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**BRYAN MUNICIPAL UTILITIES**  
**ANNUAL**  
**REPORT**

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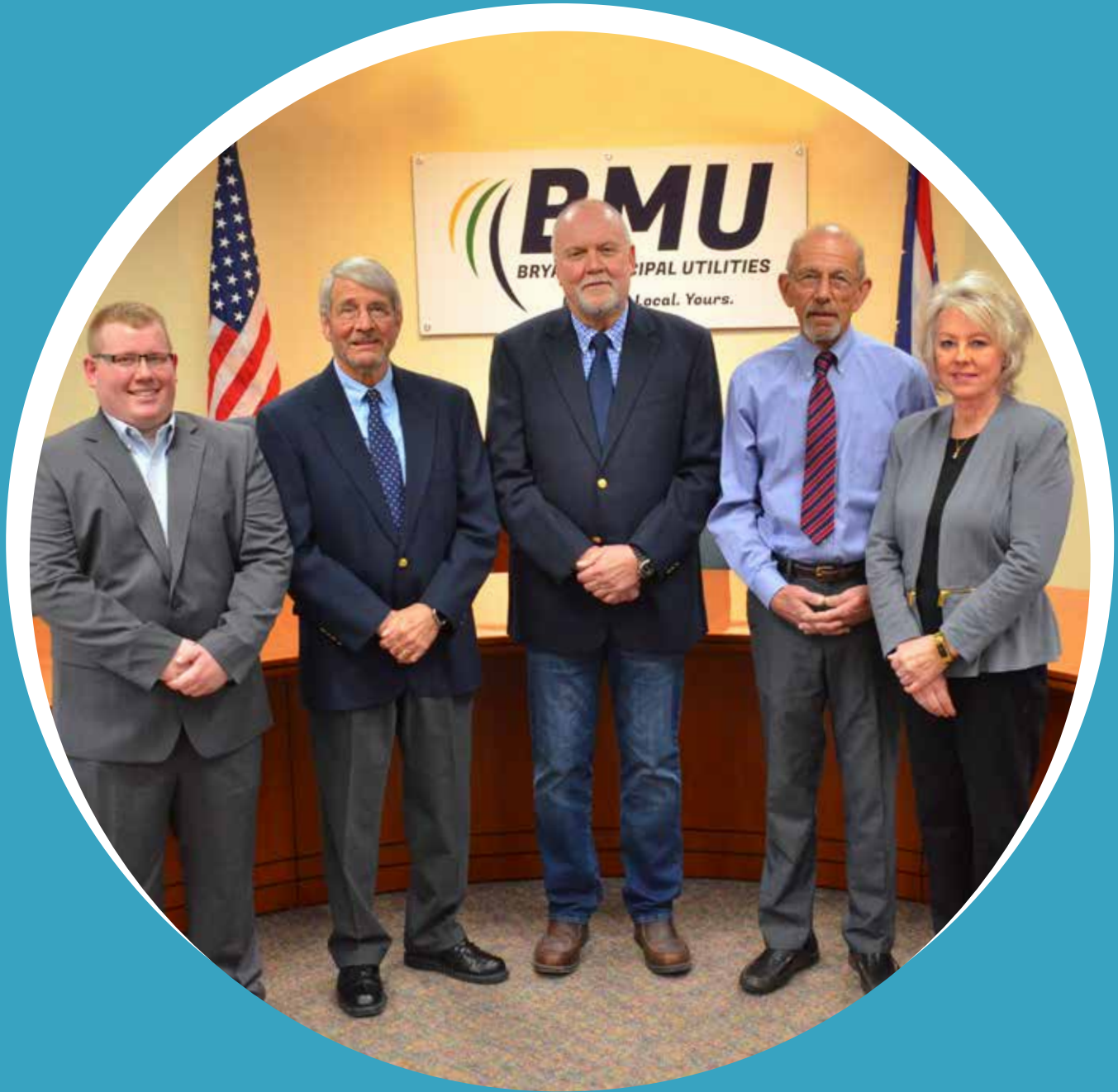
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**The Bryan Board of Public Affairs is a five-person board elected to set direction and establish policy for the community-owned utility. The citizens board meets twice monthly in open session.**

**2019 Board Members - Derek Allen, Tom Sprow, Jim Salsbury, Dick Long, and Karen Ford**

Bryan Municipal Utilities began more than 125 years ago with establishment of the Bryan municipal water system in 1892. Electric service was added in 1896 when Bryan residents voted to establish their own electric utility. A communications utility was created in 1998 to provide Bryan with a fiber-optic system designed to provide cable television and high-speed Internet access and data transfer.

Presently, the utility serves approximately 6,000 customers. Since its creation in 1906, the Board of Public Affairs has established the policies that govern the utility's operation. The Board has focused on

providing the residents and businesses of Bryan superior service at a competitive cost. The birth and development of Bryan Municipal Utilities is a success story of which all Bryan citizens can be proud. The enduring determination of Bryan's residents to own and operate their electric, water and communications utilities for the benefit of the community, and their wisdom in electing competent and dedicated citizens to oversee their investment, has been well rewarded with competitive rates and superior services for more than 125 years and ensures the community is well positioned to address the challenges of the 21st Century.



# Management Report

**Bryan Municipal Utilities is the community-owned, not-for-profit provider of electric, water and communications services to the Bryan area. We are pleased to announce another year of significant progress and service to our community in 2018. All three utilities ended 2018 with positive operating margins.**

## Rates

**Cable television** rates were adjusted in January and again in November due to rapidly escalating programming costs of channels included in BMU cable television packages. However, Internet service rates decreased by \$8 per month, so local consumers subscribing to both services saw reductions in their combined cable television/Internet bills in 2018.

**Electric** rate adjustments approved in December are designed to be revenue neutral. However, based on reduced power supply costs, the average electric customer's effective cost per kilowatt-hour decreased for the second year in a row.

**Water** rates were adjusted approximately 7 percent in December to generate additional revenue needed to fund capital improvements such as replacing aging, small diameter water mains. Based on rate comparisons and available information, BMU electric, water and communications rates remain very competitive with other area providers of these services.

## Reliable Service

On March 1, 2018, BMU received a Certificate of Excellence in Reliability from the American Public Power Association for "significantly outperforming the electric industry national average as reported by the Energy Information Administration." APPA is the national trade and service organization for more than 2,000 U.S. community-owned electric utilities. In 2018, BMU's System Average Service Availability Index (ASAI)—a measure of the percentage of the year the electric distribution system was in service and available to our customers—was 99.9573%.

An effective line clearance and vegetation management program is critical to ensure electric service reliability. Limbs directly contacting overhead conductors, blowing into lines during windy conditions, drooping into feeders when ice covered and providing pathways for squirrels all negatively impact electric service reliability. In November 2018, BMU contracted with Asplundh Tree Expert to clear vegetation from all electric transmission and distribution lines, in accordance with national standards. Once the entire system is cleared, a four-year line cycle will be established to maintain appropriate clearances in the future.



**Dawn Fitzcharles**  
Operations Manager

**Jim Salsbury**  
BPA Chair

**Kevin Maynard**  
Director

Last summer, approximately 3,593 feet of eight-inch PVC water main, seven fire hydrants and 75 customer service lines were installed on South Walnut Street from Maple to South streets, and on East South Street from Walnut Street to Meadowbrook Road. This improvement was designed to improve water service reliability and increase firefighting capability in the project area. An additional project benefit was elimination of 21 lead customer service

*On March 1, 2018, BMU received a Certificate of Excellence in Reliability from the American Public Power Association for “significantly outperforming the electric industry national average...”*



lines. The Water Department goal is replacement of approximately 3,700 feet of water main annually based on an estimated 100-year service life.

Capital improvement budgets for the electric, water and communications utilities all increased in 2018. These improvements help maintain continued reliable service and rate stability, while ensuring our community has the necessary infrastructure in place to not only effectively serve existing customers but also for future economic development.

## **Internet Improvements**

In 2018, BMU made a number of improvements to its communications system that increased speed and service reliability for many of our Internet customers. Residential Internet speeds increased from up to 8 megabits per second (Mbps) to up to 10 Mbps, and a new Enhanced Residential Internet service with up to 30 Mbps service was offered. BMU also contracted with the Coldwater, Mich., Board of Public Utilities to provide local communication customers with 24 hours a day, seven days a week access to professional service and advice to address cable television and Internet issues.

## **Economic Development**

Last year, City of Bryan representatives met with approximately 20 of Bryan's largest employers to discuss their current and projected operations, review electric cost and consumption data, and share information on City services. All of the industries visited were optimistic and seeking additional staff. Many have installed or plan to install additional production equipment, and some are in the process of expanding their local facilities. In 2017, the City of Bryan began the SiteOhio certification process for Bryan Industrial Park North. This JobsOhio program certifies available commercial and industrial sites as

“development ready.” SiteOhio certification requires completion of numerous due diligence checklist items and documentation of site characteristics. Under the program, JobsOhio assists in marketing certified sites. In March 2018, the City of Bryan received formal notification that Bryan Industrial Park North achieved SiteOhio certification. This designation will make the site more attractive to prospective industries.

In 2018, Bryan Census Tract 9506 east of Main Street was designated an Opportunity Zone. Opportunity Zones are low- to moderate-income areas certified by the U.S. Treasury Department in which investors may finance projects and enterprises in exchange for certain federal capital gains tax advantages. Census Tract 9506 includes existing industrial areas along Perry, Union and Wilson streets as well as the Bryan Industrial and Commercial Park. There are more than 8,700 Opportunity Zones in U.S.; however, Bryan is one of only three northwest Ohio Opportunity Zones.

## **Strategic Planning**

Bryan Municipal Utilities completed a Strategic Plan in 2018. This process included the Board of Public Affairs and staff. The Strategic Plan adopted by the BPA identified four areas of focus: 1). Continuous Improvement in Services to Our Customers; 2). Maintain a Skilled Workforce; 3). Utilize Industry Best Practices to Maintain a Financially Sound Utility; and 4). Leverage New Technology to Improve Quality of Services to Customers. Key Performance Indicators (KPI) were established to monitor the organization's progress in achieving its Strategic Plan.

**We appreciated the opportunity to be of service to our community in 2018 and look forward to helping make Bryan an even better place in which to live, work and spend leisure time in 2019.**

*Dawn E. Fitzchakles*

*James Kelsberg*

*Kevin M. Maynard*

# Communications

*In 2018, the Communications Department continued to provide reliable, competitively priced cable television, Internet and fiber optic network services to residents of Bryan and surrounding areas.*

We maintained our existing cable television channel lineup, which includes both Basic and Extended Basic service, as well as our Digital Basic and HD tiers of service. We continue to pass through many additional programs from our broadcast stations at no additional charge to our customers. We seek to offer new cable television programming for our customers whenever possible, while also working to keep programming costs and our rates as low as possible.



## www.cityofbryan.net

One stop source for utility services and information. Last year the site had over 49,000 page views. Did you know you can sign up to pay your bill on-line? Visit our website to learn more.



## Miles of Cable

Communication Department staff maintain 51.32 miles of fiber in and around Bryan. Cable TV and Internet customers are fed through over 170 miles of coaxial cable.



## Lots of Data!

BMU Internet passed around 3,455,000 gigabytes data last year to its Internet customers. That's about 1 million hours of HD streaming movies.



**BMU TV Video Crew had a busy season producing programming and preserving events for future generations at no additional charge to the community.**

In 2018, the BMU TV video team continued to produce high quality video programming for our customers and the community. Crews broadcast Golden Bear sporting events as well as Bryan City Schools Music Department performances. Live broadcasts of Board of Public Affairs, City Council, Bryan Planning and Zoning Commission and Bryan Board of Education meetings are produced by our video team and shared at no additional cost to BMU cable television customers.



## The Communications Department's primary focus in 2018 was upgrading our cable Internet system.

This upgrade increased available bandwidth to our customers, greatly improving their Internet service. We installed new routing equipment for cable modems, and a new larger capacity circuit provides much greater bandwidth from the outside world. We replaced outdated cable modems, and installed new equipment that allows us to provide a much improved Internet experience for our customers.

The rate for Residential Internet service was decreased from \$38 to \$30 last year, saving customers nearly \$100 per year. We constantly seek ways to improve Internet service reliability and to meet customer demands for ever-increasing speeds.

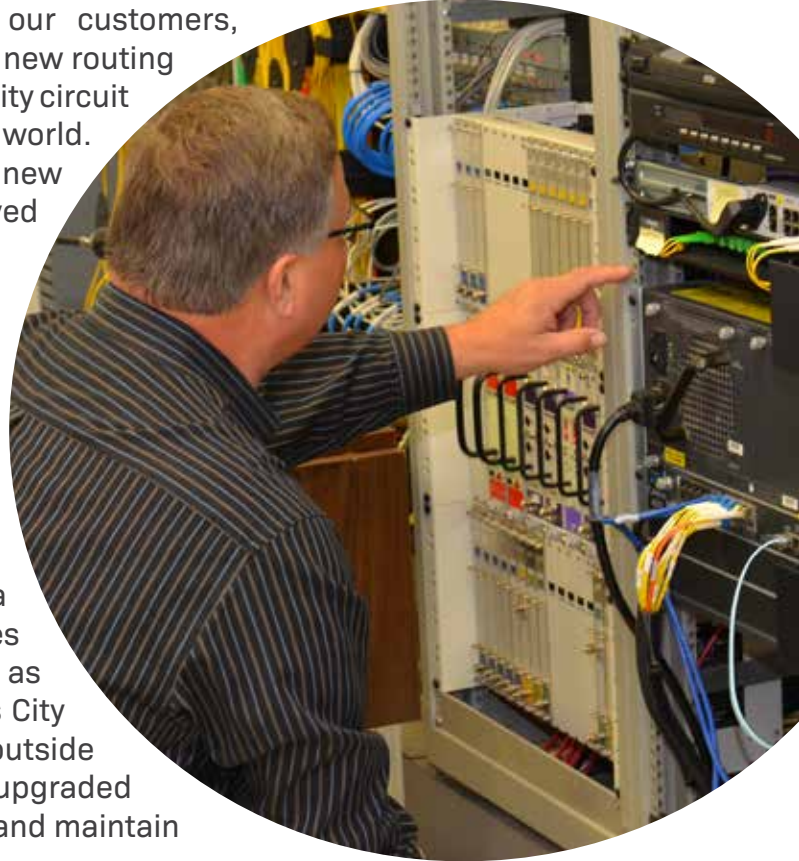
The Communications Department completed a Cisco telephone system upgrade, which provides voice service to Bryan Municipal Utilities (BMU) as well as many other City of Bryan offices. This allows City departments to communicate internally and with outside contacts much more quickly and efficiently. We also upgraded the main servers that operate our software systems and maintain the BMU business operations network.

A new bandwidth manager was installed that enables us to provide various connection options for fiber optic customers. This device connects directly into our main network to provide a quality connection for business customers.

Last year we completed additional network upgrades, including installation of a new Cisco main router, and the upgrade of our main VM servers and applied software. We installed additional equipment at our Bryan Street Hub location for increasing our capacity to serve the downtown business district.

Communications staff completed several fiber optic and network projects in 2018, including Yanfeng, Daavlin, Gendron and the Spangler Candy Company. We also completed installation for fiber optic cable into several electric substations as part of a protective relay and circuit breaker upgrade project.

Customer demands and technology continue to change at an escalating pace, and meeting those needs are the Communications Department's primary focus. Our staff works hard each day to exceed customer expectations as your hometown provider of cable television, Internet, and fiber optic services. We appreciate our customers' terrific support and look forward to serving you in 2019.



# Communications

## Communications Income & Expenses

### Operating Income:

Charges for Services	\$2,355,908
Other Operating Income	<u>55,679</u>

**Total Operating Income** **\$2,411,587**

### Other Income:

Interest Income	\$31,809
Other Miscellaneous Income	<u>12,408</u>

**Total Other Income** **\$44,217**

**Total Income** **\$2,455,804**

### Operating Expenses:

Supply and Distribution	\$2,149,801
Billing and Accounting	<u>87,009</u>

**Total Operating Expenses** **\$2,236,810**

**Balance Available for Capital Improvements & Debt Service** **\$218,994**

### Capital Improvements

Supply and Distribution	\$191,837
Billing and Accounting	<u>0</u>

**Total Capital Improvements** **\$191,837**

Transfer to Communications Capital Improvement Fund \$125,858

**Total Expenses** **\$2,554,505**



## Communication Utility Fund Transactions and Balances

	Balance				Balance
	Dec. 31, 2017	Income	Expenditures	Capital	Dec. 31, 2018
Communications Fund	\$2,316,477	\$2,455,804	\$2,236,810	\$191,837	\$2,217,776*
Communications Capital Fund	0	125,858	0	0	\$125,858
<b>TOTAL</b>	<b>\$2,316,477</b>	<b>\$2,581,662</b>	<b>\$2,236,810</b>	<b>\$191,837</b>	<b>\$2,343,634</b>

\* \$125,858 transferred to Communications Capital Improvement Fund

## Communications Capital Reserve Fund Income and Expenses

<b>Beginning Balance 1/1/2018</b>	<b>\$0</b>
<b>Transfer Income:</b>	<b>\$125,858</b>
Capital Expenses:	
Communications	\$0
Clerks Office	0
<b>Total Capital Improvements</b>	<b>\$0</b>
<b>Ending Balance 12/31/2018</b>	<b>\$125,858</b>

Total Internet Customers



**2.4%**

1,569

Total Cable TV Customers



**3.0%**

1,466

Total Fund Balance

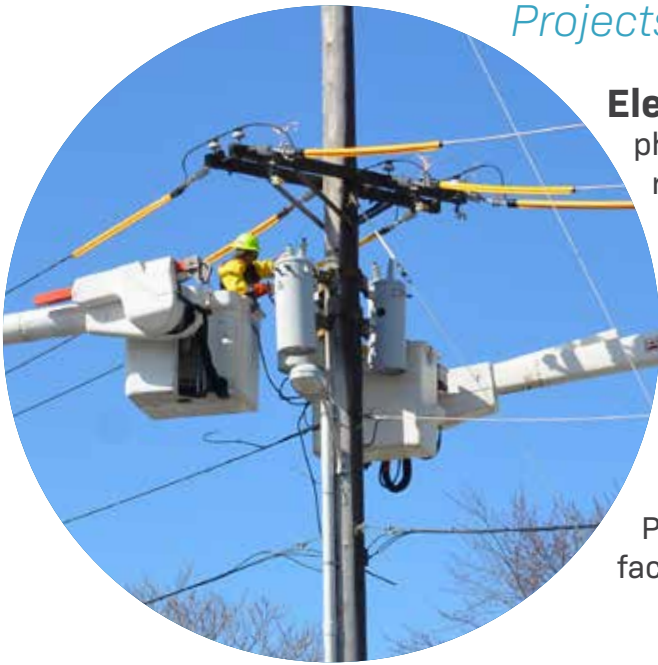


**1.2%**

\$2,343,634

# Electric Department

*Last year was filled with accomplishments, opportunities and challenges for Electric Transmission and Distribution System staff. The 2018 Departmental activities can be generally categorized as Electric Distribution Extension Projects, Overhead to Underground Conversion Projects and Streetlight Improvement Projects.*



**Electric Distribution Extension Projects**—Single-phase primary electric service was extended to a new residence on County Road 12, a new residence in the 900 block of West Bryan Street and to an existing transformer in the 900 block of Townline Road. Secondary underground service was extended to Kora Brew House and Wine Bar, a new downtown business, which also provided for future underground electric service improvements in Bryan's central business district. Finally, three-phase underground electric service was extended to Allied Moulded Plant 3 in the Bryan Industrial and Commercial Park and to Spangler Candy Company's recently-acquired facilities on West Mulberry Street.

*BMU provided 6,458,487 kilowatt hours of unbilled electricity to the citizens of Bryan in 2018. That's \$742,055 in free service to better our community.*



**Overhead to Underground Conversion Projects**—Replacing aging overhead electric distribution facilities with new underground lines improves electric system reliability by reducing weather related impacts, tree contacts and the most frequent cause of electric service interruptions—squirrels. Serviceability is also improved by allowing service crews to access electric facilities on the ground instead of using an aerial device or climbing gear. In 2018, overhead to underground conversion projects were completed in the 800 block of East Maple Street, to Genesis Healthcare on Center Street, to H-Machine in the Bryan Industrial and Commercial Complex, on Laglyda Court east side rear properties, on Lawndale Drive and on Bellaire Avenue.



**Streetlight Improvement Projects**—Last year, 75-year-old deteriorating streetlight poles and fixtures in the 200 block of West Butler Street were replaced with the ornamental acorn-style fixtures in use downtown and in the Fountain City Historic District. Six poles and LED fixtures were installed and the overhead electric service was converted to underground service. Electric Department staff worked with the Williams County Commissioners to convert 52 high pressure sodium light fixtures to LED operation in the courtyard and around the perimeter of the square. This conversion improved lighting quality and reduced City and County electric consumption for lighting the courthouse square. Finally, 11 aluminum poles and LED fixtures were installed along Winzeler Drive in the Bryan Industrial and Commercial Park. This capital improvement improved lighting quality, pedestrian safety and will help support economic development of available lots in the Bryan Industrial and Commercial Park.



## Power Lines

2,229,813 feet of overhead power lines supply reliable, local power to businesses, industries and homes around Bryan. An additional 317,891 feet is buried underground to supply power.



## Power Poles

BMU Electric Distribution maintains over 4,100 poles. They range in size from 30 feet to 90 feet. The department strives to replace 100 poles a year to maintain high system reliability.



## Street Lights

As a public service BMU provides street lighting to the community of Bryan. Crews maintain 1,147 streetlights including the new historical lights downtown. Nearly all lighting has been updated to energy efficient LEDs.

# Electric Department

## Electric Operating Income and Expenses

### Operating Income:

Charges for Services	\$20,739,787
Other Operating Income	149,506

<b>Total Operating Income</b>	<b>\$20,889,293</b>
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### Other Income:

Interest Income	\$193,068
Other Miscellaneous Income	216,528

<b>Total Other Income</b>	<b>\$409,596</b>
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<b>Total Income</b>	<b>\$21,298,889</b>
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### Operating Expenses:

Purchase Power	\$12,012,987
Power Plant Operations	1,280,252
Solar Lease	607,648
Distribution Operations	1,573,002
Billing and Accounting	301,065
Customer Service and Administration	936,638
Maintenance	94,855
Board of Public Affairs	53,700
Electric Communications	345,596
Hydroelectric Plant Operations	396,237

<b>Total Operating Expenses</b>	<b>\$17,601,980</b>
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### Other Expenses:

Kilowatt Hour Tax to State of Ohio	\$69,121
Kilowatt Hour Tax to General Fund	699,198

<b>Total Other Expenses</b>	<b>\$768,319</b>
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<b>Total Expenses</b>	<b>\$18,370,299</b>
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<b>Balance Available for Capital Improvements and Debt Service</b>	<b>\$2,928,590</b>
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### Capital Improvements

Power Plant	\$517,637
Distribution	83,490
Customer Service and Administration	15,188
Hydroelectric Plant	4,024

<b>Total Capital Improvements</b>	<b>\$620,339</b>
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Transfer to Generator Maintenance Fund	\$26,066
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<b>Total Expenses</b>	<b>\$19,016,704</b>
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## Electric Utility Fund Transaction and Balances

	Balance Dec. 31, 2017	Income	Expenditures	Capital	Balance Dec. 31, 2018
Electric Fund	\$9,201,185	\$21,298,889	\$18,370,299	\$620,339	\$11,483,370*
Capital Improvement Fund	\$4,500,000	0	0	937,279	\$3,562,721
Utility Deposit Fund	\$168,446	35,303	36,963	0	\$166,786
Generator Maintenance Fund	\$224,785	26,066	0	0	\$250,851
<b>TOTAL</b>	<b>\$14,094,416</b>	<b>\$21,360,258</b>	<b>\$18,407,262</b>	<b>\$1,557,618</b>	<b>\$15,463,728</b>

\* \$26,066 transferred to Generator Maintenance Fund

## Electric Capital Reserve Fund Income and Expenses

<b>Beginning Balance 1/1/2018</b>	<b>\$4,500,000</b>
<b>Transfer Income:</b>	<b>\$0</b>
Capital Expenses:	
Power Plant	\$338,817
Electric Distribution	467,427
Electric Utility Office	47,662
Auglaize Hydroelectric Plant	23,990
Electric Communications	59,383
<b>Total Capital Improvements</b>	<b>\$937,279</b>
<b>Ending Balance 12/31/2018</b>	<b>\$3,562,721</b>

Total Electric Metered kWh



**4.2%**

191,625,089

Total Electric Meters



**8**

6,059

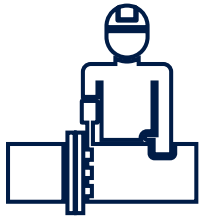
Total Fund Balance



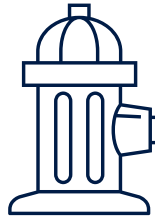
**9.7%**

\$15,463,728

# Water Department



**70 miles**



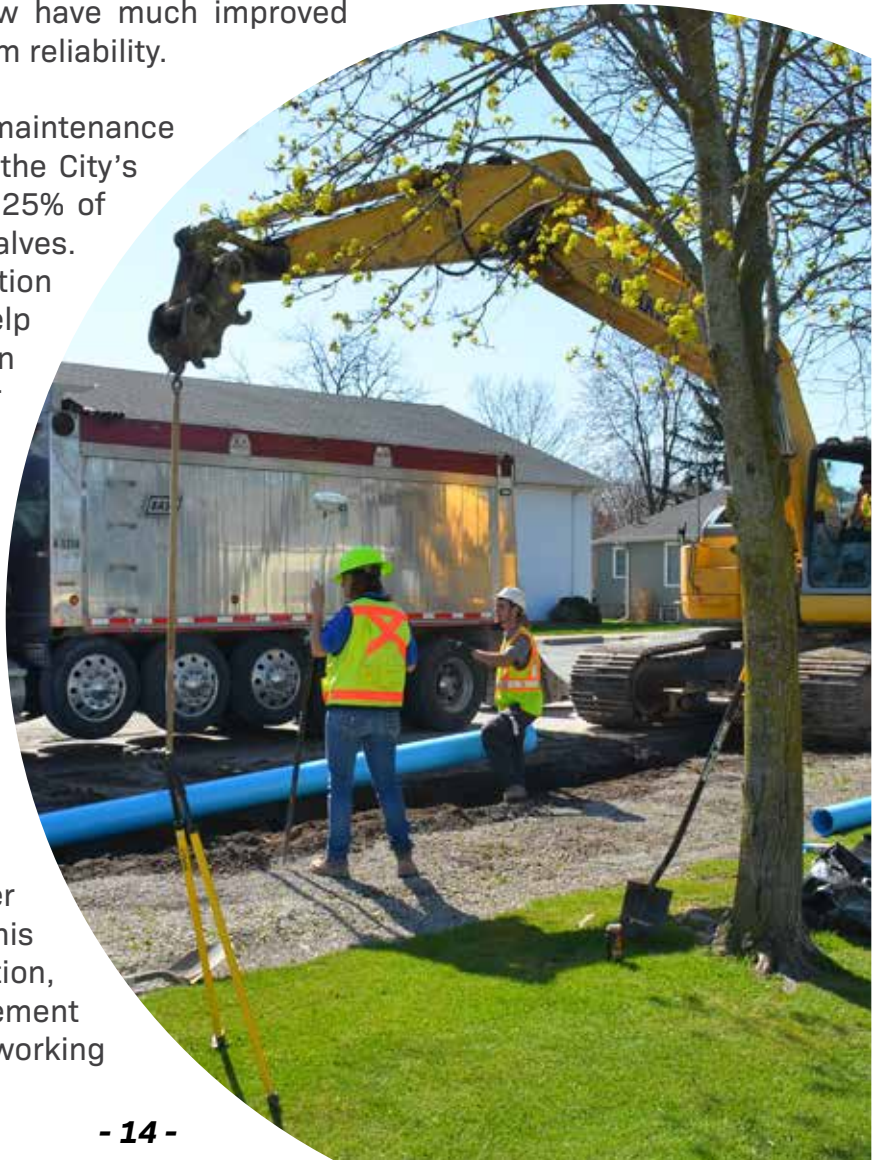
**575**

2018 was a year of great progress for the Bryan Water Department. We installed nearly 5,000 feet of water main, replacing aging, undersized and maintenance-prone mains. Some of the water mains replaced were in service for more than 100 years.

More than 3,600 feet of eight-inch water main was installed on South Walnut Street from Maple Street to South Street, and on East South Street from Walnut Street to Meadowbrook Road. Approximately 300 feet of eight-inch water main was installed in the 100 Block of East Pierce Street. Additionally, more than 1,000 feet of eight-inch water main was installed on West Bryan Street from Baker Street to Vine Street. These projects included installation of 36 main line isolation valves, seven fire hydrants and 95 customer service connections. As part of these improvements, 25 lead service lines were identified and eliminated from the Water Distribution System. These areas now have much improved firefighting capability and water system reliability.

Annual Water Distribution System maintenance includes inspection and operation of the City's 575 fire hydrants and approximately 25% of more than 2,000 system isolation valves. The Water Treatment Plant chlorination system is replaced or rebuilt yearly to help assure safe and reliable disinfection system operation. An aerator blower motor was rebuilt as well.

Last year, Water Treatment Plant operators participated in an Emergency Preparedness Exercise with the Williams County Health Department. These exercises are a necessary part of our required Water System Emergency Contingency Plans. Water Treatment Plant staff also completed the new Ohio Environmental Protection Agency (Ohio EPA) mandated Water System Asset Management Plan. This Plan documents Water System condition, System maintenance and management plans to keep the System in good working order.







# 4,900

**Number of feet of new water mains  
installed in 2018:  
3,600 feet on South Walnut,  
300 feet on East Pierce,  
1000 feet on  
West Bryan Street**

Staff also attended various continuing education workshops and seminars required to maintain Ohio EPA operator certifications. Four employees were re-certified in backflow prevention through the Operator Training Committee of Ohio. Water Treatment Plant operators also compiled 68 years of groundwater level data and weather data in electronic form for monitoring and data analyses purposes.

The Water Treatment Plant laboratory performed 513 bacteriological water sample analyses and collected samples for annual lead and copper testing. More than 471 million gallons of safe drinking water were pumped, filtered and treated in 2018.



## **Drinking Water**

Our drinking water comes from seven artesian wells with an average depth of 131 feet. We pump an average of 1.5 million gallons of treated water per day to the city at a rate of approximately 1,000 gallons per minute. All the wells, both water towers, and Water Treatment Plant operations can be controlled by our SCADA computer and telemetry system.

## **Laboratory Services**

As a service to the Williams County Health Department and other communities, the Water Department provides bacterial analyses every Tuesday at 10 a.m. Call 419-633-6160 for details.

# Water Department

## **Water Operating Income and Expenditures**

### Operating Income

Charges for Services	\$2,124,550
Other Operating Income	7,631

**Total Operating Income** **\$2,132,181**

### Other Income

Interest Income	\$29,632
Water Loan	0
Other Miscellaneous Income	25,164

**Total Other Income** **\$54,796**

**Total Income** **\$2,186,977**

### Operating Expenses

Supply and Distribution	\$1,158,104
Billing and Accounting	108,346
Customer Service and Administration	305,822
Interest on S. Walnut/E South St Project	3,687

**Total Operating Expenses** **\$1,575,959**

**Total Expenses** **\$1,575,959**

**Balance Available for Capital Improvements & Debt Service** **\$611,018**

### Capital Improvements

Supply and Distribution	\$138,368
Billing and Accounting	0
Customer Service and Administration	21,086

**Total Capital Improvements** **\$159,454**

### Debt Service- S. Walnut/E South St Project

Balance - January 1, 2018 \$255,149

Principal Payment 23,899

Balance - December 31, 2018 \$231,250

Transfer to 420 Water Main Replacement Project \$202,893

Transfer to 525 Water Capital Improvement Fund \$150,000

**Total Expenses** **\$2,112,205**



## Water Utility Fund Transactions and Balances

	Balance					Balance
	Dec. 31, 2017	Income	Expenditures	Capital Debt Service		Dec. 31, 2018
Water Fund	\$1,932,764	\$2,186,977	\$1,575,959	\$159,454	\$23,899	\$2,007,536*
Water Capital Improvement Fund	0	150,000	0	0	0	\$150,000
Utility Deposit Fund	\$168,447	35,302	36,963	0	0	166,786
<b>TOTAL</b>	<b>\$2,101,211</b>	<b>\$2,372,279</b>	<b>\$1,612,922</b>	<b>\$159,454</b>	<b>\$23,899</b>	<b>\$2,324,322</b>

\* \$150,000 transferred to Water Capital Improvement Fund

\* \$202,893 transferred to 420 Water Main Replacement Fund

## Water Capital Reserve Fund Income and Expenses

<b>Beginning Balance 1/1/2018</b>	<b>\$0</b>
<b>Transfer Income:</b>	<b>\$150,000</b>
Capital Expenses:	
Supply and Distribution	\$0
Water Utility Office	0
Water Clerks Office	0
<b>Total Capital Improvements</b>	<b>\$0</b>
<b>Ending Balance 12/31/2018</b>	<b>\$150,000</b>

Total Gallons of Water Metered



**1.7%**

351,139,633

Total Meters



**8**

3,878

Total Fund Balance



**10.6%**

\$2,324,322

# Auglaize Hydroelectric Plant

Last year, the Auglaize Hydroelectric Plant achieved its second highest annual energy production since the facility was acquired by BMU in 1996. The hydroelectric plant generated a total of 11,664 MWh, enough to supply the annual energy needs of 1,217 typical Bryan residences.

In 2018 BMU successfully certified all Auglaize Hydroelectric Plant generators as renewable energy resource generating facilities with the Public Utilities Commission of Ohio (PUCO). The Auglaize Hydroelectric Plant also operated, based on water availability, during peak demand periods, reducing capacity and transmission costs an estimated \$290,000 for 2019.

**11,664 MWh  
generated**

**Enough to power  
1,217 Bryan  
residences**



The concrete apron at the downstream base of the Auglaize Hydroelectric Plant dam was repaired last year. The repairs reduce wear on the dam's downstream face, increasing the concrete's service life. Nappe vents installed in 2017 were modified in 2018 to increase air flow introduced into the nappe. During high flow periods, water flowed over the rear of the nappe vents, reducing the volume of air introduced into the nappe and resulting in vibration that could potentially damage the Auglaize Hydroelectric Plant dam and brick powerhouse. Diverters were installed on the downriver side of the nappe vents to channel water to the sides of the nappe vents. This permits the nappe vent intakes to remain free of water and allow the maximum volume of air into the nappe, preventing water flow vibration and protecting the dam and powerhouse structure.

Power Plant staff inspected Auglaize Hydroelectric Plant turbine runners and generator bearings that are typically under water. Generators #2 and #3 exhibited runner shaft bearing wear. Lignum vitae wood is used in this bearing application as it doesn't require any lubricant that could leach into the Auglaize River and the material is suitable for underwater applications. However, lignum vitae wood is very expensive, and alternate materials are being investigated. Thordon SXL material was purchased and used in bearing repairs in 2019 to test a material rated for the same use as lignum vitae wood at significantly less cost.



# Power Plant

Last year was busy and productive for Power Plant staff with additional focus on increased reliability of Bryan's Electric Transmission and Distribution substations. Aging 69,000-volt (69kV) oil circuit breakers (OCBs) were replaced with SF6 (sulfur hexafluoride) gas-filled breakers. This capital improvement increased electric system reliability and reduced operation and maintenance expenses by eliminating testing and maintenance of OCB oil levels. Further, environmental concerns associated with potential OCB oil leaks were eliminated. In OCBs, oil extinguishes arcs during breaker operation to avoid damage to breaker contacts. Arcs are further minimized in SF6 breakers, increasing equipment service life in a more environmentally friendly manner.

Substation protective relays were replaced with industry-standard Schweitzer Engineering Laboratories digital electrical protection relays. These relays improve system protection and reliability by quickly reacting to and isolating electric distribution faults and allowing staff to determine the fault's cause.

Annual preventive oil tests on Cherry Street Substation voltage regulators indicated that the electrical insulation inhibitor was not providing adequate insulation protection. Regulator fluid was hot oil cleaned and insulation inhibitor added to extend regulator service life.

Power Plant Westinghouse 191 Gas Turbine #2 emergency starting generator was rebuilt in 2018 after aluminum was detected in its oil during a maintenance inspection. Upon disassembly of the emergency starting generator, a faulty piston was identified. The engine was rebuilt to help prevent other components from creating future issues. Power Plant staff assisted the contractor in removal and installation of the rebuilt starting generator.

Power Plant staff successfully met BMU's 2018 transmission and capacity peaks, reducing the community's electric demands during periods of extreme hot and cold weather. The American Electric Power (AEP) transmission Coincident Peak (1 CP) occurred on January 3, 2018 between 7 and 8 a.m. Power Plant generators generated 39.338 megawatts (MW) during the transmission peak, saving local electric consumers an estimated \$2,726,172 in 2019 transmission costs. BMU is also charged based on the community's electric demands during the PJM (Pennsylvania-New Jersey-Maryland), Regional Transmission Organization (RTO) five highest annual Coincident Peaks (5 CPs). Generation at the Bryan Power Plant, Auglaize Hydroelectric Plant and Bryan Solar Field decreased local electric demands during PJM's five CPs, reducing 2019 capacity charges by approximately \$1,482,797.

The Auglaize Hydroelectric Plant and Bryan Solar Field are PUCO certified renewable energy resource generating facilities. As such, each megawatt-hour (MWh) of energy production from these facilities creates an associated Renewable Energy Certificate/Credit (REC) that can be sold to parties interested in assuring part or all of their energy requirements are met by renewable energy resources. Sales of 2018 RECs from these two facilities totaled \$91,658—\$24,843 in Bryan Solar Field RECs and \$66,815 in Auglaize Hydroelectric Plant RECs. Taken altogether, BMU peak shaving efforts and REC sales will save local electric consumers approximately \$4.3 million in 2019.



# Production Totals

## 2018 POWER PRODUCTION DATA

Gross Kilowatt Hours Generated by Power Plant	2,436,754
Gross Kilowatt Hours Generated by Auglaize Hydro	11,664,006
Gross Kilowatt Hours Generated by Solar Field	2,548,340
<b>Total Gross Kilowatt Hours Generated</b>	<b>16,649,100</b>
Kilowatt Hours Purchased:	
Belleville Hydroelectric Project (JV5)	8,318,319
New York Power Authority (NYPA)	6,674,816
AMP Fremont Energy Center (AFEC)	41,918,194
Prairie State Energy Campus	64,016,909
Blue Creek Wind Farm	4,857,736
Landfill Gas	8,760,000
BP Remaining Requirements	50,620,922
Meldahl Hydroelectric Project	5,610,647
Greenup Hydroelectric Project	2,786,961
AMP Hydroelectric Projects (CSW)	6,767,339
Morgan Stanley	20,148,000
<b>Total of Gross Kilowatt Hours Purchased</b>	<b>220,479,843</b>
<b>Gross Generated and Purchased Kilowatt Hours</b>	<b>237,128,943</b>
Kilowatt Hours Used:	
Customer Metered Kilowatt Hours	191,625,089
OMEG Kilowatt Hours Sold	30,019,800
Auglaize Kilowatt Hours Sold	2,852,606
Power Plant Use	1,155,818
Kilowatt Hour Line Loss (4.84%)	11,475,630
<b>Total Metered and Line Loss</b>	<b>237,128,943</b>

## COMMUNICATIONS CUSTOMER DATA 2018

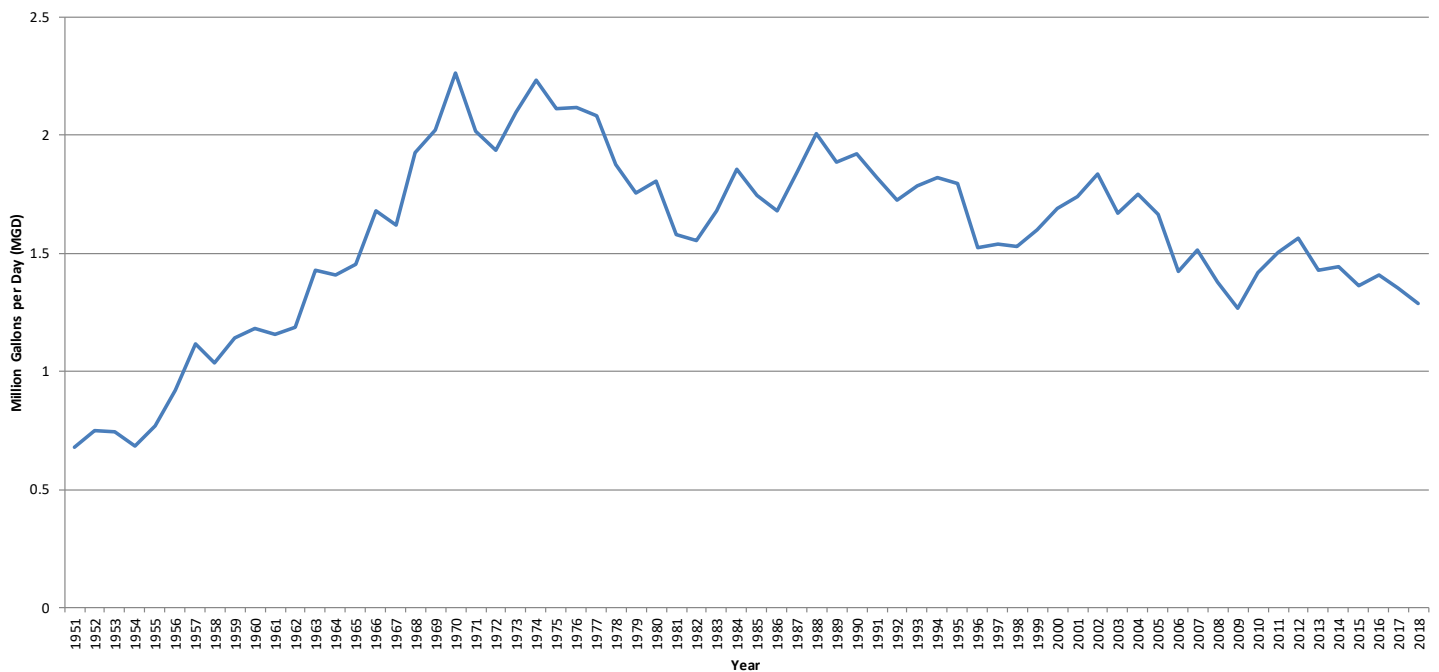
	Cable TV	Internet	Fiber
Residential	1408	1455	0
Commercial/Industrial	38	99	25
Unbilled Services	20	15	14
<b>Total</b>	<b>1466</b>	<b>1569</b>	<b>39</b>



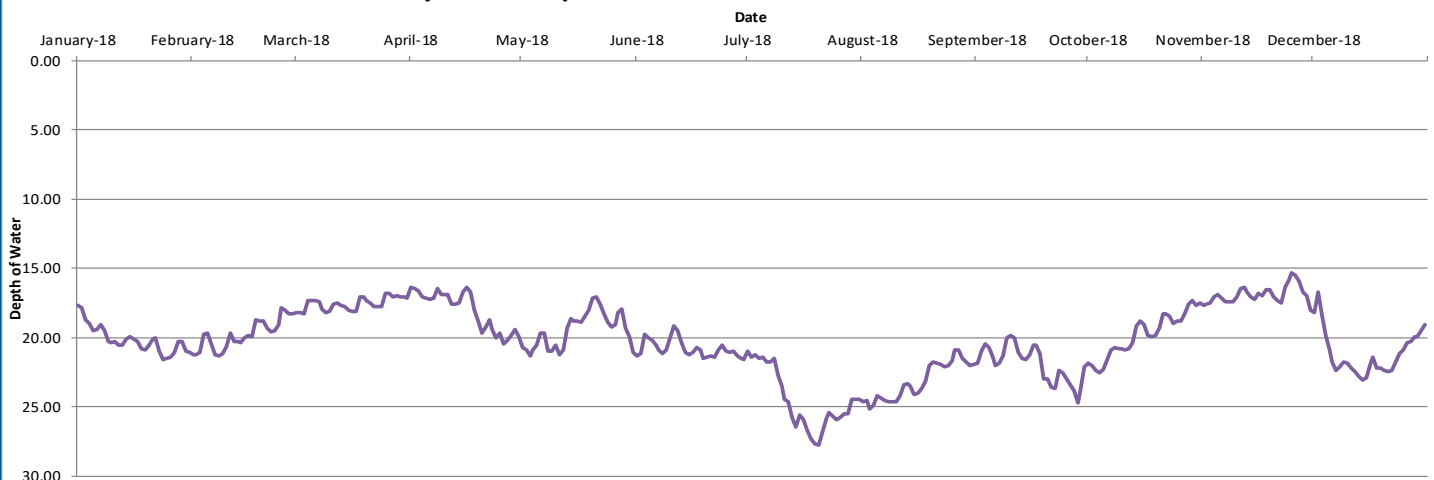
## WATER PRODUCTION DATA

	Meters	Gallons Used
Residential	3,238	136,831,640
Commercial & Industrial	609	190,389,936
City of Bryan (Unbilled Service)	31	23,918,057
<b>Total Metered</b>	<b>3,878</b>	<b>351,139,633</b>
Bulk Water & Hydrant Water (Billed)		512,602
Filter Backwash/Production Water		1,585,575
Hydrant Flushing		5,500,000
Other		0
<b>Total Other Water Use</b>		<b>7,598,177</b>
Line Losses (23.9%)		112,640,190
<b>Total Water Production</b>		<b>471,378,000</b>

**AVERAGE YEARLY PUMPAGE DATA**  
Bryan Municipal Utilities



**Bryan Municipal Utilities WM-1A Well at Power Plant**



# Financial Highlights & Five Year Summary

## Electric Department

<i>Operations</i>	<b>2018</b>	<b>2017</b>	<b>Change</b>	<b>% Change</b>
Income	\$21,298,889	\$24,272,615	(2,973,726)	-12.3%
Expenses	18,370,299	21,934,861	(3,564,562)	-16.3%
<b>Margin</b>	<b>2,928,590</b>	<b>2,337,754</b>	<b>590,836</b>	<b>25.3%</b>
<i>Finance</i>				
Capital Improvements	620,339	880,125	(259,786)	-29.5%
Generator Maintenance Fund	26,066	15,170	10,896	71.8%
Capital Improvements Reserve Fund	0	4,500,000	(4,500,000)	-100.0%
<b>Total Fund Balances Available Dec. 31</b>	<b>15,463,728</b>	<b>14,094,416</b>	<b>1,369,312</b>	<b>9.7%</b>
<b>Total Meters</b>	<b>6,059</b>	<b>6,051</b>	<b>8</b>	<b>0.1%</b>
<b>Total Metered kWh</b>	<b>191,625,089</b>	<b>183,925,175</b>	<b>7,699,914</b>	<b>4.2%</b>
<b>Peak Demand (kilowatts)</b>	<b>39,783</b>	<b>39,210</b>	<b>573</b>	<b>1.5%</b>

## Water Department

<i>Operations</i>				
Income	2,186,977	2,046,686	140,291	6.9%
Expenses	1,575,959	1,480,161	95,798	6.5%
<b>Margin</b>	<b>611,018</b>	<b>566,525</b>	<b>44,493</b>	<b>7.9%</b>
<i>Finance</i>				
Capital Improvements	159,454	294,722	(135,268)	-45.9%
420 Water Main Replacement Fund	202,893	0	202,893	
Capital Improvements Reserve Fund	150,000	0	150,000	
<b>Total Fund Balances Available Dec. 31</b>	<b>2,324,322</b>	<b>2,101,211</b>	<b>223,111</b>	<b>10.6%</b>
<b>Total Meters</b>	<b>3,878</b>	<b>3,870</b>	<b>8</b>	<b>0.2%</b>
<b>Total Metered Gallons</b>	<b>351,139,633</b>	<b>345,173,879</b>	<b>5,965,754</b>	<b>1.7%</b>

## Communications Department

<i>Operations</i>				
Income	2,455,804	2,559,285	(103,481)	-4.0%
Expenses	2,236,810	2,007,239	229,571	11.4%
<b>Margin</b>	<b>218,994</b>	<b>552,046</b>	<b>(333,052)</b>	<b>-60.3%</b>
<i>Finance</i>				
Capital Improvements	191,837	49,969	141,868	283.9%
Capital Improvements Reserve Fund	125,858	0	125,858	
<b>Total Fund Balances Available Dec. 31</b>	<b>2,343,634</b>	<b>2,316,477</b>	<b>27,157</b>	<b>1.2%</b>
<b>Total Customers</b>	<b>3,074</b>	<b>3,158</b>	<b>(84)</b>	<b>-2.7%</b>

<b>Electric Department</b>		<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Income		\$21,298,889	\$24,272,615	\$21,599,614	\$20,355,168	\$21,509,185
Expenditures		18,370,299	21,934,861	19,055,666	18,030,435	19,257,095
Margin		\$2,928,590	\$2,337,754	\$2,543,948	\$2,324,733	\$2,252,090
Capital Improvements		620,339	880,125	434,064	2,276,666	1,448,824
Fund Transfers Out		26,066	4,515,170	22,010	10,890	167,342
Fund Balance Dec. 31		\$11,483,370	\$9,201,185	\$12,258,726	\$10,170,852	\$10,133,675
<b>Meters</b>						
Residential		5,062	5,054	5,069	5,061	5,046
Commercial		706	705	697	700	695
Industrial		57	58	58	56	53
Unbilled Services		234	234	233	232	234
Total Meters		6,059	6,051	6,057	6,049	6,028
<b>kWh Used</b>						
Residential		48,568,070	43,691,480	46,665,280	47,607,070	48,025,060
Commercial		26,231,622	25,805,790	27,037,855	29,024,771	28,004,048
Industrial		110,366,910	107,964,046	108,107,254	107,251,672	113,504,016
Unbilled Services		6,458,487	6,463,859	6,514,652	6,250,112	6,594,195
Total kWh		191,625,089	183,925,175	188,325,041	190,133,625	196,127,319
Peak Demand (kilowatts)		39,783	39,210	41,020	40,770	38,420

<b>Water Department</b>						
Income		\$2,186,977	\$2,046,686	\$1,967,302	\$1,871,650	\$2,032,307
Expenditures		1,575,959	1,480,161	1,501,585	1,457,472	1,347,453
Margin		\$611,018	\$566,525	\$465,717	\$414,178	\$684,854
Capital Improvements		159,454	294,722	242,561	284,911	452,499
Fund Transfers Out		352,893	0	0	0	0
Debt Service		23,899	0	0	0	0
Fund Balance Dec. 31		\$2,007,536	\$1,932,764	\$1,660,961	\$1,437,805	\$1,308,538
<b>Meters</b>						
Residential		3,238	3,230	3,237	3,263	3,194
Commercial and Industrial		609	609	608	612	623
Unbilled Services		31	31	30	30	32
Total Meters		3,878	3,870	3,875	3,905	3,849
<b>Gallons Used</b>						
Residential		136,831,640	137,779,356	140,258,228	144,068,540	144,518,836
Commercial and Industrial		190,389,936	174,217,428	184,980,400	212,489,596	256,792,140
Unbilled Services		23,918,057	33,177,095	33,424,145	30,938,535	30,469,854
Total Gallons		351,139,633	345,173,879	358,662,773	387,496,671	431,780,830

<b>Communications Department</b>						
Income		\$2,455,804	\$2,559,285	\$2,608,305	\$2,495,181	\$2,446,391
Expenditures		2,236,810	2,007,239	1,981,378	1,918,958	1,844,763
Margin		\$218,994	\$552,046	\$626,927	\$576,223	\$601,628
Capital Improvements		191,837	49,969	49,056	15,357	57,934
Fund Transfers Out		125,858	0	0	0	0
Debt Service		0	0	294,642	350,000	334,000
Fund Balance Dec. 31		\$2,217,776	\$2,316,477	\$1,814,400	\$1,531,171	\$1,320,305
<b>Customers</b>						
Cable TV Residential		1,408	1,442	1,518	1,597	1,593
Cable TV Commercial/Industrial		38	48	50	53	83
Cable TV Unbilled Services		20	21	19	18	18
Total Cable TV Customers		1,466	1,511	1,587	1,668	1,694
Internet Residential		1,455	1,495	1,241	1,418	1,405
Internet Commercial/Industrial		99	97	109	101	90
Internet Unbilled Services		15	15	16	15	15
Total Internet Customers		1,569	1,607	1,366	1,534	1,510
Fiber Commercial/Industrial		25	24	23	23	22
Fiber Unbilled Services		14	16	16	15	15
Total Fiber Customers		39	40	39	38	37
Total Customers		3,074	3,158	2,992	3,240	3,241

# In the Community

As part of our commitment to being 'Reliable. Local. Yours.' Bryan Municipal Utilities employees spend countless hours of their own time volunteering in the Bryan community. Employees also give back to the citizens of Bryan during various community events allowing residents to meet and talk to the men and women who keep our lights on everyday, provide safe water to drink, and communication services that connect us to the world.



Touch-a-Truck

For the past several years BMU Electric, Water and Communications crews have allowed students to get up close and climb on BMU trucks and equipment. The annual event is hosted by the Bryan City Schools PTO.



Day of Giving

This past July BMU staff joined with other utilities from across the country in a call to give back to the community. Staff spent time sprucing up the East End Park by mulching trees, tuck pointing and painting the shelter house, painting picnic tables, and applying a fresh coat of paint to trash cans and light poles



Open House

October of 2018 showcased the "Rich History" of BMU with an open house celebration. The Water Department celebrated 125 years since it first supplied clean, reliable drinking water to the citizens of Bryan. Power Plant crews showcased the 1948 Nordberg generator by running it for the public during an open house celebration.



Trunk or Treat

New last year was a chance for local businesses to participate in "Trunk or Treat." The event had hundreds of kids lining the west side of the square.





# Unbilled Utility Services

	Electricity	Water	Communications
Street and Security Lights	\$88,996	\$0	\$0
Utility Departments, Building & Facilities	215,839	16,098	71,752
Parks, Pools & Other Recreational Areas	46,454	28,711	0
Bryan Community Center	7,031	534	1,536
Municipal Departments, Buildings & Facilities	359,245	54,143	101,663
County Miscellaneous Facilities	2,826	0	6,960
Traffic Signals	11,870	0	0
Bryan City Schools	2,338	0	32,039
Day in the Park, Jubilee, Christmas Lights	1,842	240	0
Bard Fountain	5,614	945	0
Other	0	0	10,680
<b>Total Unbilled Utilities</b>	<b>\$742,055</b>	<b>\$100,671</b>	<b>\$224,630</b>
<b>Electric Department</b>			
Maintenance Services (Labor & Equip.) Provided			
Street Light Installation and Maintenance			\$112,353
All Other City Services and Civic Organizations			\$52,334
Total Unbilled Maintenance (Labor) Provided including Equipment			<u>\$164,687</u>
Materials Provided			
New Street Lights and Replacements			\$105,558
All Other City Services & Civic Organizations			\$5,789
Total Unbilled Materials Provided			<u>\$111,347</u>
<b>Total Labor and Materials Provided</b>			<b>\$276,034</b>
<b>TOTAL UNBILLED LABOR, MATERIALS and ELECTRICITY</b>			<b>\$1,018,089</b>
<b>Water Department</b>			
Maintenance Services (Labor) Provided			
Installation and Services to City Facilities			\$10,600
Installation and Maintenance of Fire Hydrants			\$30,773
Equipment			\$4,720
Total Unbilled Maintenance (Labor) Provided including Equipment			<u>\$46,093</u>
Materials Provided			
Water Lines and Services to City Facilities			750
New Fire Hydrants and Replacements			33,250
Total Unbilled Materials Provided			<u>\$34,000</u>
<b>Total Labor and Materials Provided</b>			<b>\$80,093</b>
<b>TOTAL UNBILLED LABOR, MATERIALS, and WATER</b>			<b>\$180,764</b>
<b>Communications Department</b>			
Maintenance Services (Labor) Provided			
Installation and Services to City Facilities			0
Installation and Services to Bryan City Schools			0
Total Unbilled Maintenance (Labor) Provided including Equipment			<u>\$0</u>
Materials Provided			
Cable and Accessories for Services to City Facilities			0
Cable and Accessories for Services to Bryan City Schools			0
Total Unbilled Materials Provided			<u>\$0</u>
<b>Total Unbilled Labor and Materials Provided</b>			<b>\$0</b>
<b>TOTAL UNBILLED LABOR, MATERIALS, AND COMMUNICATIONS</b>			<b>\$224,630</b>
<b>TOTAL UNBILLED UTILITY SERVICES</b>			<b>\$1,423,483</b>

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American Public Power Association