the fixed costs of the DHR Biomass Plant across a greater number of kWh, lowering the fuel adjustment for all customers. This program is base revenue neutral during the five year discount period, with additional base revenues after the discount ends. The System does not have any customers currently participating in this program.

Public roadways in Gainesville and in portions of the unincorporated areas of the County within the System's service territory are served by streetlights operated and maintained by the System, which bills the appropriate jurisdiction for payment. Currently, the City of Gainesville General Fund (the "General Fund") pays for streetlights in Gainesville. Pursuant to a 1990 agreement, the General Fund reimburses the Board of County Commissioners of the County to, in effect, pay for the streetlights in such portions of the unincorporated areas served by the System.

Rates and Charges for Electric Service

The electric rates, effective October 1, 2018, are provided below by class of service. Though the rates are functionally unbundled, they are commonly presented in a bundled format.

Residential Standard Rate

Customer charge, per month.....	\$14.25
First 850 kWh, Total charge per kWh.....	\$0.070
All kWh per month over 850, Total charge per kWh	\$0.093

Non-Residential General Service Non-Demand Rates

Customers in this class have not established a demand of 50 kW. Charges for electric service are:

Customer charge, per month.....	\$29.50
First 1,500 kWh per month, Total charge per kWh.....	\$0.093
All kWh per month over 1,500, Total charge per kWh	\$0.123

Non-Residential General Service Demand Rates

Customers in this class have established a demand of between 50 and 1,000 kW. Charges for electric service are:

Customer charge, per month.....	\$100.00
Total Demand charge, per kW	\$9.50
Total Energy charge, per kWh.....	\$0.062

Non-Residential Large Power Rates

Customers in this class have established a demand of 1,000 kW or greater. Charges for electric service are:

Customer charge, per month.....	\$350.00
Total Demand charge, per kW	\$9.75
Total Energy charge, per kWh.....	\$0.058

Customers in all classes are charged a fuel and purchased power adjustment. Chapter 203, Florida Statutes, imposes a tax at the rate of 2.5% on the gross receipts received by a distribution company for utility services that it delivers to retail consumers in the state of Florida and requires that the distribution company report and remit its Florida Gross Receipts tax to the Florida Department of Revenue on a monthly basis. All non-exempt customers residing within the City's corporate limits pay a utility tax (public service tax) of 10% on portions of their bill. All non-exempt customers not residing within the City's corporate limits are assessed a surcharge of 10% and also pay a County utility tax of 10% on portions of their bill. All non-residential taxable customers pay a State sales tax of 6.95% on portions of their bill. The minimum bill is the customer charge plus any applicable demand charge. The billing demand is defined as the highest demand (integrated for 30 minutes) established during the billing month. The City's codified rate ordinances include clauses providing for primary service metering discounts and facilities leasing adjustment.

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Comparison with Other Utilities

The table below shows the average monthly bills for electric service for certain selected Florida electric utilities, including the System. Residential bills are commonly compared at 1,000 kWh in Florida, however GRU's customers typically average closer to 800 kWh per month.

Comparison of Monthly Electric Bills⁽¹⁾

	General Service			
	Residential 1,000 kWh	Non-Demand 1,500 kWh	Demand 30,000 kWh 75 kW	Large Power 430,000 kWh 1,000 kW
Kissimmee Utility Authority	\$99.59	\$162.00	\$2,755.39	\$36,899.12
Lakeland Electric	\$102.85	\$149.52	\$2,477.70	\$34,313.56
Orlando Utilities Commission	\$106.00	\$163.90	\$2,540.00	\$34,579.00
Florida Power & Light Company	\$96.14	\$144.76	\$2,313.44	\$32,452.98
JEA	\$108.50	\$155.64	\$2,715.10	\$37,297.40
Tampa Electric Company	\$105.16	\$161.59	\$2,484.39	\$34,704.91
City of Tallahassee	\$109.07	\$140.00	\$2,653.08	\$35,907.07
Clay Electric Cooperative, Inc.	\$112.90	\$171.05	\$2,728.25	\$35,806.00
Ft. Pierce Utilities Authority	\$111.84	\$176.93	\$3,020.85	\$45,217.20
Ocala Electric Authority	\$119.20	\$175.85	\$2,972.55	\$42,593.75
Gainesville Regional Utilities	\$122.87	\$220.90	\$3,713.50	\$49,961.00
City of Vero Beach	\$122.95	\$191.41	\$3,428.15	\$48,398.40
Duke (Energy Florida)	\$121.11	\$184.80	\$2,840.82	\$39,736.02
Gulf Power Company	\$128.00	\$187.69	\$2,738.93	\$38,761.50

⁽¹⁾ Rates in effect for October 2018 applied to noted billing units, ranked by residential bills. Excludes utility taxes, sales taxes and surcharges.

Source: Prepared by the Finance Department of the System based upon published base rates and charges for the time period given with fuel costs provided by personal contact with utility representatives unless otherwise published.

Water and Wastewater System

The table below presents water system revenue requirements and total residential bill changes since 2014 and Management's most recent projections of future revenue requirements and total bill changes. The percentage increases shown represent the aggregate amount required to fund increases in projected revenue requirements for the water system.

**Water System
Revenue Requirement and Total Bill Changes**

	Percentage Revenue Requirement Increase ⁽¹⁾	Total Bill Increase ⁽²⁾
Historical		
October 1, 2014	3.75%	1.90%
October 1, 2015	3.75	10.40
October 1, 2016	3.00	2.20
October 1, 2017	0.00	0.00
October 1, 2018	0.00	0.00
Projected⁽³⁾		
October 1, 2019	1.00%	1.00%
October 1, 2020	1.00	1.00
October 1, 2021	1.00	1.00
October 1, 2022	1.00	1.00
October 1, 2023	1.00	1.00

⁽¹⁾ Change in overall revenue requirements collected from all retail customer classes from billing elements, including monthly customer service charges and water usage charges. Increases are applied to billing elements to reflect the most recent cost of service study and to yield the overall revenue requirement.

⁽²⁾ Based on monthly bill at 7 Kgal.

⁽³⁾ All changes in the System's revenue requirements are subject to approval by the City Commission, which usually occurs in conjunction with its approval of the System's annual budget.

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The table below presents wastewater system revenue requirements and total residential bill changes since fiscal year 2014 and Management's most recent projections of future revenue requirement and total bill changes. The percentage increases shown represent the aggregate amount required to fund increases in projected revenue requirements for the wastewater system.

**Wastewater System
Revenue Requirement and Total Bill Changes**

Historical	Percentage Revenue Requirement Increase ⁽¹⁾	Total Bill Increase ⁽²⁾
October 1, 2014	4.85%	4.00%
October 1, 2015	4.85	3.30
October 1, 2016	3.00	1.50
October 1, 2017	0.00	0.00
October 1, 2018	0.00	0.00
 Projected ⁽³⁾		
October 1, 2019	4.75%	4.75%
October 1, 2020	4.00	4.00
October 1, 2021	3.00	3.00
October 1, 2022	2.00	2.00
October 1, 2023	2.00	2.00

- ⁽¹⁾ Change in overall revenue requirements collected from all retail customer classes from billing elements, including monthly customer service charges and wastewater usage charges (as a function of water usage). Increases are applied to billing elements to reflect the most recent cost of service study and to yield the overall revenue requirement.
- ⁽²⁾ Based on monthly bill at 7 Kgal.
- ⁽³⁾ All changes in the System's rates are subject to approval by the City Commission, which usually occurs in conjunction with its approval of the System's annual budget.

Rates and Charges for Water and Wastewater Services

Total water and wastewater system revenues are derived from two basic types of charges which reflect costs: (a) monthly service charges and (b) connection charges. The current schedule of fees, rates and charges, combined with other revenues for the water and wastewater systems, provides sufficient funds to meet all operation and maintenance expenses, prorated debt service, and internally generated capital expense. The connection charges are designed to provide for the capital costs associated with the water and wastewater system expansion. Growth in retail revenues due to projected customer growth provides for all other increased costs.

Residential customers are subject to inverted block rates. As of October 1, 2015, the first tier pricing is applied to the first 4,000 gallons used, the second tier pricing is applied to usage between 5,000 and 16,000 gallons, and the third tier pricing is applied to usage above 16,000 gallons. A three tier billing structure has

been in place since 2001. Over time the thresholds for quantities of water billed in each block has been lowered to current break points.

The City Commission also adopted a new Multi-Family water rate as part of the fiscal year 2015 budget. The pricing for the usage charge is the same as the second tier of the three tier residential rate.

The University of Florida is charged different rates than other customers because of the City's commitment not to receive General Fund transfers from sales to the University of Florida and because the University of Florida owns and maintains its own on-campus water distribution system. The General Fund transfer policy reflects a historical commitment which enticed the University of Florida to locate in the City of Gainesville in the early 1900's. In 2004, the University of Florida rates became cost-of-service based.

Monthly Service Charges

Monthly customer charges are levied for the actual units of service rendered to individual customers. Customers pay a rate per thousand gallons of water consumed or wastewater treated, and all customers pay a monthly customer charge, as shown on Table 1 below. All wastewater customers are subject to rate surcharges for wastewater discharges which exceed normal domestic strength. Commercial customers are billed 95% of their water usage as wastewater while residential customers are billed the lesser of actual water usage or winter maximum usage, in order to better identify water used for domestic purposes for wastewater billing. Table 2 below lists the charges for water and wastewater service that will become effective October 1, 2018. These rates are unchanged from fiscal year 2018.

Table 1. Monthly Water Customer Charge by Meter Size

<u>Meter Size</u>	<u>Monthly Customer Charge</u>
5/8" and 3/4"	\$9.45
1"	9.65
1.5"	12.50
2"	20.00
3"	74.00
4"	100.00
6"	140.00
8"	200.00
10"	275.00

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Table 2. Current Monthly Charges For Water and Wastewater Services

Water Rates:	
Residential	
Customer Billing Charge	Based on meter size
Consumption Rate:	
1,000 to 4,000 gallons	\$2.45 per 1,000 gallons
5,000 to 16,000 gallons	\$3.75 per 1,000 gallons
17,000 or more gallons	\$6.00 per 1,000 gallons
Commercial	
Customer Billing Charge	Based on meter size
Consumption Rate	\$3.85 per 1,000 gallons
University of Florida	
Customer Billing Charge	Based on meter size
Consumption Rate:	
On-campus facilities	\$2.43 per 1,000 gallons
Off-campus facilities	\$3.21 per 1,000 gallons
City of Alachua ⁽¹⁾	
Customer Billing Charge	Based on meter size
Consumption Rate	\$1.62 per 1,000 gallons
Wastewater Rates:	
Residential and Commercial	
Customer Billing Charge	\$9.10 per month
All Usage ⁽²⁾	\$6.30 per 1,000 gallons

⁽¹⁾ The System provides wholesale water service to Alachua for resale to four locations.

⁽²⁾ Wastewater rates apply to all metered water consumption up to a specified maximum. The residential maximum is established for each customer based upon its winter (December or January) maximum water consumption. The non-residential maximum is 95% of metered water use.

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Comparison with Other Cities

The System's average water and wastewater charges in effect for the month of October 2018 are compared to those other Florida cities in the table below.

Comparison of Monthly Residential Water and Wastewater⁽¹⁾

	<u>Water</u>	<u>Wastewater</u>	<u>Total</u>
Gainesville Regional Utilities	\$30.50	\$53.20	\$83.70
Ocala	16.27	45.20	62.07
Lakeland	24.62	47.69	72.31
Orlando	14.43	50.37	64.48
Tampa	21.04	44.08	65.12
Jacksonville	23.37	46.33	69.70
Pensacola (ECUA)	29.02	50.64	79.66
Tallahassee	25.16	61.19	86.35
Ft. Pierce	39.92	55.31	95.23

⁽¹⁾ Comparisons are based on 7,000 gallons of metered water and 7,000 gallons of wastewater treated and rates in effect for October 2018. Excludes all taxes, surcharges, and franchise fees. Sorted in ascending order by total charges.

Source: Prepared by the Finance Department of the System based upon published rates and charges and/or personal contact with utility representatives of the applicable system.

Surcharge

Non-exempt water customers residing within the City's corporate limits are assessed a 10% utility tax. Non-exempt water customers residing outside the City's corporate limits are assessed a 25% surcharge and pay a 10% County utility tax. There is no utility tax on wastewater. However, non-exempt wastewater customers residing outside the City's corporate limits are assessed a 25% surcharge. Effective October 1, 2001, water and wastewater connection charges were subject to the 25% surcharge imposed on non-exempt customers not residing within the City's corporate limits. This surcharge on connection fees was suspended for fiscal year 2015 and was re-implemented in fiscal year 2016.

Connection Charge Methodology

Beginning October 1, 2016, GRU made a change in its assessment of connection charges to more equitably distribute the costs of demand on the System to each customer based on their anticipated demand on the System. The change is intended to be revenue neutral for the System. New single family connections and small non-residential connections will continue to pay a Minimum Connection Charge, which is similar to how GRU currently charges for these small connections. Larger non-residential connections, with an estimated use greater than 280 gallons per day, will pay a flow-based connection charge. Multi-family connections will continue to pay flow-based connection charges and are not affected by these changes.

Calculation of the estimated average water use for a non-residential customer is based on the total square footage of the business multiplied by the water use coefficient to obtain gallons per day. If the average water use is estimated to be 280 gpd or less the Minimum Connection Charge will be assessed. If the water use is estimated to be greater than 280 gpd the customer will pay a flow-based connection charge.

Effective October 1, 2018, transmission and distribution/collection system connection charges for individual lots are \$462 to connect to the water system and \$766 to connect to the wastewater system. Water and wastewater plant connection charges for individual lots are \$695 and \$2,631, respectively. The water meter installation charge is \$697 for a typical single family dwelling (requiring 3/4 inch meter). The total water system connection charges for a typical single family dwelling (requiring 3/4 inch meter) are \$1,854 for new water service and the total wastewater connection charges are \$3,397 for new wastewater service. Total water and wastewater connection charges for a typical single family dwelling are \$5,251. Additionally, effective in the fiscal year ended September 30, 2018, GRU implemented lower water and wastewater connection charges for single family homes smaller than 1,400 square feet heated and cooled. The total water connection charge for these homes is \$1,449 and the total wastewater connection charge is \$2,208. Also, there is a 25% surcharge applied to new connections located outside of the incorporated area of the City.

Infrastructure Improvement Area

The System's water and wastewater extension policy requires that new development projects pay the cost for the infrastructure improvements needed to serve them. Under this policy, developers typically design and install most of these improvements, with the System's review and approval, as part of the design and construction for their development projects. In some cases, the System may construct these improvements, with the developer reimbursing the System for the cost.

The City Commission, by adoption of Ordinance No. 110541 on April 7, 2016, established the "Innovation District Infrastructure Improvement Area." Within the designated area, the System developed a master plan for major water distribution and wastewater collection capacity improvements needed to facilitate current and anticipated future development. The System is constructing these improvements according to the master plan. The System has constructed \$1.14 million in water system improvements and \$2.34 million in wastewater collection system improvements as of the date of this Official Statement. The cost for these improvements will be recovered through "infrastructure improvement area user fees" which new development projects pay at the time of connection to the System. These user fees are calculated for each development project based on the size of the project and type of project. The user fees are set based on recovering the System's expenditures with interest over a 20 year period. The City Commission enacted Ordinance No. 160725 on March 16, 2017 increasing the fees for the improvement area.

Natural Gas System

Each of the System's various rates for natural gas service consists of a "base rate" component and a "purchased gas adjustment" component. The base rates are evaluated annually and adjusted as required to fund projected revenue requirements for each fiscal year. The purchased gas adjustment clause provides for increases or decreases in the charge for natural gas to cover increases or decreases in the cost of gas delivered to the System. The current purchased gas adjustment is calculated with a formula using a one-month forward-looking projection and a true-up of the second month preceding the actual fuel cost in the billing month.

The table below presents natural gas system base rate revenue requirements, purchased gas adjustment and total residential bill changes since 2014 and Management's most recent projections of future base rate revenue requirements, purchased gas adjustment and total residential bill changes. The percentage changes shown represent the aggregate amount required to fund changes in projected non-fuel and purchased gas revenue requirements for the natural gas system.

**Natural Gas System
Base Rate Revenue
Purchased Gas Adjustment and Total Bill Changes**

	Percentage Base Rate Revenue Increase/(Decrease) ⁽¹⁾	Percentage Purchased Gas Adjustment Revenue Increase/(Decrease) ⁽²⁾	Total Bill Increase/(Decrease) ⁽³⁾
Historical			
October 1, 2014	4.25 ⁽⁴⁾ %	4.10%	3.90%
October 1, 2015	4.75	(36.40)	(8.30)
October 1, 2016	9.00	(13.10)	4.40
October 1, 2017	0.00	0.00 ⁽⁵⁾	0.00 ⁽⁵⁾
October 1, 2018	0.00	34.08	6.10
Projected ⁽⁴⁾			
October 1, 2019	0.00%	2.00%	0.50%
October 1, 2020	0.00	2.00	0.50
October 1, 2021	0.00	2.00	0.50
October 1, 2022	0.00	2.00	0.50
October 1, 2023	0.00	2.00	0.50

⁽¹⁾ Change in overall non-fuel revenues collected from all retail customer classes from billing elements, including monthly service charges and energy usage charges ("therms"). Fuel revenue requirements are collected as a uniform charge on all therms of energy used. Increases or decreases are applied to billing elements to reflect the most recent cost of service studies and to yield the overall revenue requirement. For additional information on the MGP site, see "-- The Natural Gas System – Manufactured Gas Plant" above.

⁽²⁾ Historical purchased gas adjustment revenue increase represents the change in weighted average purchased gas adjustment.

⁽³⁾ Based on monthly residential bill at 25 therms.

⁽⁴⁾ All changes in the System's revenue requirements are subject to approval by the City Commission, which usually occurs in conjunction with its approval of the System's annual budget.

⁽⁵⁾ Includes purchase gas adjustment increase equal to \$0.23 per therm.

Rates and Charges for Natural Gas Service

The current natural gas rates, effective October 1, 2018, are provided below by class of service:

Residential Service Rate	
Customer Charge	\$9.75 per month
Non-Fuel Energy Charge	\$0.63 per therm
Small Commercial Rate	
Customer Charge.....	\$20.00 per month
Non-Fuel Energy Charge.....	\$0.62 per therm
General Firm Service Rate	
Customer Charge	\$45.00 per month
Non-Fuel Energy Charge	\$0.44 per therm
Large Volume Interruptible Rate	
Customer Charge	\$400.00 per month
Non-Fuel Energy Charge	\$0.27 per therm
Manufactured Gas Plant Cost Recovery Factor (Applied to All Rate Classes)	\$0.0556 per therm

Customers in all classes are charged a purchased gas adjustment and the Manufactured Gas Plant Cost Recovery Factor. Chapter 203, Florida Statutes, imposes a 2.5% tax based on an index price applied to the quantity of gas billed. All non-exempt customers residing within the City's corporate limits pay a City utility tax of 10% on portions of their bill. All non-exempt customers not residing within the City's corporate limits pay a 10% County utility tax on portions of their bill and a 10% surcharge on portions of their bill. All non-residential taxable customers pay a State sales tax of 6% on portions of their bill. For firm customers, the minimum bill equals the customer charge.

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Comparison with Other Utilities

The System's average natural gas charges in effect for the month of October 2017 are compared to those for eleven other municipal and private natural gas companies (based on rates effective February 2018) in the following table. The System's gas rates are among the lowest in the State.

Comparison of Monthly Natural Gas Bills⁽¹⁾

	Residential <u>25 therms</u>	General Firm <u>300 therms</u>	Large Volume <u>30,000 therms</u>
Gainesville Regional Utilities	\$34.64	\$286.68	\$19,468.00
Okaloosa Gas District	42.83	353.39	26,829.36
Tallahassee	35.85	345.24	21,607.41
Clearwater	43.50	397.00	29,050.00
City of Sunrise	44.74	378.60	19,218.65
Ft. Pierce	46.84	324.36	22,826.19
Kissimmee ⁽²⁾	50.42	379.34	30,713.80
Lakeland ⁽²⁾	50.42	379.34	30,713.80
Orlando ⁽²⁾	50.42	379.34	30,713.80
Tampa ⁽²⁾	50.42	379.34	30,713.80
Central Florida Gas	54.32	439.37	29,474.70
Pensacola	56.93	559.21	28,485.20

⁽¹⁾ Rates in effect for October 2018 applied to noted billing volume (excludes all taxes).

⁽²⁾ Service provided by People's Gas.

Source: Prepared by the Finance Department of the System based upon published base rates and charges for the time period given with fuel costs provided by personal contact with utility representatives unless otherwise published.

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Comparison of Total Monthly Cost of Electric, Gas, Water and Wastewater Services for Residential Customers in Selected Florida Locales

The following table shows comparisons of the total monthly cost for a "basket" of electric, gas, water and wastewater services for residential customers in selected Florida locales for the month of October 2017, based upon (a) typical average usage by the System's residential customers by category of service and (b) standard industry benchmarks for average usage by residential customers.

Comparison of Monthly Utility Costs⁽¹⁾

	Based Upon Typical Average Usage by Residential Customers of the System ⁽²⁾	Based Upon Standard Industry Usage Benchmarks ⁽³⁾
Tampa	\$176.77	\$227.01
Kissimmee	180.02	220.32
Orlando	180.17	221.22
Lakeland	184.39	225.58
Gainesville Regional Utilities	185.37	241.21
Jacksonville	186.68	228.62
Tallahassee	182.92	231.28
Ocala	193.12	231.70
Clay County	193.60	232.37
Vero Beach	196.37	241.70
Ft. Pierce	200.21	253.90
Pensacola	212.66	272.27

⁽¹⁾ Based upon rates in effect for October 2018 by the actual providers of the specified services in the indicated locales, applied to the noted billing units. Excludes public utility taxes, sales taxes, surcharges, and franchise fees.

⁽²⁾ Monthly costs of service have been calculated based upon typical average annual usage by residential customers of the System during the fiscal year ended September 30, 2018, as follows: for electric service: 800 kWh; for natural gas service: 20 therms; for water service: 5,000 gallons of metered water; and for wastewater service: 4,000 gallons of wastewater treated.

⁽³⁾ Monthly costs of service have been calculated based upon standard industry benchmarks for average annual usage by residential customers, as follows: for electric service: 1,000 kWh; for natural gas service: 25 therms; for water service: 7,000 gallons of metered water; and for wastewater service: 7,000 gallons of wastewater treated.

Source: Prepared by the Finance Department of the System based upon (a) in the case of electric and gas service, published base rates and charges for the time period given, with fuel costs provided by personal contact with utility representatives of the applicable system unless otherwise published and (b) in the case of water and wastewater service, published rates and charges and/or personal contact with utility representatives.

Since the System's rates for electric, water and wastewater service are designed to encourage conservation, average usage of those utility services by residential customers of the System are lower than the standard industry benchmarks for average usage by residential customers that typically are used for

rate comparison purposes. As a result, the total monthly cost of electric, gas, water and wastewater service for residential customers of the System, calculated based upon average usage by such customers, compares favorably to what the total monthly cost of such services would have been, calculated based upon such standard industry benchmarks.

Summary of Combined Net Revenues

The following table sets forth a summary of combined net revenues for the fiscal years 2014, 2015, 2016 and 2017, along with combined net revenue information for the nine-month period ended June 30, 2018. The information is derived from the audited financial statements of the City for the System. Such information should be read in conjunction with the City's audited financial statements for the System and the notes thereto for the fiscal years ended September 30, 2014, 2015, 2016, 2017 and 2018, referenced in APPENDIX B attached hereto or in prior audited financial statements.

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Fiscal Years Ended September 30,
(in thousands)

	2014	2015	2016	2017	[Unaudited 2018 ⁽⁴⁾]
Revenues:					
Electric	\$280,482	\$298,914	\$308,071	\$317,644	\$285,720
Water	31,827	32,524	33,818	35,091	36,868
Wastewater	36,052	38,261	42,346	44,185	46,155
Gas	25,801	24,111	24,325	21,925	21,279
GRUCom	10,694	12,600	11,744	11,450	11,210
Total Revenues	<u>\$384,856</u>	<u>\$406,410</u>	<u>\$420,304</u>	<u>\$430,295</u>	<u>\$401,232</u>
Operation and Maintenance Expenses⁽¹⁾:					
Electric	\$203,506	\$217,082	\$225,290	\$235,525	\$177,687
Water	13,321	13,559	14,827	15,463	16,242
Wastewater	13,968	14,334	17,388	19,052	20,213
Gas	16,726	15,318	14,577	12,902	12,993
GRUCom	6,492	8,460	7,422	7,109	6,503
Total Operation and Maintenance Expenses	<u>\$254,013</u>	<u>\$268,753</u>	<u>\$279,504</u>	<u>\$290,051</u>	<u>\$233,638</u>
Net Revenues:					
Electric	\$76,976	\$81,832	\$82,781	\$82,119	\$108,034
Water	18,506	18,965	18,991	19,627	20,625
Wastewater	22,084	23,927	24,958	25,133	25,942
Gas	9,075	8,793	9,748	9,023	8,286
GRUCom	4,202	4,140	4,322	4,341	4,708
Total Net Revenues	<u>\$130,843</u>	<u>\$137,657</u>	<u>\$140,800</u>	<u>\$140,243</u>	<u>\$167,595</u>
Aggregate Debt Service on Bonds	\$54,860	\$55,461	\$55,822	\$55,989	\$89,236
Debt Service Coverage Ratio for Bonds	2.39	2.48	2.52	2.50	1.88
Debt Service on Subordinated Indebtedness ⁽²⁾	<u>\$5,182</u>	<u>\$6,178</u>	<u>\$6,205</u>	<u>6,583</u>	<u>859</u>
Total Debt Service on Bonds and Subordinated Indebtedness	\$60,042	\$61,639	\$62,027	\$62,572	\$90,095
Debt Service Coverage Ratio for Bonds and Subordinated Indebtedness ⁽³⁾	2.18 ⁽³⁾	2.23 ⁽³⁾	2.27 ⁽³⁾	2.24 ⁽³⁾	1.86 ⁽³⁾

[Footnotes appear on following page]

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- (1) Includes administrative expenses. Excludes depreciation and amortization.
- (2) Excludes principal of maturing commercial paper notes which were paid from newly-issued commercial paper notes.
- (3) The historical debt service coverage calculation described above is based on the rate covenant described in "SECURITY FOR THE BONDS – Rates, Fees and Charges" herein. At the end of 2017 the DHR Biomass Plant was acquired using proceeds of the 2017. Coverage levels thereafter significantly dropped, in part, because of the debt which was necessary to finance the costs of such acquisition. It should also be noted that financial operations information in the table above only reflects ownership of the DHR Biomass Plant by the City for 327 of 365 days during the fiscal year ended September 30, 2018; so the 1.86x coverage figure would have been slightly lower had the City owned the DHR Biomass Plan for all 365 days. In addition, the refunding of certain variable rate debt through the issuance of the 2019C Bonds is expected to allow for a higher debt service coverage ratio to be achieved in fiscal years ___ - ___ and provide additional flexibility with respect to the debt related to the 2019 Bonds. However, such acquisition is not expected to adversely affect the City's ability to pay debt service on the Outstanding Bonds, or to otherwise comply with any of its obligations under the Resolution, including the rate covenant. On the contrary, such acquisition improved financial results. In particular, the City is realizing future annual cash flow savings from elimination of payments pursuant to the PPA, taking into account new annual debt service on the 2017 Bonds. When debt service coverage gets calculated on a cash flow basis rather than pursuant to the Resolution, the coverage level is expected to increase. Also, see "PLAN OF FINANCE" herein. The debt restructuring described therein is more consistent with the useful lives of the assets financed thereby will be reduce annual debt service in the near future providing opportunities for additional rate relief.
- [(4) Unaudited.]

Source: Prepared by the Finance Department of the System.

The operating results of the System reflect the results of past operations and are not necessarily indicative of results of operations for any future period. Future operations will be affected by factors relating to changes in rates, fuel and purchased power and other operating costs, environmental regulation, increased competition in the electric utility industry, economic growth of the community, labor contracts, population, weather, and other matters, the nature and effect of which cannot at present be determined. Net Revenues take into account amounts transferred to or from the Rate Stabilization Fund.

See also "Management's Discussion and Analysis" in the audited financial statements of the System referenced in APPENDIX B attached hereto. In addition, for a discussion of derivative transactions entered into by the System, see Note 9 to the audited financial statements of the System in APPENDIX B attached hereto.

Management's Discussion of System Operations

Results of Operations

The operating results of the System reflect the results of past operations and are not necessarily indicative of results of operations for any future period. Future operations will be affected by factors relating to changes in rates, fuel and other operating costs, environmental regulation, increased competition in the electric utility industry, economic growth of the community, labor contracts, population, weather, and other matters, the nature and effect of which cannot at present be determined.

For the electric system, base rate revenue requirements for the fiscal year ended September 30, 2015 decreased by 8.5%. For the fiscal year ended September 30, 2016, requirements were unchanged and remained unchanged through the fiscal year ended September 30, 2017. For fiscal years ended September 30, 2018 and 2019, revenue requirements increased by 2% each year as reflected in base rate charges. For the fiscal year ended September 30, 2015, the electric system deposited \$2.3 million, to the Rate Stabilization Fund. For the fiscal years ended September 30, 2016 and 2017, the electric system withdrew \$1.0 million and \$15.5 million, respectively, from the Rate Stabilization Fund. For the fiscal year ended September 30, 2018, the electric system withdrew approximately \$7.5 million from the Rate Stabilization Fund.

Energy sales (in MWh) to retail customers increased 1.4% per year from the fiscal year ended September 30, 2014 to the fiscal year ended September 30, 2018. The number of electric customers increased at an average annual rate of 1.17% for the fiscal years ended September 30, 2014 through and including 2018. Native load fuel costs for the electric system between the fiscal years ended September 30, 2015 and 2016, the electric fuel cost decreased each year by approximately \$1.0 million (1%). Between the fiscal years ended September 30, 2016 and 2017, fuel costs increased approximately \$6.67 million (4.3%). From the fiscal year ended September 30, 2015 to the fiscal year ended September 30, 2016 fuel revenues decreased by approximately \$10.2 million (7%).

For the fiscal years ended September 30, 2014 through and including 2018, natural gas sales increased by 1.96% per year. The number of gas customers increased at an annual rate of approximately 1.17% between fiscal years ended September 30, 2014 and 2018.

The base rate revenue requirement for the natural gas system remained unchanged for the fiscal year ended September 30, 2013, with a nominal increase of 0.85% for the fiscal year ended September 30, 2014. For the fiscal year ended September 30, 2015, base rate revenue requirement for the gas system was increased by 4.75%. For the fiscal years ended September 30, 2016 and 2017, the base rate revenue requirements were increased by 4.25% and 9.0%, respectively. Base rates were not changed for the fiscal year ended September 30, 2018 and 2019. For the fiscal year ended September 30, 2014, the natural gas system withdrew approximately \$1.0 million from the Rate Stabilization Fund. For the fiscal year ended September 30, 2015, the natural gas system deposited approximately \$1.6 million to the Rate Stabilization Fund. For the fiscal year ended September 30, 2016, the natural gas system withdrew approximately \$2.0 million from the Rate Stabilization Fund. For the fiscal year ended September 30, 2017, the natural gas system deposited approximately \$1.1 million to the Rate Stabilization Fund. In order to recover costs associated with the remediation of soil contamination caused by the operation of an MGP, the City established a per therm charge as part of the gas system's customer rate in the fiscal year ended September 30, 2003. The estimated remaining cost to be recovered is approximately \$17.0 million. See "-- The Natural Gas System – Manufactured Gas Plant" above. The MGP has billed at a rate of \$0.0556 per therm since October 1, 2014. Natural gas fuel cost decreased by approximately \$2.6 million (28%) between the fiscal years ended September 30, 2015 and 2016, and increased by approximately \$273 thousand (4%) between the fiscal years ended September 30, 2016 and 2017. This fluctuation in gas cost is reflective of the natural gas commodity market prices during the same timeframe. Since these costs are passed along to customers as part of the purchased gas adjustment charge each month, any natural gas cost increases or decreases are offset by purchased gas adjustment revenues.

Water system sales are impacted by seasonal rainfall. For the fiscal year ended September 30, 2014 through and including 2018, sales increased by an average annual rate of 0.37% and customers grew 0.96%. Revenues from water sales increased by approximately \$4,534,106 for the fiscal year ended September 30, 2014 through and including 2018. The water revenue increases were primarily the result of rate increases,

kept moderate by low customer growth and slow sales growth due to price sensitivity and conservation efforts.

Water base rate revenue requirements were increased by 3.5% in the fiscal year ended September 30, 2013, 3.85% in the fiscal year ended September 30, 2014, 3.75% in each of the fiscal years ended September 30, 2015 and 2016, and for the fiscal year ending September 30, 2017, the base rate revenue requirement was increased by 3.0%. Base rates were not changed for the fiscal year ended September 30, 2018 and 2019. For the fiscal years ended September 30, 2015, 2016 and 2017, the water system contributed approximately \$2.4 million, \$3.3 million, and \$2.5 million, respectively, to the Rate Stabilization Fund.

Wastewater system billings generally track water system sales. From the fiscal year ended September 30, 2014 to 2018, the wastewater system billing volumes increased 0.99% per year. Revenues during this same period increased 14.4% due to the combination of billing volumes and base rate revenue requirement increases. Approximately 1.1% more wastewater was billed for the fiscal year ended September 30, 2018, as compared to fiscal year ended September 30, 2017.

Wastewater base rate revenue requirements were increased by 3.00% in the fiscal year ended September 30, 2013, 2.4% in the fiscal year ended September 30, 2014, 4.85% in each fiscal years ended September 30, 2015 and 2016, and for the fiscal year ending September 30, 2017 and 2018, the base rate revenue requirement remained unchanged.

For the fiscal years ended September 30, 2015, 2016 and 2017, the wastewater system deposited approximately \$2.9 million, \$2.1 million and \$850 thousand, respectively, to the Rate Stabilization Fund. GRUCom's sales have increased from \$10.5 million in fiscal year ended September 30, 2013 to \$11.2 million in fiscal year ended September 30, 2017. This is a 6.7% increase over this 4 year time period. Sales were \$11.2 million, \$10.9 million and \$11.7 million in fiscal years ended September 30, 2014, 2015 and 2016, respectively. For the fiscal year ended September 30, 2015, GRUCom withdrew approximately \$1.4 million from the Rate Stabilization Fund, GRUCom deposited approximately \$7,400 from the Rate Stabilization fund, for the fiscal year ended September 30, 2016 and for the fiscal year ended September 30, 2017, GRUCom withdrew approximately \$585 thousand from the Rate Stabilization Fund.

The debt service coverage ratio ("DSCR") is a financial ratio that measures a company's ability to service its current debts by comparing its net operating income with its total debt service obligations. See "THE SYSTEM – Summary of Combined Net Revenues " above which shows GRU's DSCR for year's fiscal year 2014 through and including fiscal year 2017 and partial year.

The operating results of the System reflect the results of past operations and are not necessarily indicative of results of operations for any future period. Future operations will be affected by factors relating to changes in rates, fuel and purchased power and other operating costs, environmental regulation, increased competition in the electric utility industry, economic growth of the community, labor contracts, population, weather, and other matters, the nature and effect of which cannot at present be determined. Net Revenues take into account amounts transferred to or from the Rate Stabilization Fund.

Liquidity Position

GRU periodically updates its liquidity targets based on an internal analysis of market, operating and other risk factors in order to determine an appropriate liquidity target for the System. Also see "--Cash Balance Policy" below which may impact such targets. The following table identifies this target as well as the sources of funds and accounts, to include available capacity in GRU's commercial paper program and the SunTrust Loan that can be used to meet this liquidity target:

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Cash Reserve Targets:	\$73,600,000	\$75,800,000	\$78,100,000	\$80,400,000	
Operating Cash	4,404,399	4,404,399	4,404,399	4,404,399	
Rate Stabilization Fund	50,036,741	36,993,156	26,793,857	19,893,729	
Utilities Plant Improvement Fund for Reserves	<u>28,000,815</u>	<u>28,004,478</u>	<u>33,220,997</u>	<u>36,271,525</u>	
Total Cash Reserves	\$82,441,955	\$69,402,033	\$64,419,253	\$60,569,653	
SunTrust Loan ⁽¹⁾	25,000,000	25,000,000	25,000,000	25,000,000	
Tax-Exempt CP Lines ⁽²⁾	125,000,000	125,000,000	125,000,000	125,000,000	
Taxable CP Lines ⁽²⁾	<u>25,000,000</u>	<u>25,000,000</u>	<u>25,000,000</u>	<u>25,000,000</u>	
Total Liquidity and Lines	\$257,441,955	\$244,402,033	\$239,419,253	\$235,569,653	
Over(Under) Target	\$183,841,955	\$168,602,033	\$161,319,253	\$155,169,653	

(1) The expiration date of the SunTrust Loan is _____, 2021.

(2) The fixed rate long-term financing of the outstanding commercial paper with proceeds of the 2019 Bonds will provide full capacity to issue commercial paper under both by tax-exempt and taxable programs at least until the respective credit facility expiration dates of November 30, 2021 and August 28, 2020, at which times GRU intends to seek extensions or replacements of both credit facilities

Source: Prepared by the Finance Department of the System.

Transfers to General Fund

The City Commission established a General Fund transfer formula for the System for fiscal year 2015 through and including fiscal year 2019 pursuant to Resolution Number 140166, adopted on July 23, 2014. The General Fund transfer formula will be up for renewal beginning with the fiscal year ending September 30, 2020. The transfer formula established the base amount of the fiscal year 2015 transfer, less the amount of ad valorem revenue received each year by the City from the DHR Biomass Plant. The fiscal year ended September 30, 2015 base transfer amount increases each fiscal year over the period between fiscal year 2016 through fiscal year 2019 by 1.5%. The General Fund transfer for the fiscal year ended September 30, 2017 was equal to 7.8 % of the System's operating revenue.

This transfer formula is to be reviewed at least every other year by the System's staff and the City's General Government staff. The transfer amount may be paid from any part of the System's revenue or a combination thereof. The City Commission may modify the transfer amount or the transfer formula at any time. The City Commission is in the process of determining a new formula for the transfer for the fiscal year ending September 30, 2020.

The transfers to the General Fund made in the fiscal years ended September 30, 2012 through and including 2018 were as follows:

<u>Fiscal Years ended September 30,</u>	<u>Transfers to General Fund</u>	
	<u>Amount</u>	<u>% Increase/(Decrease)</u>
2012	\$36,004,958	2.2%
2013	36,656,458	1.8
2014	37,316,841 ⁽¹⁾	1.5
2015	34,892,425	(7.1)
2016	34,994,591	0.03
2017	35,814,010	2.3
2018	36,379,079	1.6

⁽¹⁾ Year ended September 30, 2014 was the last year of a four year agreement regarding General Fund transfer calculation methodology, where the agreed upon value was compared to prior formulaic calculation and a gain/loss sharing was applied.

Source: Prepared by the Finance Department of the System.

The projected transfers to the General Fund made in the fiscal years ended September 30, 2019 through and including 2020 are as follows:

<u>Fiscal Years ended September 30,</u>	<u>Projected Transfers to General Fund</u>	
	<u>Amount</u>	<u>% Increase/(Decrease)</u>
2019	\$38,285,000	5.2%
2020	38,285,000	-

Source: Prepared by the Finance Department of the System.

Investment Policies

The System's investment policy provides for investment of its funds. The primary goals of the investment policy are (1) preservation of capital, (2) providing sufficient liquidity to meet expected cash flow requirements, and (3) providing returns commensurate with the risk limitations of the program. The System's funds are invested only in securities of the type and maturity as permitted by the Resolution, Florida Statutes and its internal investment policy. The System does not presently have, nor does it intend to acquire in the future, derivative or leveraged investments or investments in mortgage-backed securities. The System does not invest its funds through any governmental or private investment pool (including, without limitation, the Florida PRIME or the former Local Government Surplus Funds Trust Fund administered by the State's Board of Administration).

Debt Management Policy

The System's debt management policy applies to all current and future debt and related hedging instruments issued by the System and approved by the City Commission. The purpose of the policy is to provide guidance for issuing and managing debt. The System debt is required to be managed with an overall philosophy of taking a long term approach in borrowing funds at the lowest possible interest cost. To achieve this goal, the System will continuously work towards developing an optimal capital structure, including the types of variable rate exposure, in view of the System's risk tolerance to market fluctuations,