

# Birmingham Water Works Board

## Fiscal Year 2020 Approved Budget

**Investing in every cent.**







# FY 2020 APPROVED BUDGET DOCUMENT



Michael Johnson  
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Subject:  
Proposed Calendar Year 2020 Budgets

Dear Mr. Johnson:

We have reviewed the "Proposed CY2020 Operation and Maintenance Budget" and the "Proposed CY2020 Capital Budget", dated November 26, 2019, for the Water Works Board of the City of Birmingham (Board). Our comments on these budgets are presented below. Please note that comparisons between CY2019 and CY2020 budgets are for the comparable 12-month period.

## OPERATION AND MAINTENANCE BUDGET

The total Proposed CY2020 Budget for Operation and Maintenance costs is \$104,867,179 a 1.8 percent increase from the 2019 approved budget of \$103,000,004. Operating Revenues are budgeted at \$203,775,655 in CY2020 compared to budgeted revenues of \$195,897,200 for 2019. Water System Operating Income is budgeted at \$98,908,476 for CY2020, versus budgeted 2019 income of \$92,897,196. The justification and explanation for these amounts have been provided by the Board staff within the budget documents, and will not be repeated here.

The budgeted revenues and expenses appear to be reasonable in view of the continued growth and expansion in the Board's service area, and the needs of securing, operating and maintaining the Board's system in a cost-effective manner over the long term.

In our opinion, the "Proposed CY2020 Operation and Maintenance Budget" is reasonable. The amounts shown are appropriate for the operation and maintenance of the Board's system and property. We recommend that the Board adopt the CY2020 Operating and Maintenance Budget.

WATER

Date:  
May 6, 2020

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Our ref:  
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# FY 2020 APPROVED BUDGET DOCUMENT

Michael Johnson  
The Water Works Board of the  
City of Birmingham, Alabama  
May 6, 2020

## CAPITAL BUDGET

The "Proposed CY2020 Capital Budget" is \$ 81,484,428, an increase of 22 percent from the 2019 approved budget of \$63,893,797. This includes \$48,245,477 for Budget Items 1 through 7 and \$33,238,951 for Capital Projects. The justification and explanation for these amounts have been provided by the Board staff within the budget documents and will not be repeated here.

We find that the Budget Items 1 through 7 and the Capital Projects, as presented in the "Proposed CY2020 Capital Budget" appear to be reasonable. We understand that individual expenditures within Budget Items 1 through 7 will be reviewed prior to purchase in accordance with the criteria adopted by the Capital Budget Review Committee to confirm the necessity of each expenditure.

The Capital Budget Projects are the minimum necessary for immediate system expansion, compliance with regulatory requirements, upgrading system assets, improved reliability and security, and renewal and replacement to continue meeting the needs of the Board's customers effectively and efficiently.

We recommend that the Board adopt the CY2020 Capital Budget.

If the Board desires additional information or clarification, please do not hesitate to contact me at 205-930-5954.

Sincerely,

ARCADIS U.S., Inc.

Patrick Flannelly, PE, BCEE  
Executive Vice President

Copies:

Shelia Patterson (BWVB)  
Jason Carter, PE (Arcadis, U.S.)  
Gary Trachtman (Arcadis, U.S.)



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## SECTION

# 1 *Introduction*

## Introduction

The Birmingham Water Works Board's (BWWB) Annual Budget Document (The Budget) has been developed to communicate to customers, directors and staff how BWWB intends to fulfill its mission and vision, which are inserted below.

**Mission:** The Water Works Board of the City of Birmingham is committed to providing the highest quality water and service to our customers and our entire service area.

**Vision:** As a concerned corporate citizen, we are responsive to the needs of the entire community and strive to maintain, preserve and conserve our precious water resources to ensure quality water and adequate supply for future generations.

The BWWB has adopted "Effective Utility Management" (EUM) as the framework within which it manages the utility to ensure that it implements strategies that support EUM and ultimately result in the BWWB accomplishing its mission and fulfilling its vision. In addition, the adoption of EUM has been essential in communicating a clear direction to all who are responsible for ensuring the success of the BWWB. The Fiscal Year (FY) 2020 Operations and Capital Budgets have been prepared using the EUM framework.



## FY 2020 APPROVED BUDGET DOCUMENT

### Key Considerations Affecting Budget Development

As we operate in an ever-changing environment, we are continually faced with situations that increase the cost of service we deliver to our customers. The following are key areas that were considered in preparing the FY 2020 Budget:

1. Consumption trends
2. Effect of rate increase on customer base
3. Need to control operating cost by focusing on effectiveness and efficiency
4. Reduction in the reliance on long-term debt to fund capital projects
5. Impact of cost of service
6. Ensuring compliance with the policy to increase "Pay As You Go" (PAYGO) to 50% of Capital Expenditures
7. Replacing aging infrastructure
8. Need to enhance communications to internal and external customers
9. Need to develop a strategy to increase Historically Underutilized Business (HUB) expenditures
10. Need to update the BWB's Strategic Plan





## FY 2020 APPROVED BUDGET DOCUMENT

### Compliance with Financial Policies

The BWWB is rated Aa2 by Moody's Investors Service and AA rated by S&P Global due in large part to its sound fiscal management evidenced by its adoption and adherence to its financial policies. The chart below shows BWWB's current policies and related trends.

Reserve Fund	Target
Capital Reserve	25% of Capital Plan
Revenue	15% of O&M + Debt
Demand Shortfall	5% of O&M + Debt
Rate Stabilization	5% of O&M + Debt
Economic Development	5% of O&M + Debt

Reserves of  
approximately 240 days  
of operating expenses  
on hand

231 days – Current balance  
days cash on hand  
150 – 250 days; Moody's  
criteria for Aa utilities

Strong Bond Ratings

2002: S&P A / Moody's A  
2013: S&P AA / Moody's Aa2  
2016: S&P AA / Moody's Aa2



## FY 2020 APPROVED BUDGET DOCUMENT

Policy	Trend
Rate increases below industry average (5.14%, 2004 - 2019)	2.9% - 2018 3.9% - 2012, 2014, 2015, 2017, 2019, 2020 4.9% - 2013, 2016
O&M increases less than 5%	3.3% annual growth rate, 2014-2018 -1.7% in 2019 1.7% for 2020 (Approved)
Goal of 50% of Capital Budget funded from PAYGO by 2023	25% in 2017 and 2018 47.5% in 2019 49.5% projected in 2020



# RATE INCREASE TRENDS





## RSE TARGETS

Senior Debt Service Coverage	Current
- Target	1.75
- Max	2.00
- Min	1.50

Total Debt Service Coverage	Current
- Target	1.20
- Max	1.30
- Min	1.10



# FY 2020 APPROVED BUDGET DOCUMENT

## FY2020 Budget Highlights

The FY 2020 Operating Budget increased by \$1,867,180 or 1.81% from 2019. The FY 2020 Operating Budget includes funding for the following new initiatives:

- \$ 140,650 to add two employees to the Communications Department
- \$ 100,000 to develop a plan to increase Historically Underutilized Business (HUB) participation
- \$ 80,000 to update the BWWB's Strategic Plan

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The FY 2020 Capital Budget increased by \$ 17,590,631 or 27.53 % from 2019. The FY 2020 Capital Budget includes additional funding as follows:

- \$ 17,800,000 to replace galvanized steel throughout the distribution system





# FY 2020 APPROVED BUDGET DOCUMENT

## Strategic Goals

The BWWB adheres to a set of strategic goals that focus on the framework of the Effective Utility Management (EUM) program. These goals are grouped into five strategic target categories along with ten attributes of an Effectively Managed Utility as can be seen in the diagram below.

The EUM focuses on ten attributes that include stakeholder understanding and support, product quality, customer satisfaction, employee and leadership development, operational optimization, financial viability, infrastructure strategy and performance, enterprise resiliency, community sustainability, and water resource sustainability. Each of these has a subset of objectives and strategies that are laid out to guide the organization towards achieving its goals.





## SECTION

# 2

## *Budget Development*

This budget document attempts to match a staff-prepared needs assessment with projected revenues. It has been developed and prepared in accordance with applicable state and federal statutes and applicable Board policies and procedures.

The budget development process is guided by the following financial planning strategies:

- BWWB Strategic Plan – Where the policies and goals established in the Capital Improvements Program (CIP) will serve as the framework for the future direction and objectives of the BWWB.
- Multi-year Budget Management Plan – Where it is a principal objective of the BWWB to achieve multi-year stability in the Board's system of rates and charges.
- Departmental Goals and Objectives – Where budgeting decisions are based upon the establishment of realistic departmental goals and objectives and criteria for the measurement of performance.
- Operational Budget Policies – Where the BWWB will attempt to maintain a high quality of performance, while recognizing the demands related to major ongoing utility system improvements and challenges, and the need to maintain personnel levels to ensure maximum efficiency and utilization.

For the FY 2020 budget, and as with most years, total revenues are projected to exceed total expenses. As such, the Board's definition of a balanced budget is when projected annual revenues and existing fund balances are sufficient enough to meet budgeted expenses.

## Budget Process

Annually, the BWWB prepares and adopts a financial plan for the next fiscal year (January 1 through December 31). The plan includes determining the appropriate rates, fees and charges necessary to provide sufficient revenues to meet anticipated expenses for operating and maintenance, asset repair or replacement, asset acquisition or construction to meet the service needs of the customer base, and debt service requirements for existing and projected debt. The financial plan is developed within the framework of the Board's Rate Stabilization Equalization Policy, which ensures that we charge reasonable rates sufficient to pay debt service, provide for payment towards operating and maintaining the system in good repair and replacement under work orders, and perform and comply with the covenants under the Board's Bond Indenture.



## FY 2020 APPROVED BUDGET DOCUMENT

The development of the operating and maintenance budget begins in June following the completion of the first five months of the current fiscal year. Each department is requested to project their staffing (including overtime needs), supplies and materials such as travel, education, contractual services and other operating and maintenance needs, chemicals and power for the next fiscal year. These projections are based on historical trends, new projects and/or requirements, changes in existing projects and/or requirements, cost adjustments and changes in regulatory requirements.

The Budget Office holds budget hearings with each department and Executive Management to review and discuss the proposed budget requests with the department management team. During the budget hearings, department managers justify the need for increases if applicable. The Budget Office and/or Executive Management may recommend reducing budget line items based on current year spending and/or historical spending.

When the budget hearing is complete, the department management team enters the data approved in their respective budget hearings into the budget module.

The Budget Office confirms data entry from all departments, enters any additional data and reviews the results to meet with the Executive Management Team to review and discuss the proposed Operating and Maintenance Budget. The proposed budget is updated upon Executive Management request.

Executive Management and the Budget Office hold a budget workshop with the Board of Directors to present the proposed Operating and Maintenance Budget and the Capital Budget. Management provides several schedules to support the proposed budget, including:

- Top Ten – a list of 14 major expenses in the budget with comparisons to the prior year and the variance
- By Department – a list of each department's expenses with comparisons to the prior year and the variance
- Department Details – for each department, a schedule to outline notable department expense variances and the number of employee positions included in the department and the department's expense as a percentage of the total proposed budget

The proposed budget is updated upon request from the Board of Directors. If needed, additional budget workshops are held with the Board of Directors and updates are made to the proposed budget as requested.

The Board holds a public hearing for public feedback on the budget. The Board of Directors may request additional updates to the proposed budget prior to approval. Once the Board of Directors approve the budget, the public is notified of the rate increase no later than 30 days prior to the beginning of the fiscal year, January 1.



## FY 2020 APPROVED BUDGET DOCUMENT

### Budget Calendar

This year's budget preparation calendar is shown below:

June 26, 2019	Distribute Additional Staff Request Forms to Department Managers and Supervisors
June 28, 2019	Distribute budget packet information to Departments
July 3, 2019	Additional Staff Requests due to the Budget Officer
July 12, 2019	Budget packet due to the Budget Officer
July 15 -19, 2019	Budget Office schedules meetings and prepare for Budget Hearings
July 22 -August 9, 2019	Departmental Budget Hearings
July 23-August 9, 2019	Budget Input Meetings
August 15, 2019	Complete Budget Information for discussion with Executive Management
September 18, 2019	Finance Committee Meeting – Submittal of Draft Budget
October 4, 2019	Budget Workshop
October 16, 2019	Budget Workshop
November 5, 2019	Budget Workshop
November 14, 2019	Public Hearing
November 26, 2019	Board Adoption of the 2020 Budget



## SECTION 3

### *Operating and Capital Budget Summary*

#### Operating Budget Summary

The Approved FY 2020 O&M Budget is \$104,867,175. This is an increase of 1.81% over FY 2019 and .19% less than the projected 2% assumed in the Debt Reduction Plan. A summary is provided below.

Category	2020	2019	Increase (Decrease)	Percentage Change
LABOR	\$39,276,245	\$38,214,708	\$1,061,537	2.78%
EMPLOYEE RELATED EXPENSES	\$14,788,664	\$15,108,533	-\$319,868	-2.12%
POWER	\$9,274,470	\$9,181,403	\$93,066	1.01%
TRANS & DISTRIB MAINT MATERIALS	\$10,063,124	\$9,775,999	\$287,125	2.94%
LICENSE FEES	\$4,380,000	\$4,310,000	\$70,000	1.62%
CHEMICALS	\$4,992,407	\$5,147,833	-\$155,425	-3.02%
LEGAL	\$1,081,470	\$1,081,470	\$0	0.00%
LAB_SUPP, PURIFICATION MAINT	\$1,670,307	\$1,699,866	-\$29,558	0.00%
OUTSOURCED SECURITY	\$1,262,508	\$1,253,680	\$8,828	0.70%
INSURANCE	\$1,803,608	\$1,592,620	\$210,988	13.25%
ELECTRICAL/ PUMP MAINTENANCE	\$440,833	\$434,891	\$5,942	1.37%
BILLING EXPENSE	\$1,102,310	\$1,102,100	\$210	0.02%
OTHER O&M EXPENSES	\$11,997,694	\$11,693,526	\$304,168	2.60%
CONSULTANTS	\$2,733,535	\$2,403,373	\$330,163	13.74%
<b>TOTAL O&amp;M</b>	<b>\$104,867,175</b>	<b>\$103,000,000</b>	<b>\$1,867,175</b>	<b>1.81%</b>





# FY 2020 APPROVED BUDGET DOCUMENT

## Capital Budget Summary

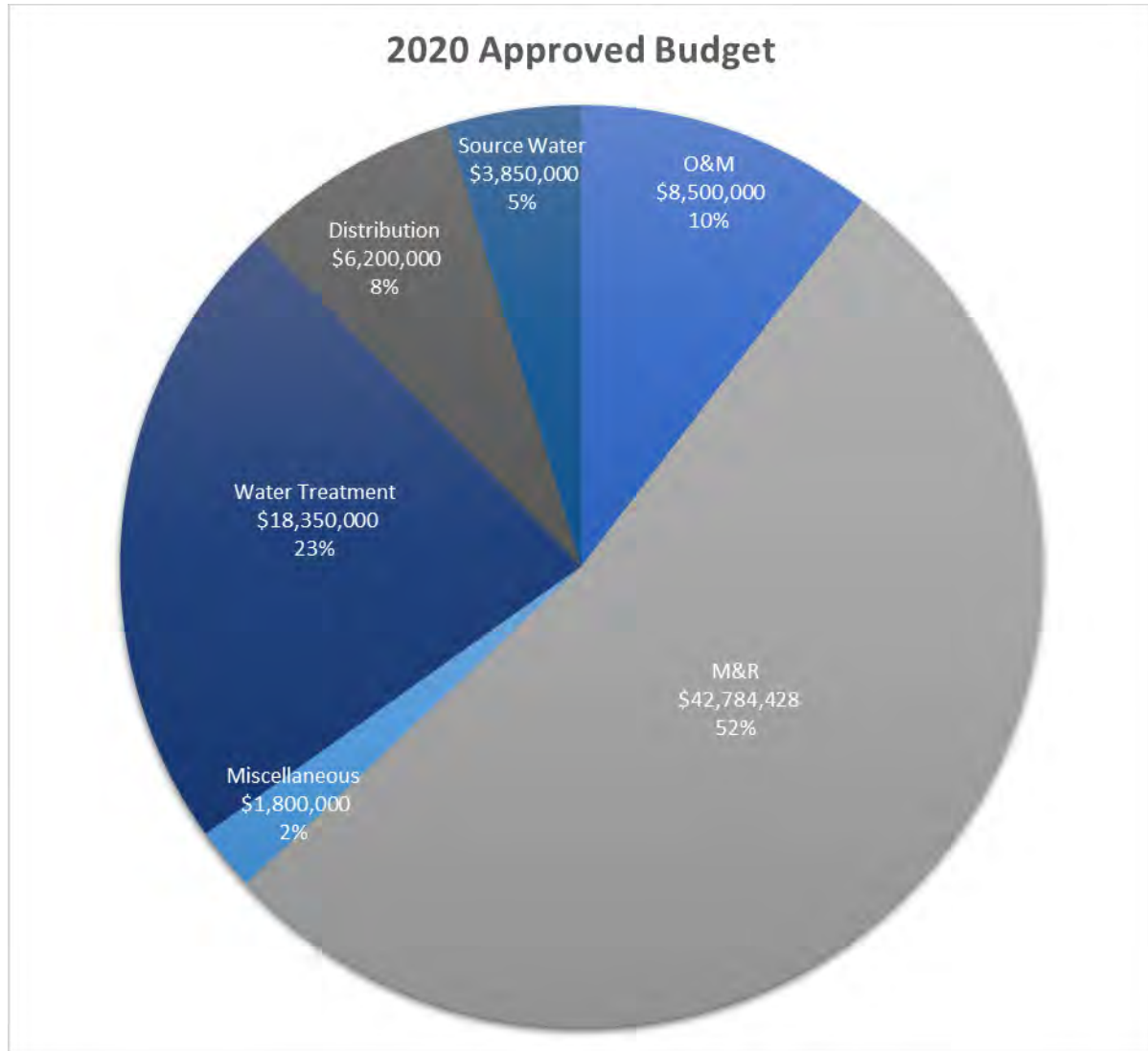
The Approved FY 2020 Capital Budget is \$81,484,428. This is an increase of \$ 17,590,631 or 27.5% over FY 2019. A schedule of the Capital Budget is provided below.

Description	Drivers	2020
<b>Filter Plants</b>		
CFP Liquid Lime	Perform	\$ 500,000
SMFP Residuals	Reg	\$ 200,000
SMFP Filter Improvements	Reg	\$ 16,800,000
WFP Liquid Lime	Perform	\$ 850,000
<b>Raw Water &amp; Distribution</b>		
Inland Lake Dam Monitoring and Evaluation Program	Risk	\$ 350,000
Lake Purdy Dam Stability Rehabilitation	Risk	\$ 2,700,000
Inland Lake PS and Transmission Line Improvements	Risk	\$ 800,000
Carson Loop Phase 6D	Risk	\$ 4,500,000
Carson Loop Phase 8	Risk	\$ 1,700,000
<b>IT/Security</b>		
SAP Implementation (Phase 3 - HR)	Perform	\$ 1,800,000
<b>Maintenance and Repairs</b>		
1A - New Distribution Mains and Hydrants (Associated w/ New Developments)	M & R	\$ 1,000,000
1B - Replace Existing Services - Revenue Water Only	M & R	\$ 40,000
1C - Meters and Metering Technologies	M & R	\$ 1,708,000
1D - Replace Distribution Mains - System Development Only	M & R	\$ 23,850,000
1E - Replace Distribution Services - System Development Only	M & R	\$ 6,150,000
1F - Water Plant Filters	M & R	\$ 46,328
1H - Tank Maintenance and Repairs	M & R	\$ 2,601,000
1I - Repair/Replace Pumps, Motors, Generators	M & R	\$ 2,550,000
1K - Service Line Replacement - Distribution Department Only	M & R	\$ 1,090,000
1L-Repair/Replace Distribution Hydrants and Valves	M & R	\$ 1,100,000
1N - Developer Installed	M & R	\$ 30,000
2 - Office Furniture & Equipment	M & R	\$ 40,000
3 - Transportation Equipment	M & R	\$ 1,900,000
4 - General Equipment	M & R	\$ 800,000
5 - Maintenance & Repairs to Existing Facilities	M & R	\$ 3,600,000
6 - Information Technology/GIS	M & R	\$ 400,000
7 - Economic Development	Perform	\$ -
99 - Distribution Mains, Hydrants & New Customer Tap Fees	M & R	\$ (4,120,900)
Capitalized Operation & Maintenance		\$ 8,500,000
<b>Total</b>		<b>\$ 81,484,428</b>



## FY 2020 APPROVED BUDGET DOCUMENT

The Chart below is an allocation of the FY 2020 Capital Budget.





## SECTION

# 4 SOURCES OF FUNDS

## Revenue Projections and Development

Annual revenue estimates are developed using projected changes in consumer consumption patterns. For FY 2020, it is projected that water demand will increase by approximately 1.53% over the FY19 estimated actuals. Revenues are reviewed monthly during the budget development process until the budget is adopted by the Board of Directors.

## Sources of Funds

Funding sources available to meet anticipated operating and capital expenses are:

- **Rates and Charges** – comprised of monthly charges for residential, raw and commercial water services based on usage, basic facility charges, connection and maintenance fees, miscellaneous charges for ancillary services, and penalty charges related to non-payment and service interruption.
- **Sewer Collection Fees** – BWWB bills and collects sewer fees for several entities for which it is paid a fee.
- **Impact Fees** – charges assessed against new development to recover major capital costs associated with expanding water service facilities.
- **Development Impact Fees** – charges established to recoup the cost of installing or extending water lines to service a certain defined group of properties, some of which may not currently be developed.
- **Debt** – monies borrowed through the issuance of revenue bonds or loans through the State Revolving Fund.



# FY 2020 APPROVED BUDGET DOCUMENT

## Funding Goals

As part of the rates, charges and impact fee analysis, the BW&W's revenue requirements are as follows:

- Provide sufficient revenue to fund the operating budget and the programs provided by the Board
- Provide sufficient revenue to fund the recurring capital needs.
- Provide sufficient revenue to meet the debt service payments and coverage requirements
- Provide sufficient revenue to fund the reserve funds as established by the RSE Policy
- Provide sufficient revenue to meet PAYGO requirements.

Adherence to funding goals is essential to long-term financial viability.

## Rates and Charges

Each year rates are established based on ensuring that sufficient revenues are received to fully recover all costs of operating and maintaining the water system. These costs include daily system operating expenses; planned repair, renewal and/or replacement of aging capital assets; and payment of principal and interest on existing debt. In addition, the budget and any rate adjustments must ensure that the legal obligations contained in the bond indenture are also met.



## Debt Funding

### **Debt Reduction Planning:**

In 2018, the Birmingham Water Works Board (the BWWB) issued the Series 2018 Senior Water Revenue Bonds with proceeds of \$97,000,000 to be used for the Board's planned capital expenses in 2019 and 2020. In recent years, the BWWB has settled into a two-year cadence of issuing new revenue bonds to fund capital projects. The BWWB has also taken the opportunity to refund prior issues at the same time as new bond issues, whenever financial market conditions have been favorable for refunding prior bond issues. While new bond issues increase the BWWB's overall outstanding debt, refunding saves money by taking advantage of favorable interest rates.

Even though the BWWB regularly issues new revenue bond debt to fund its capital program, it also pays for a portion of its annual capital program with revenues generated from rates, referred to as "pay as you go capital," or PAYGO. Paying for capital expenses with cash decreases the amount of debt required to be issued by the BWWB. Prior to 2018, the BWWB developed an internal financial policy to fund 25% of its annual capital program with PAYGO. In 2018, when the BWWB entered into a new billing contract with Jefferson County for providing sewer billing services, the new contract provided the BWWB with additional revenues of approximately \$9 million dollars in 2018 and more than \$13 million in 2019 and beyond. With this additional revenue and a desire to continue to reduce outstanding debt, the BWWB chose to apply this revenue to PAYGO, and revise its internal financial policy to increase the amount of its capital budget paid for with PAYGO to 50% by 2023.

The BWWB has demonstrated a willingness to engage in practices that will reduce total outstanding debt over the long run. While the BWWB must continue to fund its capital program, it can take advantage of refunding opportunities, increases in PAYGO, and other financing approaches such as bond restructuring, to reduce debt. The BWWB's commitment to reducing debt crystalized in late 2018 after members of the Board met with ratings agencies as part of the 2018 bond issuance. While the ratings agencies commended the BWWB's strong leadership and commitment to financial management, one of the main downsides to the BWWB's financial outlook from the ratings agencies' perspectives is the amount of principal outstanding. Inspired by this opportunity for improvement, the Board resolved to explore strategies for significantly reducing outstanding principal by 2030.

To evaluate the various debt reduction strategies and their impacts to outstanding debt, overall financial management, and water rates, the BWWB is working with a team that includes its financial advisor and rate consultant to develop recommendations. Total current outstanding debt is \$990,180,000.





## Current Outstanding Debt - Summary

Senior Lien Summary		
Series	Amount Outstanding	Final Maturity
2010-A	14,130,000	1/1/2021
2011	6,180,000	1/1/2021
2012-A	18,380,000	1/1/2026
2013-A	22,880,000	1/1/2043
2015-A	25,215,000	1/1/2029
2015-B	16,875,000	1/1/2040
2016-A	157,190,000	1/1/2041
2018	86,815,000	1/1/2039
2019	336,380,000	1/1/2045
Total Senior	\$ 684,045,000	
Subordinate Lien Summary		
Series	Amount Outstanding	Final Maturity
DWSRF Loans-DL	7,225,000	2031 - 2035
Series 2016-B	278,200,000	1/1/2043
Series 2016-C	20,710,000	1/1/2023
Total Subordinate	\$ 306,135,000	
<b>Aggregate Total</b>	<b>\$ 990,180,000</b>	



## FY 2020 APPROVED BUDGET DOCUMENT

### Current Outstanding Debt – Annual Debt Service



Aggregate Debt Service			
Period Ending	Senior Lien DS	Subordinate Lien DS	Aggregate Debt Service
2020	40,161,795	19,794,990	59,956,784
2021	46,257,422	19,792,934	66,050,356
2022	46,248,233	19,797,078	66,045,311
2023	46,263,467	19,786,929	66,050,396
2024	46,256,739	19,791,513	66,048,252
2025	46,261,546	19,789,850	66,051,396
2026	50,352,214	15,696,706	66,048,921
2027	50,363,967	15,691,754	66,055,720
2028	50,354,723	15,694,799	66,049,522
2029	50,355,790	15,685,613	66,041,403
2030	41,396,789	25,297,323	66,694,111
2031	41,400,314	25,296,780	66,697,094
2032	41,526,715	25,168,655	66,695,370
2033	41,615,805	25,077,580	66,693,385
2034	41,148,420	25,548,610	66,697,030
2035	42,071,973	24,689,280	66,761,253
2036	42,113,134	24,648,475	66,761,609
2037	42,110,462	24,653,000	66,763,462
2038	42,106,639	24,657,375	66,764,014
2039	38,211,177	24,667,625	62,878,802
2040	30,492,764	24,671,550	55,164,314
2041	30,490,777	24,677,025	55,167,802
2042	23,572,759	24,676,725	48,249,484
2043	24,194,748	24,683,050	48,877,798
2044	6,920,337	-	6,920,337
2045	6,926,571	-	6,926,571
<b>Totals</b>	<b>\$ 1,009,175,281</b>	<b>\$ 529,935,216</b>	<b>\$ 1,539,110,497</b>



## SECTION

### 5

## *Capital Improvements Plan*

**BWWB Vision:** The Water Works Board of the City of Birmingham is committed to providing the highest quality water and service to our customers and our entire service area.

## ANNUAL BUDGET DOCUMENT

### Introduction

The Water Works Board of the City of Birmingham (BWWB), established in 1895, supplies raw and potable water to approximately 700,000 customers in a five-county region (Jefferson, St. Clair, Blount, Shelby, Walker). The BWWB operates four (4) intake stations with a total rated pumpage capacity of 285 million gallons per day (MGD). The intakes draw water from the Cahaba River, Mulberry Fork, Sipsey Fork, and Inland Lake. The BWWB owns and operates four (4) surface water fed filtration plants with a total treatment capacity of 190 MGD. The distribution system includes approximately 4,000 miles of cast iron, ductile iron, polyvinyl chloride, and galvanized line pipe. The system also includes 73 potable and raw water storage facilities, 51 pumping stations, 41 pressure reducing valve stations, 52,000 valves, 15,000 hydrants and over 220,000-meter settings. The BWWB maintains a system with over 200,000 major pieces of equipment.

In support of these assets, the BWWB has a 2020 and a Ten-Year Capital Improvement Plan for the years 2020-29 of \$81,484,428 for 2020 and \$822,257,958 for the ten-year plan, respectively. The Capital Improvement Plan (CIP) funds are designated to address regulatory compliance, risk management, capacity/growth, performance/cost efficiency and maintenance/replacement needs throughout the system, as well as capitalized operations and maintenance. The CIP serves as a planning instrument to identify needed capital expenditures and to coordinate the financing and timing of improvements in a way that maximizes the return to the customers. In addition, the planning process is a valuable means of coordinating and taking advantage of joint planning and development of projects where possible. Planning for capital facilities over time can promote better use of BWWB's financial resources and maintain an effective level of service for customers.

While the CIP serves as a long-range plan, it is reviewed annually and revised based on current prioritized circumstances and opportunities. Also, the project priorities may be changed due to funding opportunities and/or circumstances that cause a more rapid deterioration of an asset.

The adoption of the Capital Improvement Plan is neither a commitment to a particular project nor a limitation to a particular cost. When adopted, the CIP provides the framework for management and for the Directors with respect to rates, financing, investment planning and project planning.

#### Goals of the CIP

The Capital Improvement Plan evaluates the operating condition of the organization's assets, where upgrade improvements can be made, and where opportunities for new projects may exist. For this reason, the BWWB has the following goals from its CIP process:

- Ensure that BWWB's 10-Year Capital Improvement Plan is affordable and finances only necessary capital expenditures.
- Qualify capital investment decisions according to a fair, transparent, and objective process.
- Emphasize the requirement for long-term planning.
- Link the relation between the Capital and Operating Budgets.
- Avoid the need to impose emergency repairs
- Serve as an educational tool for the community and the BWWB.





## Description of Project Drivers

The following categories, listed by priority, were developed to indicate the motivation/driver for each element of the BWWB's CIP. Each project has been placed into one of these categories. It is possible that a project exists which could fall into multiple categories. Where this occurred, an effort was made to identify the most significant motivation/driver for the project.

### 1 - Regulatory Compliance

Projects associated with compliance with existing, pending, and future regulations. One regulation has a direct impact on the BWWB's CIP. An example summary of this regulation and the associated projects is provided below. Example of projects:

- **Disinfectants/Disinfection Byproducts Rule Stage 2** – Requires utilities to meet disinfection by-product maximum contaminant levels at locations in the system known to produce high levels. The final rule was issued on January 4, 2006.

**Impact on BWWB** – Optimization of current treatment process and distribution system management practices. This includes the rehabilitation of existing facilities to position for potential use of alternative treatment strategies.

### 2 - Risk Management

Projects associated with increasing service reliability, system redundancy, and safety of BWWB facilities for workers, the surrounding community and the environment. These activities include security program implementation, electrical system improvements, disinfection upgrades/conversion, distribution reinforcements, and dam safety improvements.

### 3 - Capacity

Projects associated with supporting the continued growth of the BWWB service area and demand within the existing service areas. These efforts include plant expansions, system expansion/redundancy, and new source development.

### 4 – Performance/Cost Efficiency

Projects associated with maintaining/improving current practices of utility operation. These efforts include some information technology initiatives, treatment process rehabilitation, and system maintenance/replacement.

### 5 – Maintenance and Replacement

Projects associated with extending the useful life of existing infrastructure through replacement of system elements or rehabilitation.

### 6 – Capitalized Operations and Maintenance

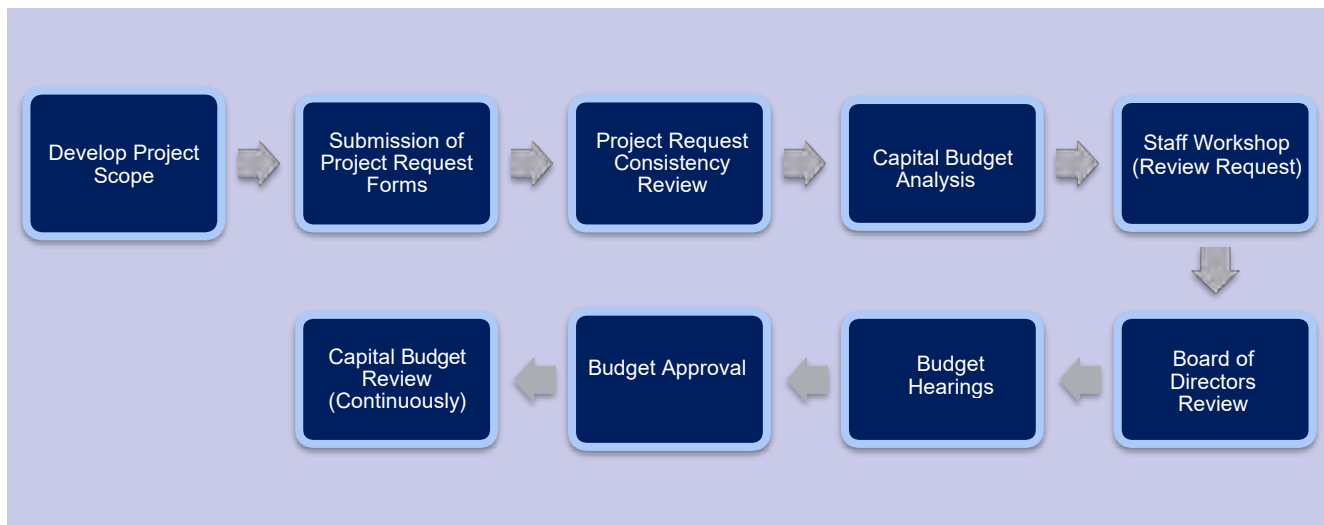
Project costs for labor and expenses associated with the execution of capital projects.



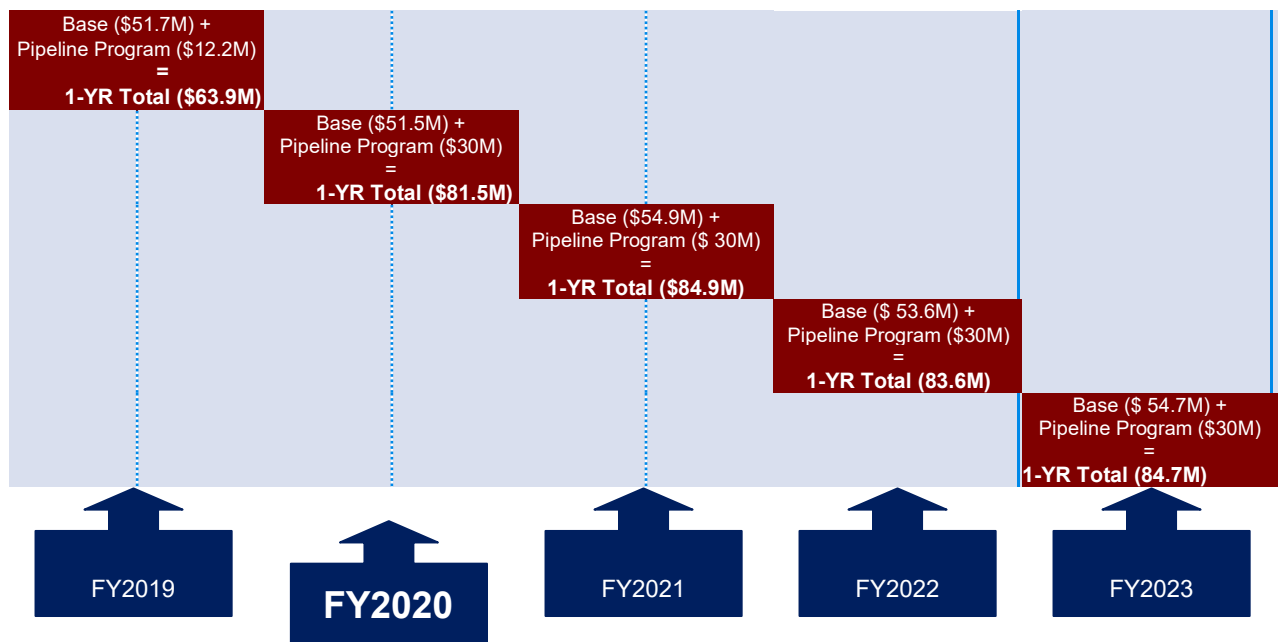
# FY 2020 APPROVED BUDGET DOCUMENT

## Capital Planning Process

The Capital Planning Process is created to be a vehicle to meet specific BWWB goals and/or drivers and to be consistent with BWWB's Strategic and Master Plans. The purpose of the Capital Planning Process is to encourage the flow of ideas and allow for proactive planning. During this process, departments are reviewing facilities condition assessments, preventive maintenance records, current performance of the Capital Improvement Plan, and providing justification of any other necessary project request. From these activities, the departments should become familiar with overall condition of their assets and needs. If these needs require the expenditure of capital dollars, each department will be responsible for completing the appropriate Capital Request and Business Case Justification Form. These request forms provide information such as: project name and location, the estimated cost, project timing, a brief description and justification of the project and resulting benefit. The procedures for the development of the Capital Improvement Plan budget will generally follow the schedule below:



## 5-Year Budget Timeline







## Capital Project Descriptions

### **Budget Item - 1A New Distribution Mains and Hydrants**

- This item covers the installation of distribution mains and fire hydrants generally associated with new developments that result in extensions of water services. These costs are generally reimbursed to the Board by the customer or developer.

### **Budget Item - 99 Distribution Mains, Hydrants, & New Customer Tap Fees**

- This item includes the contributions and deposits received for main extensions in Budget Item 1A, and new customers tap fees, in accordance with the Rules and Regulations Governing Service to Customers.

### **Budget Item - 1B New Customer Service Connections (System Dev. Only)**

- This item covers the BWWB's cost for new service connections. It includes all labor and materials furnished by the BWWB. Tap fees are charged to the customer to offset this cost.

### **Budget Item - 1C Meters & Metering Technology**

- This item covers the purchase of additional and replacement meters. The additional meters are for new service connections. The replacement meters are for the continuation of the replacement program of worn out inaccurate meters. This replacement program enhances revenue and reduces lost water.

### **Budget Item - 1D Replace Distribution Mains – System Dev. Only**

- Many of the system's older distribution mains, particularly galvanized steel, have deteriorated beyond economical repair. These mains are a continuing source of excessive maintenance and lost revenue (water loss). This item is intended to continue replacement of water mains due to excessive repairs, water quality, low fire flow, etc.

### **Budget Item - 1E Replace Distribution Services – System Dev. Only**

- Many of the system's older services, particularly galvanized steel, have deteriorated beyond economical repair. These services are a continuing source of excessive maintenance and lost revenue (water loss). This item is intended to continue the program for replacement of these older services.

### **Budget Item - 1F Water Plant Filters**

- In order to maintain the effectiveness and efficiency of the filter plants, it is necessary to rebuild the filters and replace the filter media on a regular basis. This item provides for a regular program of filter media replacement.

### **Budget Item - 1G Purchase Watershed Property**

- In order to protect valuable water resources, it is advantageous to purchase watershed property when it becomes available. This item provides funding for purchasing watershed property as it becomes available.

### **Budget Item - 1H Tank Maintenance & Repair**

- In order to maintain the integrity of the Board's storage tanks, it is necessary to have a comprehensive tank maintenance program. This item will provide for regular maintenance and rehabilitation as required. This includes updating to current standards and recoating the storage tanks on a scheduled basis.

### **Budget Item - 1I Repair/Replace Pumps, Motors, Generators**

- In order to maintain acceptable operational efficiency of pumps, motors, and other appurtenances, it is necessary to have a repair/replacement program. This item will provide for repair or replacement of equipment, as necessary to maintain optimum operating efficiency.



# FY 2020 APPROVED BUDGET DOCUMENT

## **Budget Item 1J - Reimbursable Pipeline Projects Out**

- This item covers installation of new distribution mains at the cost of the BWWB.

## **Budget Item 1K - Service Line Replacement - Distribution Department Only**

- This item covers installation of service line replacements at the cost of the BWWB.

## **Budget Item 1L - Repair/Replace Distribution Hydrants and Valves**

- Repair/Replace Distribution Hydrants and Valves

## **Budget Item 1M - Cut and Cap Program**

- This item includes the pilot program for the cut and cap of 2-inch service lines

## **Budget Item 1N – Developer Installed**

- This item includes new development associated installation cost.

## **Budget Item - 2 Office Furniture & Equipment**

- This item includes replacement of office furniture and equipment.

## **Budget Item 3 - Transportation Equipment**

- This item includes the replacement of vehicles due to excessive mileage and / or repair cost and 3 additional vehicles.

## **Budget Item 4 - General Equipment**

- This budget item sets aside monies to purchase general equipment. Departments will be required to submit justification for review and approval to purchase under this capital item.

## **Budget Item 5 - Maintenance & Repairs to Existing Facilities**

- This item includes upgrades, replacements and repairs needed to improve safety, operations and efficiency of existing facilities. These are typically small capital construction projects less than \$300,000 total installed cost.

## **Budget Item 6 - Information Technology/GIS**

- This item includes replacement of computer software and equipment to maintain existing network and other technology enhancements.

## **Budget Item 7 - Economic Development**

- This item includes the development of programs and processes to increase economic development for BWWB.



# FY 2020 APPROVED BUDGET DOCUMENT

## 2020 Capital Project Budget

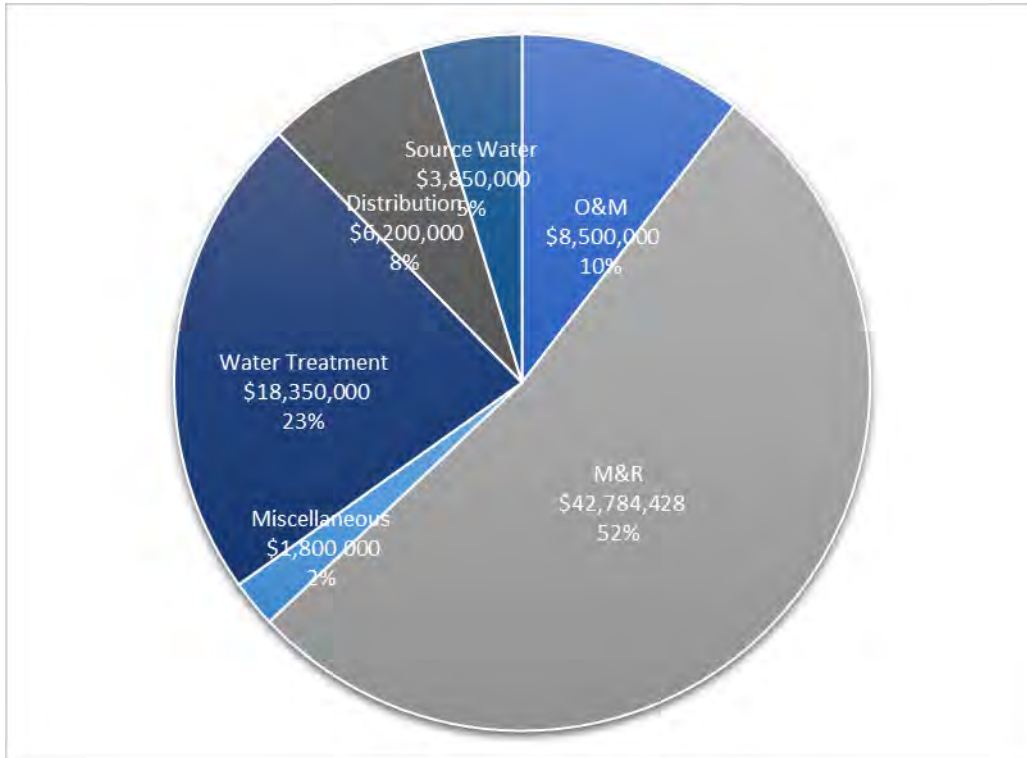
### 2020 Capital Budget – Approved

Description	Drivers	2020
<b>Filter Plants</b>		
CFP Liquid Lime	Perform	\$ 500,000
SMFP Residuals	Reg	200,000
SMFP Filter Improvements	Reg	16,800,000
WFP Liquid Lime	Perform	850,000
<b>Raw Water &amp; Distribution</b>		
Inland Lake Dam Monitoring and Evaluation Program	Risk	350,000
Lake Purdy Dam Stability Rehabilitation	Risk	2,700,000
Inland Lake PS and Transmission Line Improvements	Risk	800,000
Carson Loop Phase 6D	Risk	4,500,000
Carson Loop Phase 8	Risk	1,700,000
<b>IT/Security</b>		
SAP Implementation (Phase 3 - HR)	Perform	1,800,000
<b>Maintenance and Repairs</b>		
1A - New Distribution Mains and Hydrants (Associated w/ New Developments)	M & R	1,000,000
1B - Replace Existing Services - Revenue Water Only	M & R	40,000
1C - Meters and Metering Technologies	M & R	1,708,000
1D - Replace Distribution Mains - System Development Only	M & R	23,850,000
1E - Replace Distribution Services - System Development Only	M & R	6,150,000
1F - Water Plant Filters	M & R	46,328
1H - Tank Maintenance and Repairs	M & R	2,601,000
1I - Repair/Replace Pumps, Motors, Generators	M & R	2,550,000
1K - Service Line Replacement - Distribution Department Only	M & R	1,090,000
1L-Repair/Replace Distribution Hydrants and Valves	M & R	1,100,000
1N - Developer Installed	M & R	30,000
2 - Office Furniture & Equipment	M & R	40,000
3 - Transportation Equipment	M & R	1,900,000
4 - General Equipment	M & R	800,000
5 - Maintenance & Repairs to Existing Facilities	M & R	3,600,000
6 - Information Technology/GIS	M & R	400,000
7 - Economic Development	Perform	-
99 - Distribution Mains, Hydrants & New Customer Tap Fees	M & R	(4,120,900)
Capitalized Operation & Maintenance		8,500,000
<b>Total</b>		<b>\$ 81,484,428</b>

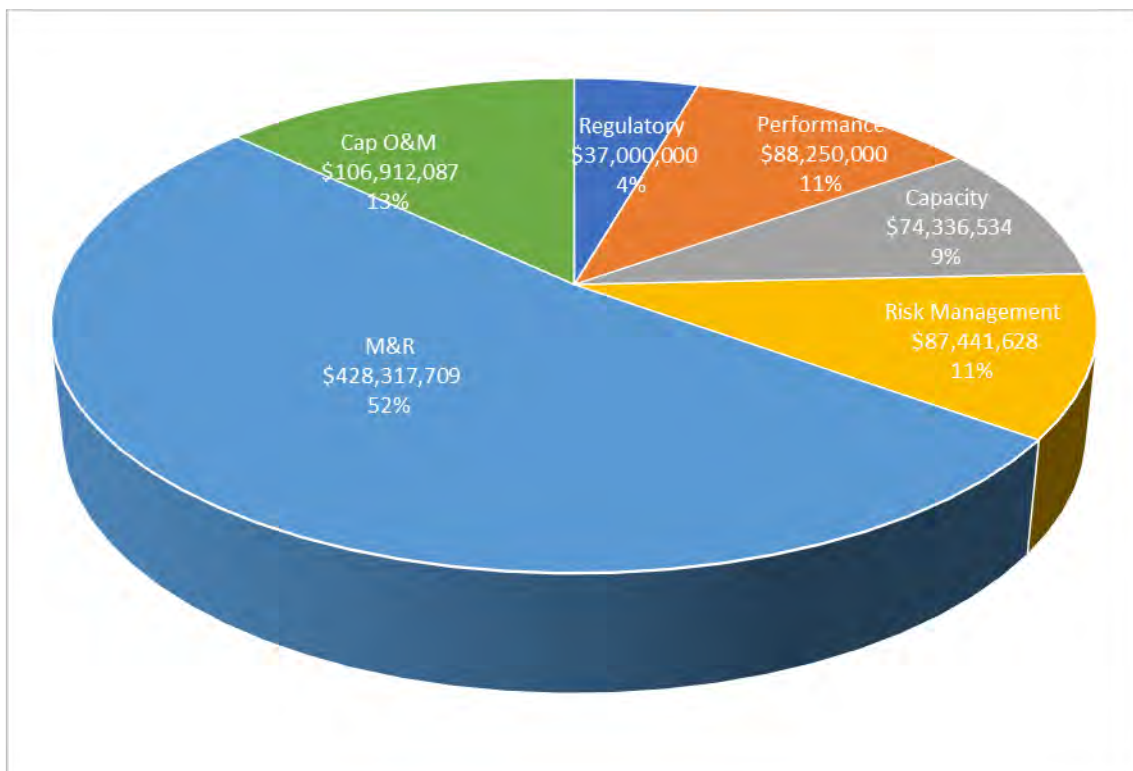


# FY 2020 APPROVED BUDGET DOCUMENT

## 2020 Approved Budget



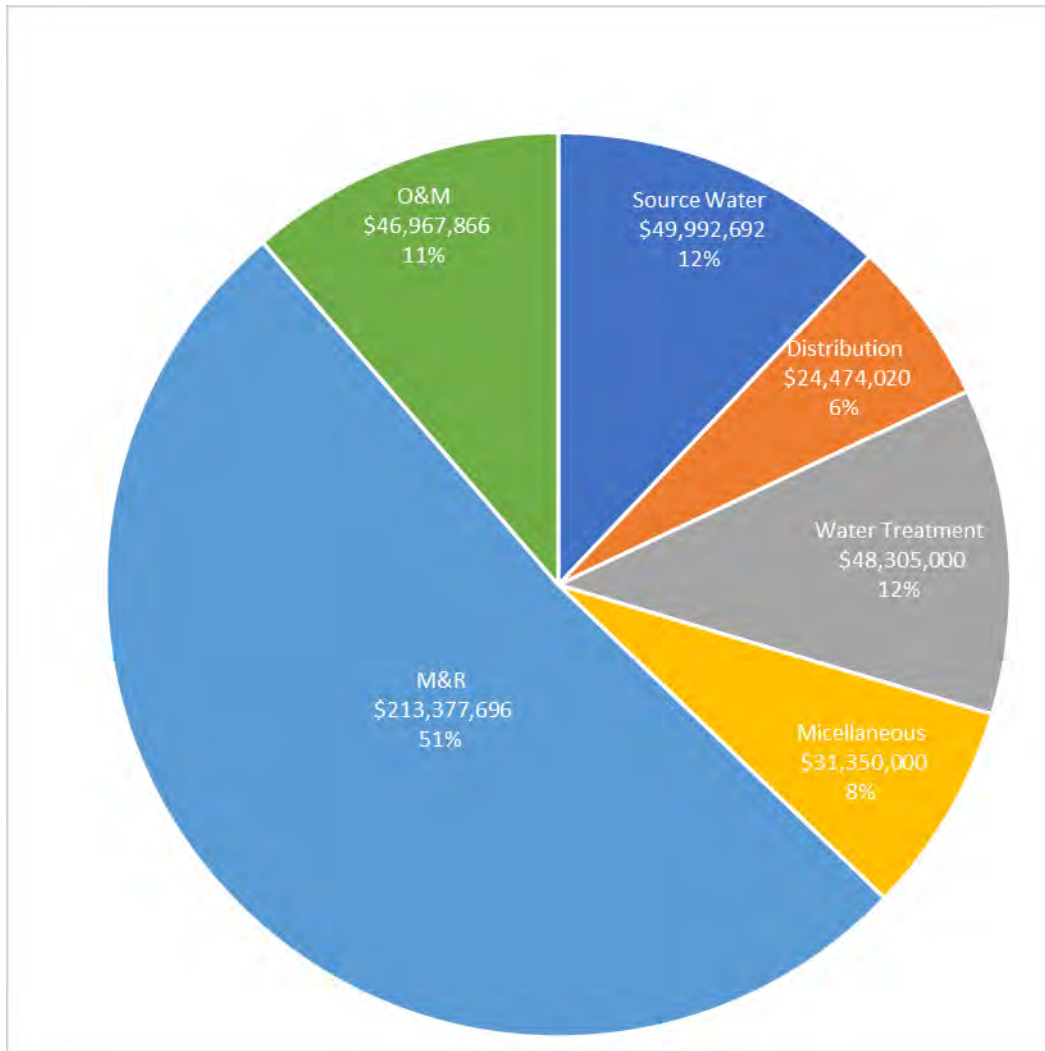
## Ten-Year Plan 2020-2029





# FY 2020 APPROVED BUDGET DOCUMENT

## Five-Year Plan 2020-2024







## Birmingham Water Works Capital Assets

### Current System Assets

**OUR GOAL IS TO MAINTAIN EXISTING ASSETS IN ORDER TO  
PRODUCE THE NATION'S HIGHEST QUALITY WATER**



**4 Treatment Plants  
2 Sludge Facilities**



**4,064 Miles of Water Main  
1,000 Miles of Service Lines**



**51 Distribution Pump Stations  
41 Pressure Reducing Valves (PRV)**



**73 Potable and Raw Water  
Tanks**



**52,000 valves  
15,000 hydrants**



**154 Buildings**



**5 Impoundments (Dams)**



**20 Pressure Gradients  
Over 220,000 Meters/Connections**



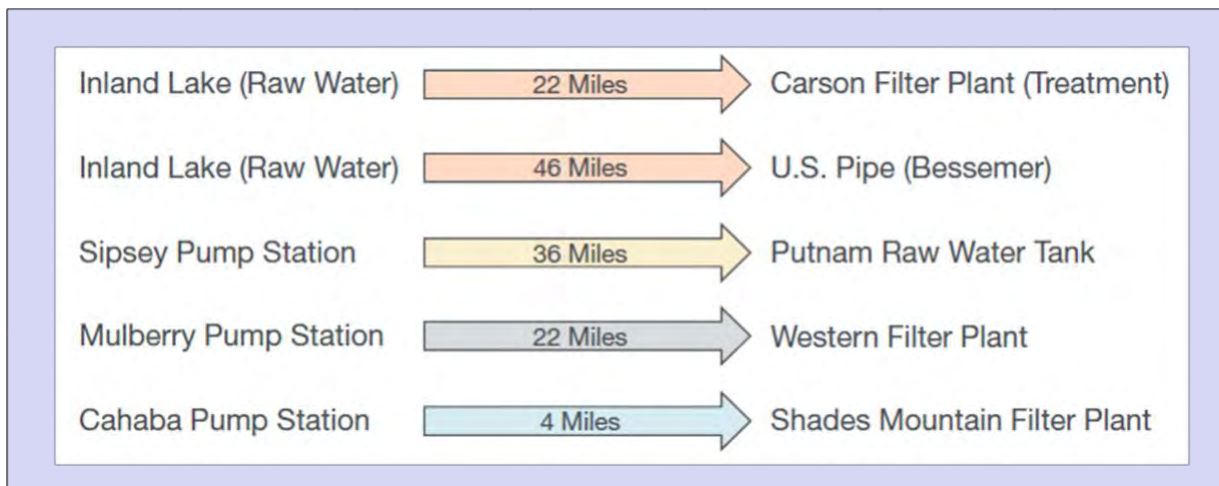
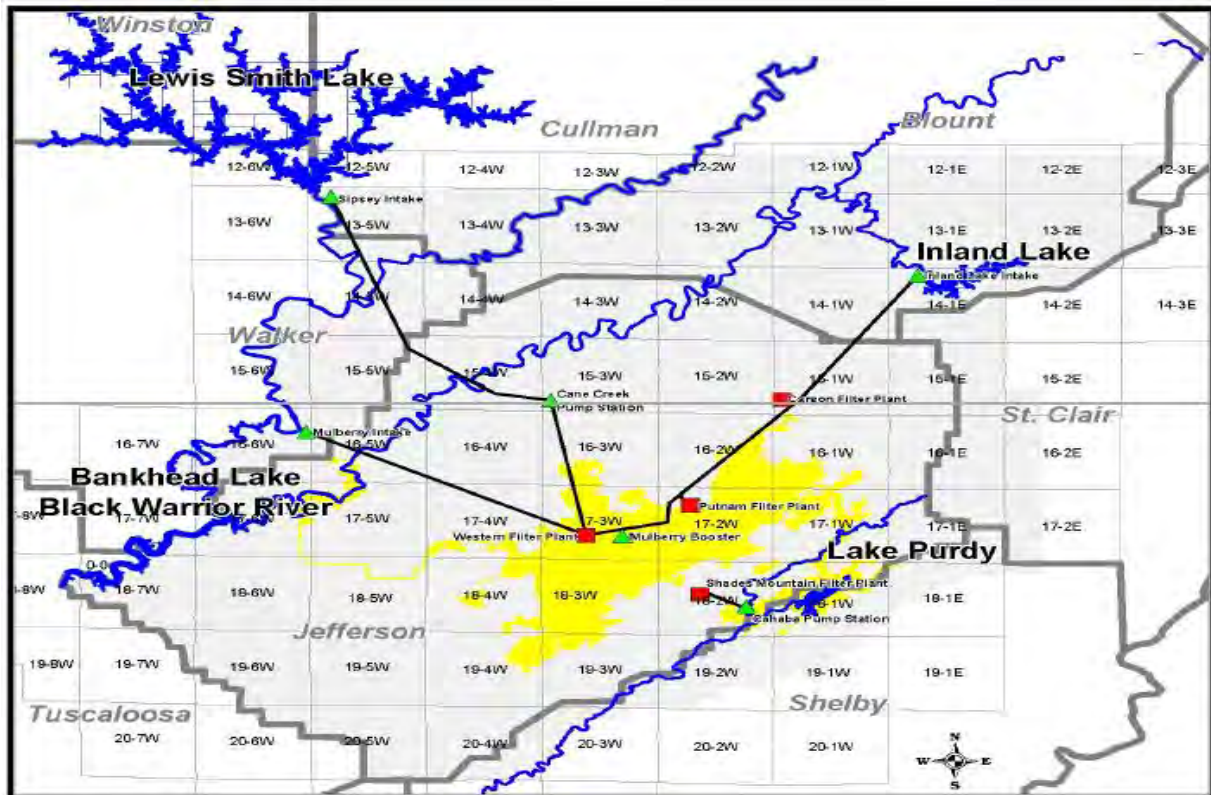


# FY 2020 APPROVED BUDGET DOCUMENT

## Raw Water

### Overview

The Birmingham Water Works Board (BWVB) ensures the availability of water to every home, school, business and even park within its service area. BWVB system serves an area of approximately 700 square miles and approximately 193,000 customer accounts in Jefferson, Blount, St. Clair, Walker and Shelby Counties. The system consists of 4 raw water intake systems, 3 raw water boosters, 5 dams, and 20 raw water storage tanks. Water must be pumped long distances from source of supply to storage/use.





# FY 2020 APPROVED BUDGET DOCUMENT

Objective: What we are trying to accomplish

The objective of these asset classes is to ensure the system provides adequate storage of treatable water and equalizes demand to meet the current and future service demands of BWWB. It also ensures that adequate water storage capacity meets water regulations and provides maximum operational efficiency for industrial purchase, wholesale customers, and meets fire protection needs.

How we will achieve our objective

The Capital Improvements Plan includes renewal and replacement projects needed to maintain adequate water supplies and storage to meet current water demands.

## **Work Completed or Scheduled in FY2019:**

- **Lake Purdy Dam Stabilization Project** - The goal of the project is to address the following objectives:
  - Improve the stability of the existing dam
  - Mitigate seepage
  - Increase the spillway capacity

**Mulberry Intake Pump** – The goal of this project is to maintain the operational efficiency of the Mulberry Raw Water Intake Pump Station. This project involves the repair and refurbishing of the existing pump in order to provide treatable water to our water treatment plants.

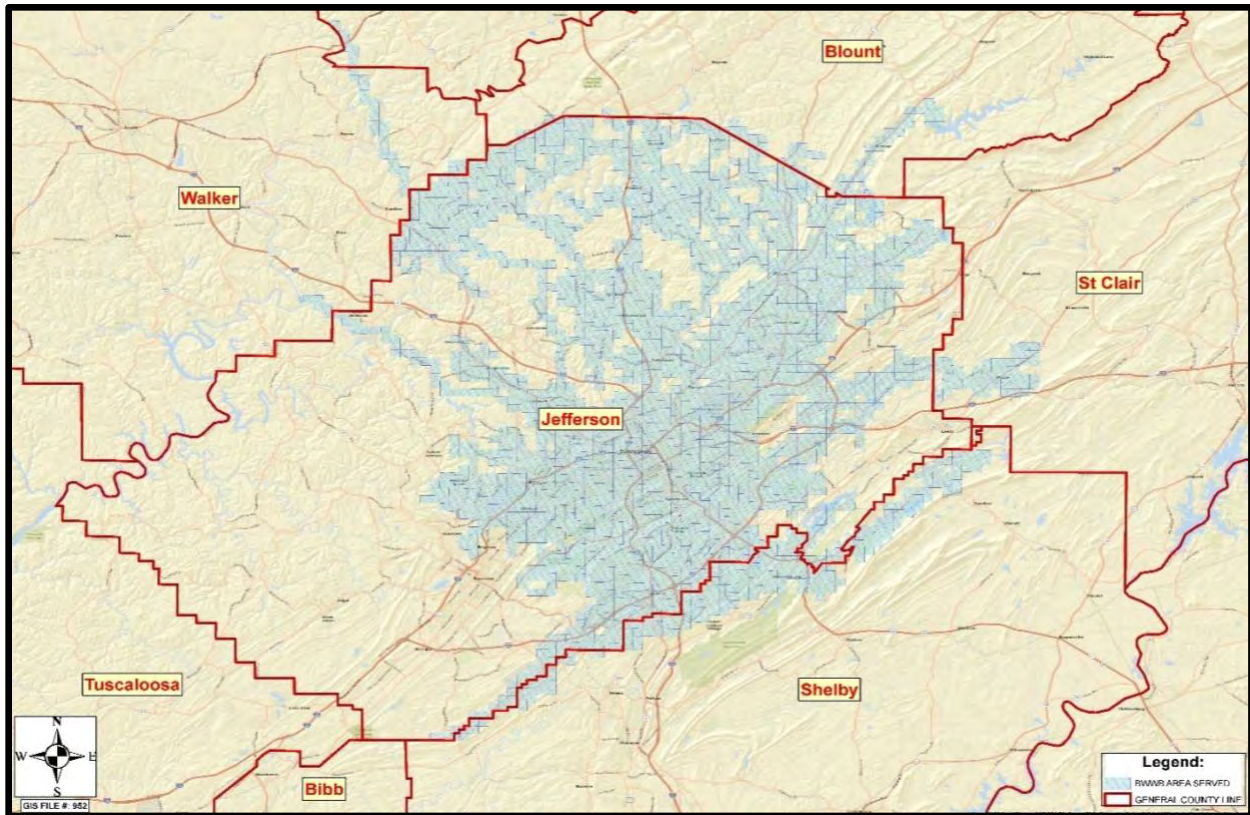




## Distribution

### Overview

The Distribution System consists of 4,000 miles of piping, 1,000 miles of service lines, 48 distribution pump stations, 51 distribution storage tanks, 41 pressure-reducing valve stations, 60,000 valves, 14,000 hydrants, and 20 pressure gradients.



**Galvanized Steel and Unlined CI account for only 14% of the system**

**Galvanized Steel Pipe and Unlined CI Pipe Accounts for 67% of our Maintenance Activity**





# FY 2020 APPROVED BUDGET DOCUMENT

Objective: What we are trying to accomplish

The objective of this asset class is to support the ongoing rehabilitation of existing water lines; improvements related to optimizing system performance and reliability, e.g. looping, paralleling and replacing lines approaching capacity; and adding new transmission and distribution mains to support growth and service deficiencies in specific areas.

How we will achieve our objective

The Capital Improvements Plan includes renewal, replacement and extension of lines as well as water quality projects that are needed in order to maintain BWBB's water distribution assets in good condition, enabling BWBB to meet water demands.

## Work Completed or Scheduled in FY2019:

- **Inland Lake Pump Station and Transmission Line Improvements Construction Project** - This project includes removing and replacing failing main line valves, check valves and blow-off. This will involve the installation of new 60-inch main line valves, 60-inch check valves and a 60-inch magnetic flow meter.
- **Carson Loop Phase 6D** – The project consists of 3,700 feet of 36" buried ductile iron pipe and fittings along from Grand River West to Floyd Bradford Road and Amber Hills Road. This project also includes a 600-foot-long pipe bridge over the Cahaba River.

**Water Line Replacement Project:** Replacement of the system's older distribution mains, particularly galvanized steel due to excessive repairs, water quality, low fire flow, etc.

**Meter Replacement Project:** The replacement meters are for the continuation of the replacement program of worn out inaccurate meters. This replacement program enhances revenue and reduces lost water.





## Water Treatment

Overall

The Birmingham Water Works (BWWB) consist of four (4) water treatment plants and is the State of Alabama's largest water utility.



Shades Mountain  
80 MGD



Western  
60 MGD



Putman  
24 MGD



Carson  
25 MGD



## FY 2020 APPROVED BUDGET DOCUMENT

Objective: What we are trying to accomplish

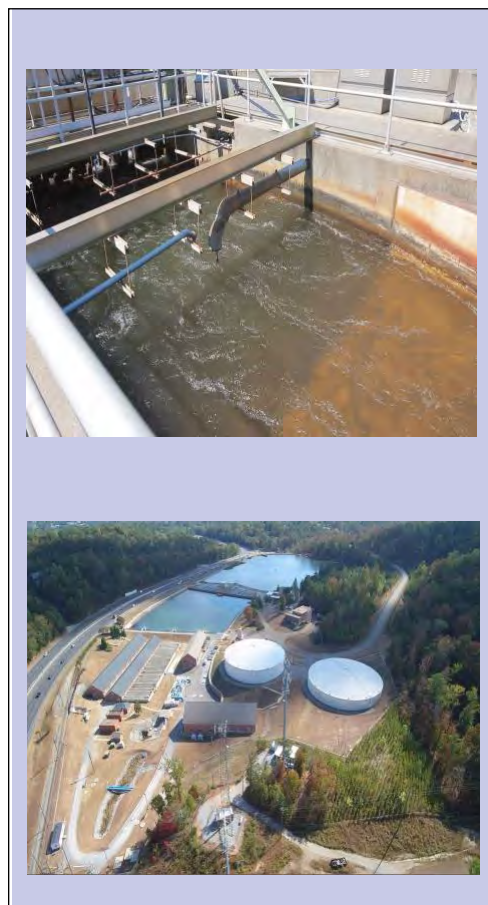
The objective of this asset class is to ensure exceptional treatment facilities are being maintained to produce water quality that exceeds drinking water standards.

How we will achieve our objective

The Capital Improvements Plan includes renewal and replacement of equipment, membranes, disinfection units and electrical/control components to ensure the water quality provided to our customers exceeds federal and state drinking water standards.

### Work Completed or Scheduled in FY2019:

- **Shades Mountain Filter Plant (SMFP) Filter Improvements-** As part of BWWB's overall filter rehabilitation program, BWWB has chosen to upgrade the filters at each plant in such a way as to provide the flexibility for installation of GAC in the filters. Consistent with that approach, this project will establish the infrastructure to allow the existing filters to be converted into GAC Filter Absorbers. GAC treatment will allow the BWWB to continue to use free chlorine for secondary disinfection while achieving compliance with Stage 2
- **SMFP Residuals-** SMFP has purchased two 26-inch solids dewatering centrifuges. These units will replace the 37-year-old failing plate and frame system currently in place. The centrifuges still require installation as well as demolition of the existing plate and frame. Electrical and piping upgrades and modifications will be required. Additionally, a new dredge will be acquired to guarantee consistent removal of solids from the sedimentation basin to the dewatering equipment. Solids dewatering is critical to regulator operations at SMFP.







# FY 2020 APPROVED BUDGET DOCUMENT

## SECTION

## 6

## Operating Budget

### ANNUAL BUDGET DOCUMENT

#### Overview

The Approved FY 2020 operating budget (including debt service) is \$104,867,175, which is 1.81% or \$1,867,175 higher than the FY 2019 Approved Budget. The following pages will provide details by Division and Department as well as budget information as it relates to the Approved FY 2020 operating budget.

#### O&M Summary – by Division and Department

Division	Funds Center	2016 NET ACTUAL	2017 NET ACTUAL	2018 NET ACTUAL	2019 NET BUDGET	2020 NET BUDGET
Executive	Executive	1,099,035.59	1,112,978.62	1,341,913.02	1,123,758.80	1,165,241.50
	Board	79,796.47	161,529.76	175,428.82	179,769.52	191,804.27
	Company Wide	27,961,502.73	22,344,490.90	23,684,480.06	25,173,316.10	25,428,455.60
	Business System & Operations	264,120.30	275,024.43	657,171.81	827,858.96	824,015.84
	Internal Auditor	224,662.32	231,072.97	238,862.81	244,221.65	251,879.35
	Public Communication	371,696.41	419,933.46	469,460.99	597,283.40	762,064.33
Finance & Administration	Customer Support Services	4,204,464.27	4,209,026.34	5,278,357.03	6,618,087.99	6,681,526.04
	Call Center	980,473.99	1,111,946.54	1,376,930.54	1,788,207.91	1,843,110.07
	Human Resources	2,272,244.17	1,624,005.28	2,545,984.01	2,812,251.22	2,855,859.99
	Wellness and Health Management	296,273.90	105,770.34	180,039.17	295,070.64	294,530.40
	Water Watchers Brigade	190,303.77	270,200.04	280,078.14	350,810.76	367,311.98
	Information Technology	3,635,928.56	2,833,359.88	4,217,075.31	5,201,582.92	5,260,712.58
	Accounting	1,337,384.86	1,377,097.91	1,676,984.24	2,033,453.65	1,908,890.35
	Purchasing	2,088,789.62	2,448,203.61	2,093,276.37	2,207,908.16	2,248,311.52
Operations & Technical Services	EnviroLab & Water Quality	2,549,610.42	2,692,713.33	2,794,697.03	2,906,196.00	3,002,928.36
	Purification	12,474,890.96	12,782,400.34	13,654,135.10	14,146,691.88	14,087,235.78
	Security	1,163,575.78	1,274,198.20	2,193,430.31	2,214,824.16	2,248,512.85
	Water Resources	6,980,291.90	6,969,130.63	6,944,547.55	7,438,983.34	7,534,864.01
	SCADA	795,410.27	750,968.58	770,704.70	777,707.40	837,353.78
	Industrial & Commercial Accounts		43,139.76	198,796.71	262,275.28	287,553.24
Engineering & Maintenance	E&M Shop	4,412,494.61	4,404,304.48	4,812,641.65	5,016,945.42	5,157,745.35
	System Development	787,275.07	580,273.62	730,073.41	684,849.90	705,646.67
	Distribution	15,270,162.77	15,597,039.93	15,840,674.19	15,672,712.63	16,300,750.24
	Engineering	1,845,767.16	1,260,213.38	1,804,024.71	1,374,249.84	1,488,707.72
	Mapping & Records	269,781.44	256,676.04	257,857.86	290,638.56	266,239.84
	Water Accountability	2,536,787.91	2,746,036.73	2,514,135.04	2,760,348.20	2,865,923.76
All Departments		94,092,725.25	87,881,735.10	96,731,760.58	103,000,004.29	104,867,175.42



# FY 2020 APPROVED BUDGET DOCUMENT

## O&M Summary – by Expense Category

Category	2020	2019	Increase (Decrease)	Percentage Change
LABOR	\$39,276,245.07	\$38,214,708.01	\$1,061,537.06	2.78%
EMPLOYEE RELATED EXPENSES	\$14,788,664.37	\$15,108,532.71	(\$319,868.34)	-2.12%
POWER	\$9,274,469.70	\$9,181,403.39	\$93,066.31	1.01%
TRANS & DISTRIB MAINT MATERIALS	\$10,063,123.99	\$9,775,998.56	\$287,125.43	2.94%
LICENSE FEES	\$4,380,000.00	\$4,310,000.00	\$70,000.00	1.62%
CHEMICALS	\$4,992,407.17	\$5,147,832.66	(\$155,425.49)	-3.02%
LEGAL	\$1,081,470.00	\$1,081,470.00	\$0.00	0.00%
LAB_SUPP, PURIFICATION MAINT	\$1,670,307.38	\$1,699,865.58	(\$29,558.20)	0.00%
OUTSOURCED SECURITY	\$1,262,507.86	\$1,253,679.65	\$8,828.21	0.70%
INSURANCE	\$1,803,607.97	\$1,592,620.00	\$210,987.97	13.25%
ELECTRICAL/ PUMP MAINTENANCE	\$440,832.60	\$434,890.82	\$5,941.78	1.37%
BILLING EXPENSE	\$1,102,310.00	\$1,102,100.00	\$210.00	0.02%
OTHER O&M EXPENSES	\$11,997,693.99	\$11,693,525.86	\$304,168.13	2.60%
CONSULTANTS	\$2,733,535.32	\$2,403,372.76	\$330,162.56	13.74%
<b>TOTAL O&amp;M</b>	<b>\$104,867,175.42</b>	<b>\$103,000,000.00</b>	<b>\$1,867,175.42</b>	<b>1.81%</b>



## FY 2020 APPROVED BUDGET DOCUMENT

### Compensation and Benefits

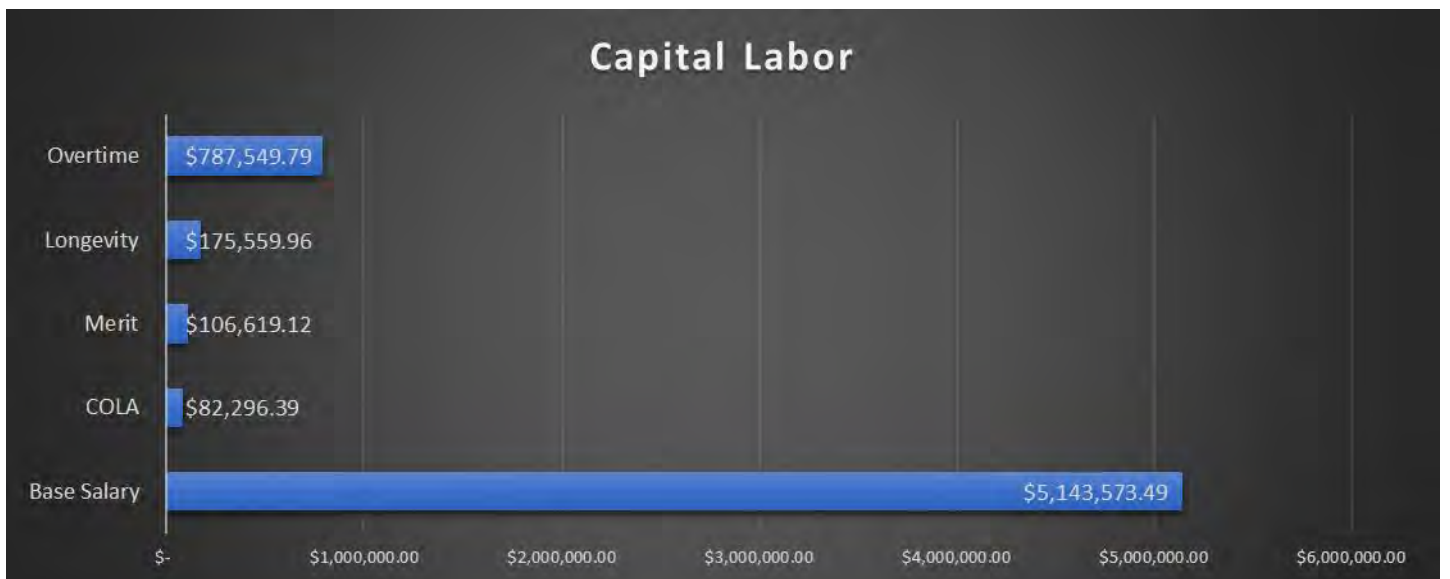
	2020	2019	Increase(Decrease)	Percentage Change
REGULAR SALARY	\$38,977,530.29	\$38,051,644.79	\$925,885.50	2.43%
VACATION PAY	\$2,852,235.50	\$2,781,248.70	\$70,986.80	2.55%
HOLIDAY PAY	\$1,818,028.35	\$1,773,486.47	\$44,541.88	2.51%
COLA AMOUNT	\$683,149.76	\$1,215,552.69	(\$532,402.93)	-43.80%
OVERTIME AMOUNT	\$2,787,609.99	\$2,789,709.40	(\$2,099.41)	-0.08%
MERIT AMOUNT	\$915,029.88	\$860,158.80	\$54,871.08	6.38%
DISCRETIONARY PAY	\$0.00	\$0.00	\$0.00	0.00%
VEHICLE PAY	\$0.00	\$0.00	\$0.00	0.00%
LONGEVITY AMOUNT	\$1,561,743.53	\$1,392,853.23	\$168,890.30	12.13%
TOTAL BUDGET	\$49,595,327.30	\$48,864,654.08	\$730,673.22	1.50%
TOTAL FTE	799.40	799.00	0.40	0.05%
OVERTIME HOURS	68,834.53	70,323.85	(1,489.32)	-2.12%

The Compensation and Benefits budget for FY 2020 is \$49,595,327.30, which is an increase of \$730,673.22 or 1.50% higher than the FY 2019 Approved Budget.

**Highlight:** The FY 2020 budget includes the addition of two new full-time employees to the Public Communications Budget. There are also budgeted merit adjustments in the average amount of 2.1% and a cost of living increase for employees estimated at 1.6%. The FY 2020 requested budget includes funding for 799.40 individual positions (685.86 full-time equivalent positions). Overtime has been decreased by \$ 2,099.41 (0.08%) or 1,489.32 hours. The trend has shown that these hours are needed to support leak repairs, plant operations and repairs, infrastructure inspection and installation related to an increase in new development and work related to Raw Water staffing deficiencies during vacation and holidays.



## FY 2020 APPROVED BUDGET DOCUMENT





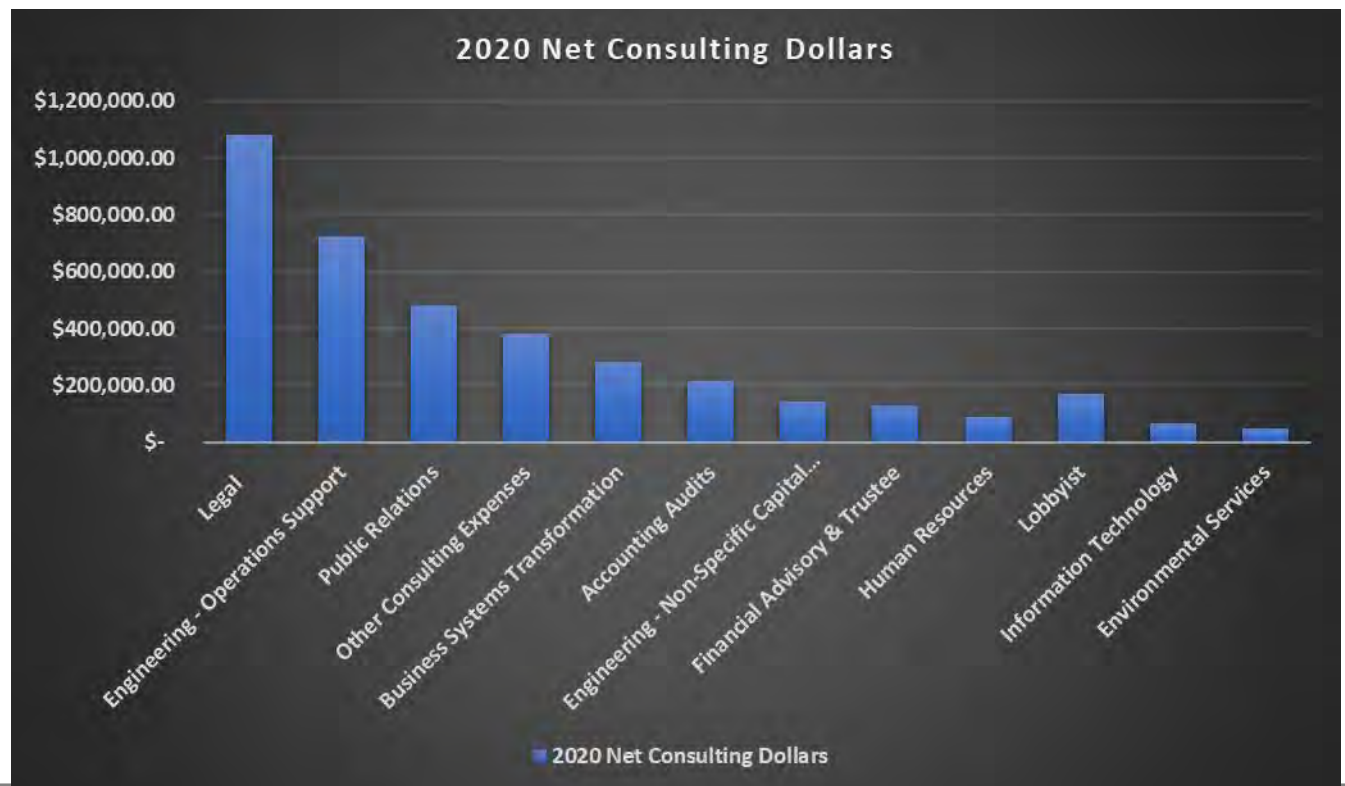


## FY 2020 APPROVED BUDGET DOCUMENT

### Consultant Services

Expense Category	2020 Net Consulting Dollars
Legal	\$ 1,081,470.00
Engineering - Operations Support	725,000.00
Public Relations	481,814.00
Other Consulting Expenses	383,754.33
Business Systems Transformation	284,859.99
Accounting Audits	214,378.50
Engineering - Non-Specific Capital Related Projects	143,724.00
Financial Advisory & Trustee	130,308.50
Human Resources	87,500.00
Lobbyist	168,140.00
Information Technology	67,256.00
Environmental Services	46,800.00
<b>Grand Total</b>	<b>\$ 3,815,005.32</b>

The Consultant Services budget for FY 2020 is \$3,815,005 which is an increase of \$330,162 or 9.47% higher than the FY 2019 Approved Budget.





# FY 2020 APPROVED BUDGET DOCUMENT

## Debt Service

The Debt Service budget for FY 2020 is \$66,047,821, which is an increase of \$1,550,973 or 5.4% higher than the FY 2019 Approved Budget.

## Debt Service Coverage

	Est. Actual 2019	Proposed 2020
<b>Total Revenues</b>	<b>\$ 202,381,000</b>	<b>\$ 206,711,544</b>
Less: Impact/System Development Fees	(1,222,000)	(1,222,000)
Less: Interest on Construction Funds	(215,192)	(107,508)
Plus: Loss on the Sale/Disposition of Assets	242,445	429,744
<b>Total Revenues per Official Statement Definition</b>	<b>\$ 201,186,253</b>	<b>\$ 205,811,779</b>
<b>Revenue Requirements</b>		
O&M Expenses	\$ (106,194,551)	\$ (104,867,175)
<b>Total Revenues Available for Debt Service and PAYGO</b>	<b>\$ 94,991,702</b>	<b>\$ 100,944,604</b>
<b>Debt Service</b>		
Senior Debt Service	\$ (44,684,801)	\$ (46,252,831)
Subordinate Debt Service	(19,812,048)	(19,794,990)
<b>Total Debt Service</b>	<b>\$ (64,496,848)</b>	<b>\$ (66,047,821)</b>
<b>PAYGO Spending</b>	<b>\$ (27,800,000)</b>	<b>\$ (34,800,000)</b>
<b>Total Revenue Requirements</b>	<b>\$ (198,491,399)</b>	<b>\$ (205,714,996)</b>
<b>Surplus/(Deficit)</b>	<b>\$ 2,694,853</b>	<b>\$ 96,783</b>
<b>Debt Service Coverage Ratios</b>		
Senior Debt Service Coverage (Target = 1.75)	2.13	2.18
Total Debt Service Coverage (Target = 1.20)	1.47	1.53







## FY 2020 APPROVED BUDGET DOCUMENT

Consumption is projected to decrease by 1,130,227 Centum Cubic Feet (CCF) or 3.58%. The schedule below provides a summary of consumption projections for FY 2020.

# 2020 INITIAL CONSUMPTION PROJECTION

	2018 Actual	2019 Actual	2020 Projected	2019 to 2020 Difference in Ccf
<b>Residential</b>				
Block 1 (0-3 Ccf)	4,944,831	5,046,962	5,000,000	
Percent Change		2.07%	-0.93%	
Block 2 (3-15 Ccf)	5,958,118	6,102,061	6,000,000	
Percent Change		2.42%	-1.67%	
Block 3 (15+ Ccf)	1,864,943	2,230,650	1,950,000	
Percent Change		19.61%	-12.58%	
<b>Subtotal: Residential</b>	12,767,892	13,379,673	12,950,000	(429,673)
Percent Change		4.79%	-3.21%	
<b>Non-Residential</b>	14,246,390	14,371,947	13,419,672	(952,275)
Percent Change		0.88%	-6.63%	
<b>Wholesale</b>			830,328	830,328
Percent Change			n/a	
<b>Raw Water</b>	4,303,167	3,778,607	3,200,000	(578,607)
Percent Change		-12.19%	-15.31%	
<b>Total Consumption</b>	31,317,449	31,530,227	30,400,000	(1,130,227)
Percent Change		3.38%	-3.58%	

Note: Wholesale started as its own customer class on January 1, 2020. Previously, Wholesale was part of the Non-Residential customer class.



## FY 2020 APPROVED BUDGET DOCUMENT

Revenue is projected to increase by \$4,330,544.00 or 2.14% over the estimated actual amount for FY 2019. The schedule below provides a summary of consumption projections for FY 2020.

# 2020 TOTAL REVENUE PROJECTIONS

	2018 Actual	2019 Actual	2020 Projected
<b>Volumetric Revenue</b>			
<u>Residential</u>			
Block 1 (0-3 Ccf)	\$ 12,015,939	\$ 12,718,344	\$ 12,950,000
Block 2 (3-15 Ccf)	17,099,798	18,184,141	20,520,000
Block 3 (15+ Ccf)	8,000,605	9,948,700	11,680,500
Subtotal: Residential	\$ 37,116,342	\$ 40,851,184	\$ 45,150,500
Difference		\$ 3,734,842	\$ 4,299,316
<u>Non-Residential</u>	\$ 53,566,427	\$ 56,194,313	\$ 53,678,688
Difference		\$ 2,627,887	\$ (2,515,625)
<u>Wholesale</u>			\$ 3,138,640
Difference			n/a
<u>Raw Water</u>	\$ 4,113,828	\$ 3,752,157	\$ 3,779,200
Difference		\$ (361,671)	\$ 27,043
<b>Total Volumetric Revenue</b>	<b>\$ 94,796,596</b>	<b>\$ 100,797,655</b>	<b>\$ 105,747,028</b>
<b>Total Fixed Charge Revenue</b>	<b>\$ 72,545,000</b>	<b>\$ 75,736,519</b>	<b>\$ 75,142,705</b>
<b>Other Revenue</b>			
Fire Protection Revenue	\$ 4,842,000	\$ 5,484,888	\$ 5,439,000
Other Operating Revenues	2,978,000	3,518,028	3,518,028
Jefferson County Sewer Billing Revenue	9,370,000	13,989,993	13,953,783
<b>Total Operating Revenues</b>	<b>\$ 184,531,596</b>	<b>\$ 199,527,082</b>	<b>\$ 203,800,544</b>
<b>Non-Operating Revenues</b>	<b>\$ 3,091,000</b>	<b>\$ 2,854,000</b>	<b>\$ 2,911,000</b>
<b>Total Revenues</b>	<b>\$ 187,622,596</b>	<b>\$ 202,381,000</b>	<b>\$ 206,711,544</b>



# FY 2020 APPROVED BUDGET DOCUMENT

## SECTION

### 7

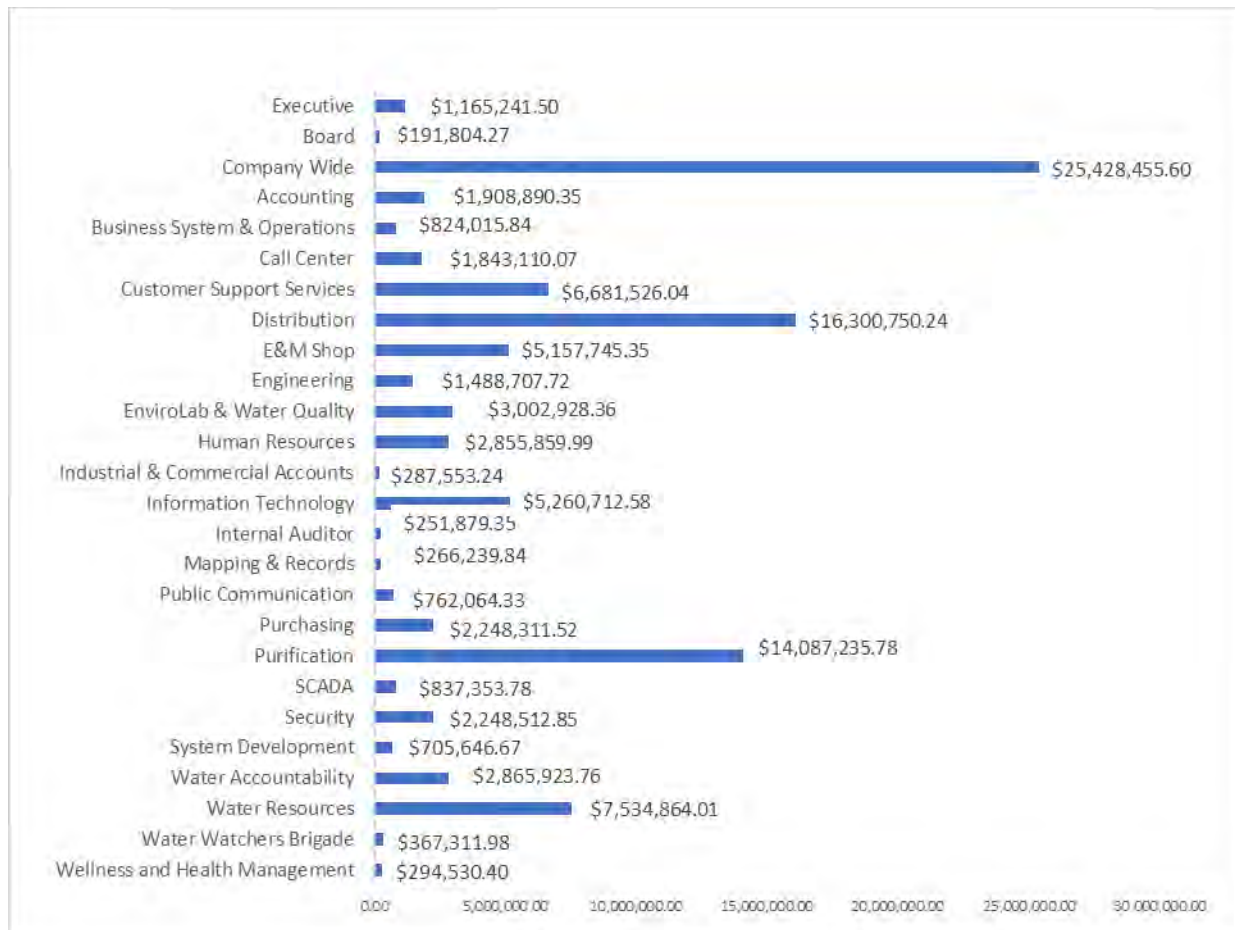
## Overview of Departments

### ANNUAL BUDGET DOCUMENT

#### Department Summary

The BWWB is organized into twenty-two functional departments, with each department having its own budget for fiscal control. The departments are organized as: Executive, Finance & Administration, Operations & Technical Services and Engineering & Maintenance. Each Department Manager reports to one of three Assistant General Managers who report to the General Manager. The total budget is \$104,867,175 and allocated as shown below.

#### Operating Budget – Department Allocations





# FY 2020 APPROVED BUDGET DOCUMENT

## Personnel Summary by Department

The schedule below is a summary of total budgeted personnel for fiscal years 2016 through 2020. The 2020 O&M Budget includes funding for 685.86 FTE, an increase of one.

Division / Department	2016	2017	2018	2019	2020
<b>Executive Division</b>					
Administrative	9.00	9.00	9.00	10.00	10.00
Project Management Office	5.00	5.00	7.00	6.00	6.00
Internal Auditing	3.00	3.00	3.00	3.00	3.00
Communications	1.00	1.00	1.00	1.00	3.00
<b>Total</b>	<b>18.00</b>	<b>18.00</b>	<b>20.00</b>	<b>20.00</b>	<b>22.00</b>
<b>Finance &amp; Administration</b>					
Call Center	31.85	36.73	36.23	36.23	36.23
Customer Support Services	86.00	85.00	95.00	95.00	95.00
Human Resources / Training / Safety / RM	12.80	14.00	14.00	14.00	14.00
Information Technology	21.00	21.00	20.00	19.00	18.00
Accounting	27.60	12.00	12.00	27.45	27.45
Treasury	0.00	16.60	16.60	0.00	0.00
Purchasing / Transportation / Warehouse	18.75	18.75	18.75	18.75	18.75
<b>Total</b>	<b>198.00</b>	<b>204.08</b>	<b>212.58</b>	<b>210.43</b>	<b>209.43</b>
<b>Operations &amp; Technical Services</b>					
EnviroLab / Water Quality	24.00	24.00	24.00	25.00	25.00
Water Treatment Plants	71.00	73.18	73.90	72.90	72.90
Water Resources	33.00	33.00	33.00	33.00	33.00
SCADA	10.00	10.00	10.00	9.00	9.00
Security	10.80	10.80	10.80	10.73	10.73
Industrial & Commercial Accts	0.00	2.00	2.00	2.00	2.00
<b>Total</b>	<b>148.80</b>	<b>152.98</b>	<b>153.70</b>	<b>152.63</b>	<b>152.63</b>
<b>Engineering &amp; Maintenance</b>					
Electrical & Mechanical	39.00	39.00	40.00	40.00	40.00
System Development	15.00	15.00	16.00	16.00	16.00
Distribution	147.40	148.40	154.80	151.80	151.80
Engineering	32.00	33.00	33.00	32.00	32.00
Revenue Water	50.00	50.00	51.73	50.00	50.00
Mapping & Records	12.00	12.00	12.00	12.00	12.00
<b>Total</b>	<b>295.40</b>	<b>297.40</b>	<b>307.53</b>	<b>301.80</b>	<b>301.80</b>
<b>Grand Total</b>	<b>660.20</b>	<b>672.45</b>	<b>693.80</b>	<b>684.86</b>	<b>685.86</b>



# FY 2020 APPROVED BUDGET DOCUMENT

## Goals and Objectives Methodology

Below are established goals and objectives for each department developed based on the Effective Utility Management Framework. The EUM wheel is inserted below.

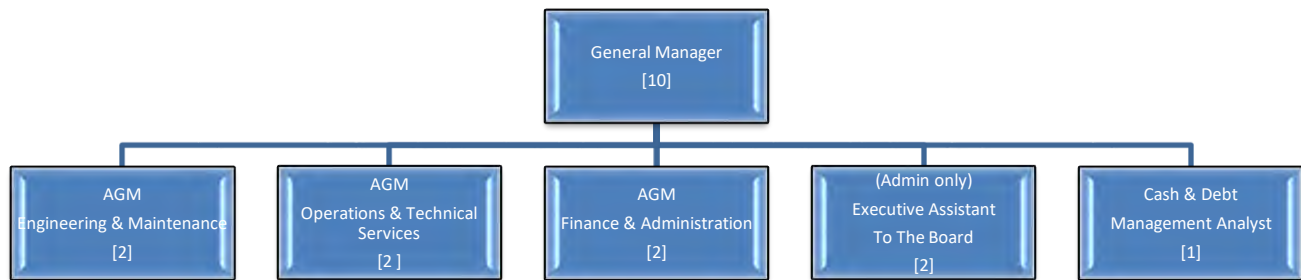




# FY 2020 APPROVED BUDGET DOCUMENT

## Executive Department

The Executive Department includes the General Manager, Assistant General Managers, Executive Assistant to the Board of Directors and three Administrative Assistants. The Board of Directors are responsible for setting the Mission and Vision for Birmingham Water Works (BWVB) and providing direction and leadership to meet the goals. The General Manager (GM) is responsible for the administration and the implementation of the Board policies and federal and state laws. The GM organizes the staff, assigns responsibilities, and is responsible for carrying out the policies and directives of the BWVB Directors.



### MISSION

The mission of the Executive Department is to efficiently and effectively manage all aspects of the Birmingham Water Works Board business plans, provide the leadership and direction to meet the Mission and Vision of the Board and achieve its organizational goals.





## FY 2020 APPROVED BUDGET DOCUMENT

### SUMMARY OF ACTIVITIES

- Provide the Board with timely information & support.
- Ensure that all water facilities & programs are operating in compliance with all applicable standards.
- Develop, implement and maintain effective long-term financial, operational and environmental protection plans.
- Implement sound fiscal policies, budgets, and controls.
- Maintain and improve effective coordination, cooperation, and communication with local, state, and federal governmental entities.
- Continue innovation and creativity in providing services in a more effective, cost-efficient and sustainable manner.
- Support training & development of all employees in order to improve BWWB's services.
- Motivate employees & encourage teamwork throughout the organization.
- Promote BWWB to the community.

### EXECUTIVE DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$1,057,934.45	\$1,110,613.24	\$ 52,678.79	4.74%
Mileage Reimbursement	1,291.80	1,291.80	0.00	0.00%
Uniforms - Non-Stock	200.00	200.00	0.00	0.00%
Supplies & Expenses	20,176.80	20,176.80	0.00	0.00%
Expenses General Office Employee	2,355.90	2,355.90	0.00	0.00%
Expenses Office and Executive	78.53	78.53	0.00	0.00%
Misc Gen Exp Membership Dues	15,501.60	4,306.00	(11,195.60)	-260.00%
Travel Misc Other	26,220.11	26,219.23	(0.88)	0.00%
TOTAL O&M	\$1,123,759.19	\$1,165,241.50	\$ 41,482.31	3.56%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$41,482 or 3.56% from the 2019 Approved Budget.

The major reasons for the variance are:

- One position transferred to Executive Department and the Treasury Department was dissolved.
- Membership dues are projected to decrease based on current year spending trends.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - GENERAL	1.00	1.00	1.00	1.00	1.00
MANAGER - ASSISTANT GENERAL	3.00	3.00	3.00	3.00	3.00
EXECUTIVE ASSISTANT TO THE BOARD	1.00	1.00	1.00	1.00	1.00
EXECUTIVE ASSISTANT II	1.00	1.00	1.00	1.00	1.00
EXECUTIVE ASSISTANT	2.00	3.00	3.00	3.00	3.00
ADMINSITRATIVE ASSISTANT II	1.00	0.00	0.00	0.00	0.00
CASH & DEBT MGMT ANALYST	0.00	0.00	0.00	1.00	1.00
	<b>9.00</b>	<b>9.00</b>	<b>9.00</b>	<b>10.00</b>	<b>10.00</b>



## FY 2020 APPROVED BUDGET DOCUMENT

### Board of Directors

BWWB is governed by a nine-member Board. The Board members are listed below.

**William Burbage, Jr.**  
Chairman/President

**Deborah Clark**  
First Vice-Chairwoman/  
First Vice President

**Brenda J. Dickerson, Ph.D.**  
Second Vice Chairwoman/  
Second Vice President

**Ronald A. Mims**  
Secretary-Treasurer

**Tommy Joe Alexander**  
Assistant Secretary-  
Treasurer

**Sherry W. Lewis**  
Director

**George Munchus, Ph.D.**  
Director

**William R. Muhammad**  
Director

**Brett A. King, Esq.**  
Director

### BOARD DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 99,403.95	\$ 99,403.95	\$0.00	0.00%
Mileage Reimbursement	1,722.40	1,722.40	0.00	0.00%
Supplies & Expenses	13,451.20	13,451.20	0.00	0.00%
Board Meeting Expenses	36,816.00	36,816.00	0.00	0.00%
Travel Misc Other	26,719.55	38,754.00	12,034.45	31.05%
Misc General Board Expenses	1,656.72	1,656.72	0.00	0.00%
TOTAL O&M	\$ 179,769.82	\$ 191,804.27	\$ 12,034.45	6.27%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$12,034 or 6.27% from the 2019 Approved Budget. The major reason for the variance is:

- Travel is projected to increase based on current year spending trends.



# FY 2020 APPROVED BUDGET DOCUMENT

## Company Wide Department

The Company Wide Department is used to account for employee benefit and other administrative costs not directly related to a particular department. Expenditures budgeted in this department are listed below.

### O&M EXPENDITURES BUDGET SUMMARY

Commitment Item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Employee Expenses Competition Programs	\$ 50,000.00	\$ 50,000.00	\$0.00	0.00%
State Unemployment Insurance	19,713.40	19,715.00	1.60	0.01%
Federal Insurance Contributions Act Tax	2,444,880.56	2,461,811.05	16,930.49	0.69%
Other Post Employment Benefits (OPEB)	537,248.17	655,362.87	118,114.70	18.02%
Employer Pension	4,615,713.61	4,903,617.27	287,903.66	5.87%
Healthcare Claims Employees	5,901,312.74	5,129,994.44	(771,318.30)	-15.04%
Group Insurance Life and Disability	188,148.94	188,150.67	1.73	0.00%
Service Line	13,000.00	13,000.00	0.00	0.00%
Inventory Expense	200.00	200.00	0.00	0.00%
General Inventory Consumption Account	2,000.00	2,000.00	0.00	0.00%
Meter Madness Water Competition Supplies	5,000.00	5,000.00	0.00	0.00%
Tapping Team Water Competition Supplies	34,000.00	34,000.00	0.00	0.00%
License Fees	4,310,000.00	4,380,000.00	70,000.00	1.60%
Legal	1,081,470.00	1,081,470.00	0.00	0.00%
Best Tasting Water Competition Supplies	1,050.00	1,050.00	0.00	0.00%
Top Operators Competition Supplies	1,000.00	1,000.00	0.00	0.00%
Insurance - Contract	1,162,620.00	1,373,607.97	210,987.97	15.36%
Uniforms - Non-Stock	1,013.00	1,015.00	2.00	0.20%
Bad Debt Expenses	3,136,896.22	3,136,895.00	(1.22)	0.00%
Supplies & Expenses	2,522.10	8,407.00	5,884.90	70.00%
Contributions	100,000.00	100,000.00	0.00	0.00%
Misc Gen Exp Membership Dues	107,650.00	107,650.00	0.00	0.00%
Consultants	1,457,867.77	1,774,509.33	316,641.56	17.84%
<b>TOTAL O&amp;M</b>	<b>\$25,173,306.51</b>	<b>\$25,428,455.60</b>	<b>\$ 255,149.09</b>	<b>1.00%</b>



## FY 2020 APPROVED BUDGET DOCUMENT

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget decreased by \$255,149 or 1.00% from the 2019 Approved Budget.

The major reasons for the variance are:

- OPEB actuarially determined contributions projected to increase based on historical trends.
- Pension actuarially determined contributions projected to increase based on historical trends.
- Healthcare insurance expense for retirees will be transferred to the OPEB Plan.
- License Fees projected to increase based on projected increase in revenue.
- Property & Casualty Insurance increased.
- Consulting expenses projected to increase for Strategic Planning and a HUB Program.



## Business Systems & Transformation

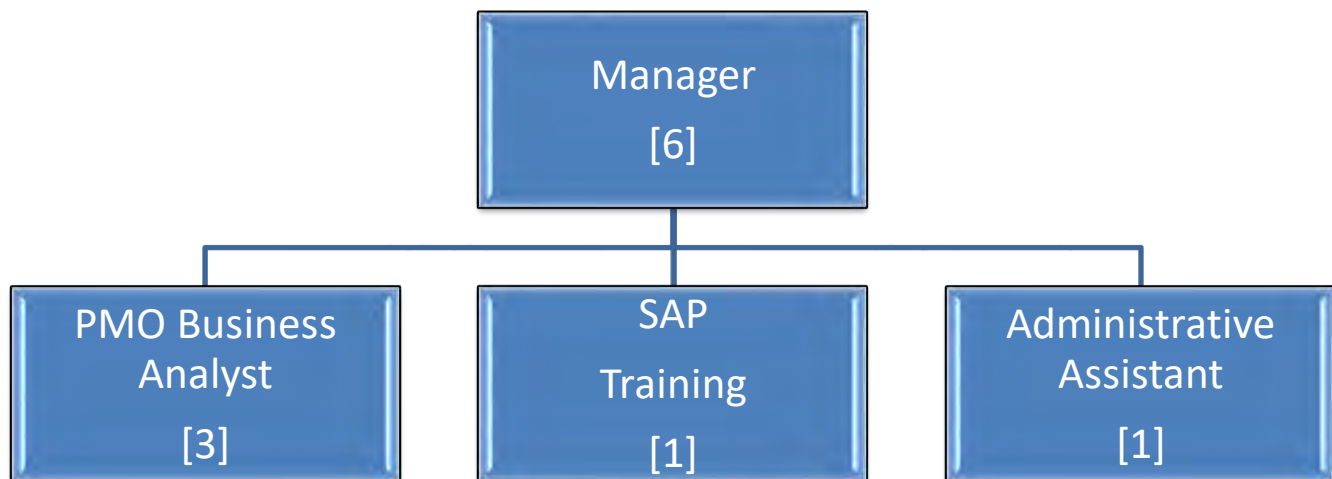
### OVERVIEW

The Project Management Office (PMO) Business Systems department is responsible for championing the implementation and maintenance of the Systems, Applications and Products (SAP) system for the organization. This effort aids in improved workflow processes, real time reporting, financial reporting and customer updates. In addition, this tool provides reduction in loss of productivity due to research of issues and building of reporting to support business requests needed internally and in response to the Executive team and the Board of Directors.

The PMO team is responsible for tracking trends of the end-users and reporting items that show the usage not in keeping with the prescribed purpose for the intention of the program. As trends are identified, they are responsible to train, coach and provide help desk support to the end users with the goal to increase the user's productivity and their ability to navigate the systems.

The PMO Business Analysts are responsible to work with SAP consultants as they continue to support current system development and future implementations. This support includes the building and documentation of functional changes and the writing of processes for accurate data in customer and financial reporting.

This group is expected to be leaders in change management as they facilitate the leaders in the organization on new features and benefits of the system. They are responsible for leading periodic meetings meant to create a learning and sharing environment for feedback and best practices in the use of the system.







## FY 2020 APPROVED BUDGET DOCUMENT

### **BUSINESS SYSTEMS & TRANSFORMATION MISSION**

As a market leader in enterprise application software, SAP helps companies of all types and sizes run better. From back office to boardroom, warehouse to storefront, desktop to mobile device – SAP empowers people and organizations to work together more efficiently and use business insight more effectively to stay ahead of the competition. SAP people, applications, and services enable approximately 300,000 customers to operate profitably, adapt continuously, and grow sustainably.

Mission: Helping our internal and external customers perform at their best by delivering excellent technical support and training.

### **SUMMARY OF ACTIVITIES**

- Serves as project manager for implementation of all SAP Enterprise Resource Planning (ERP) Systems such as FI, CRM, Payroll and other systems.
- Manages project team with a focus on developing, establishing and improving procedures, processes and computer operations to ensure efficient operations within departments and across multiple departments as well as company – wide.
- Ensures integrity of information systems, internal controls and data, including recommendations as required.
- Recommends modifications to program policies and procedures to minimize risk to the company.
- Mentors, coaches and manages the total competencies of multiple organizational units, including working with multiple managers, supervisors and supervisory level employees to improve operational efficiencies.
- Leads a transition from old to new programs at the department and division levels and participates in the development and implementation of goals and objectives, recommendations and status to executive management and the Board of Directors.
- Analyzes moderately complex situations to establish/recommend solutions and alternatives and alerts leadership to the impact on the company.
- Leads periodic informational and planning meetings with internal departmental units as well as Executive Management.
- Coordinates periodic meetings with external agencies to strategically update project implementation impacts.



## FY 2020 APPROVED BUDGET DOCUMENT

### BUSINESS SYSTEMS & TRANSFORMATION DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 523,174.38	\$ 519,329.99	\$ (3,844.39)	-0.74%
Supplies & Expenses	10,508.75	10,508.75	0.00	0.00%
Travel Misc Other	8,240.61	8,240.61	0.00	0.00%
Consulting	284,859.99	284,859.99	0.00	0.00%
Other Expenses	1,076.50	1,076.50	0.00	0.00%
<b>TOTAL O&amp;M</b>	<b>\$ 827,860.23</b>	<b>\$ 824,015.84</b>	<b>\$ (3,844.39)</b>	<b>-0.47%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget decreased by \$3,844 or 0.47% from the 2019 Approved Budget.

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
BUSINESS SYSTEMS MANAGER	1.00	1.00	1.00	1.00	1.00
SAP BUSINESS ANALYST	2.00	2.00	2.00	1.00	1.00
SAP BUSINESS ANALYST SR.	0.00	0.00	2.00	2.00	2.00
SAP / BUSINESS SYS TRAINING ADMIN.	1.00	1.00	1.00	1.00	1.00
ADMINISTRATIVE ASSISTANT II	1.00	1.00	1.00	1.00	1.00
	<b>5.00</b>	<b>5.00</b>	<b>7.00</b>	<b>6.00</b>	<b>6.00</b>



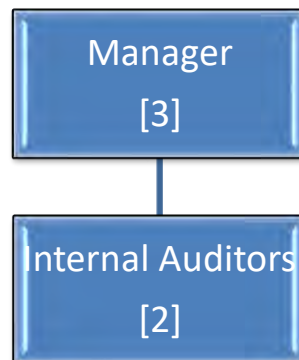
## Internal Audit

### OVERVIEW

The internal audit function was established by the Executive Committee (the Committee) of the Board of Directors in July 2004. The Committee defines the internal audit activity's responsibilities as part of their oversight role. The Internal Auditing Department functionally reports to the Committee and administratively to the General Manager.

The Internal Auditing Department is the BW&WB's independent internal function that performs financial, compliance, operational, information and technology, as well as internal controls audits and special investigations that are designed to:

- a. Provide assurance of BW&WB's strategic financial and operational controls
- b. Identify and manage BW&WB's risks and achieve BW&WB's strategic objectives in an efficient, effective and ethical manner
- c. Add value to BW&WB's operations
- d. Help BW&WB achieve its strategic objectives by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To enhance and protect organizational value by providing risk-based and objective assurance, recommendation and insight so that management can make the best possible future-focused decisions, identify areas of concern, present them to management in a balanced manner and provide the information they will need to make informed decisions on how to correct deficiencies moving forward.

### SUMMARY OF ACTIVITIES

- Evaluate controls and advise management at all levels in the improvement of controls.
- Evaluate management of risks assuring that adequate controls are in place to mitigate risks.
- Analyze operations, confirm information, verify the existence of assets and recommend proper safeguards for their protection.
- Assess compliance with policies and procedures and sound business practices.
- Ensure compliance with state and local laws and regulations.
- Review operations to ascertain whether results are consistent with established objectives and whether the operations are being carried out as planned.
- Inspect reported occurrences of anomaly, embezzlement, theft, waste, etc.
- Publish and issue written reports following the conclusion of each internal audit engagement making recommendations for correcting problems.
- Perform follow-up reviews of audit recommendations.
- Publish an internal audit plan at least annually that includes risk assessment criteria and audits for the next three (3) calendar years for the Committee review and approval.

### INTERNAL AUDITING DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 238,662.27	\$ 246,666.22	\$ 8,003.95	3.24%
Mileage Reimbursement	237.17	237.76	0.59	0.25%
Supplies & Expenses	1,293.00	944.95	(348.05)	-36.83%
Misc Gen Exp Membership Dues	2,381.22	2,381.22	0.00	0.00%
Travel Misc Other	1,648.12	1,649.20	1.08	0.07%
TOTAL O&M	\$ 244,221.78	\$ 251,879.35	\$ 7,657.57	3.04%



# FY 2020 APPROVED BUDGET DOCUMENT

## HIGHLIGHTS OF INTERNAL AUDITING BUDGET CHANGES

The 2020 Approved Budget increased by \$7,658 or 3.04% from the 2019 Approved Budget. The major reason for the variance is:

- Merit and Cost of Living Allowance increases.

## PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - INTERNAL AUDIT	1.00	1.00	1.00	1.00	1.00
INTERNAL AUDIT TRAINEE	1.00	1.00	1.00	1.00	1.00
ASSOCIATE AUDITOR III	1.00	1.00	1.00	1.00	1.00
	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>





## Public Communications

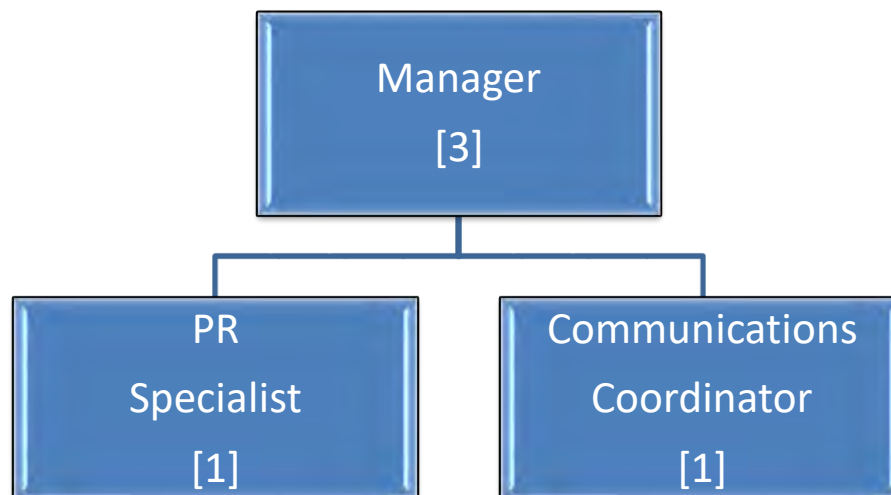
### OVERVIEW

The BWWB Public Communications Department has a set message calendar to detail primary monthly topics for customer-facing news and information, along with PR initiatives throughout the year. Those initiatives include: Fix A Leak Week, National Drinking Water Week, A World Without Water School Program, Hydrate the City, Water Works Water Boy, Customer Service Week, Imagine A Day Without Water, etc.

Other public educational efforts include subjects like billing and flushing (estimated billing, meter clean-outs, etc.), water discoloration, main breaks, and more.

The PR Specialist serves as the company's official spokesperson and routinely addresses television and print media about inquiries concerning the utility.

The Public Communications Department works closely with the BWWB's public relations agency.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

The mission of the Public Communications Department is to consistently enhance and illustrate the image, mission and values of the BW&WB by educating the public and media about the utility's ongoing initiatives and commitment to providing customers the best water at the lowest possible price.

### SUMMARY OF ACTIVITIES

- Develops and implements communication strategies for the organization.
- Represents BW&WB to the media and public by acting as corporate spokesperson.
- Fields and directs responses to all media-related inquiries and events.
- Plans and implements the organization's public relations strategies, policies and procedures.
- Provides feedback and oversight on media, creative and strategic plans developed by the public communications consultant.
- Develops contacts and relationships with media representatives to create opportunities for BW&WB products and services to maintain a positive image in the public's view.
- Maintains public relations database and contacts.
- Applies journalistic writing, grammar, editing, proofreading, and interviewing principles.
- Advises on the preparation and presentation of product or service information at displays and exhibits.
- Develops ideas and opportunities for feature articles, interviews, presentations, and other public relations activities that promote awareness of the organization and the services that BW&WB provides.
- Prepares and gives speeches on various subjects relating to water supply and conservation as needed.
- Assists and coaches BW&WB staff with public speaking engagements, presentations, and preparation of articles for publication.
- Advises management on community relations projects and activities.
- Works closely with the Communications Committee and the Board's public relations consultant on various tasks and projects.
- Meets with staff to review issues to maintain awareness of developments and the status of capital improvement programs
- Develops, implements and manages social media systems such as Twitter, Facebook and other similar platforms; understands the social media ecosystem and uses this knowledge to leverage each channel's capabilities to achieve reach and engagement objectives.
- Plans and executes campaigns to grow the reach of the BW&WB social media channels; curates external, third party content sources.
- Develops and writes public service announcements for media outlets and ensure PSA's are broadcast or published.



## FY 2020 APPROVED BUDGET DOCUMENT

### PUBLIC COMMUNICATIONS DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 97,804.51	\$ 238,454.33	\$ 140,649.82	58.98%
Mileage Reimbursement	1,000.00	500.00	(500.00)	-100.00%
Transportation Expense	2,000.00	1,000.00	(1,000.00)	-100.00%
Supplies & Expenses	40,000.00	40,000.00	0.00	0.00%
Fuel	2,000.00	1,500.00	(500.00)	-33.33%
Misc Gen Exp Membership Dues	1,000.00	1,000.00	0.00	0.00%
Travel Misc Other	6,089.20	7,000.00	910.80	13.01%
Public Relations	220,400.00	220,400.00	0.00	0.00%
Consultants	226,989.00	252,210.00	25,221.00	10.00%
TOTAL O&M	\$ 597,282.71	\$ 762,064.33	\$ 164,781.62	21.62%

### HIGHLIGHTS OF BUDGET CHANGES (Public Communications)

The 2020 Approved Budget increased by \$164,782 or 21.62% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Two positions were added to the Public Relations Department.
- One position was upgraded.
- Consultants expense was increased.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	201 6	201 7	201 8	201 9	202 0
PUBLIC COMMUNICATIONS SPECIALIST	1.00	1.00	1.00	1.00	0.00
PUBLIC RELATIONS MANAGER	0.00	0.00	0.00	0.00	1.00
PUBLIC RELATIONS SPECIALIST	0.00	0.00	0.00	0.00	1.00
COMMUNICATIONS COORDINATOR	0.00	0.00	0.00	0.00	1.00
	1.00	1.00	1.00	1.00	3.00

### Proposed New Positions:

#### **Public Relations Specialist:**

Develops, coordinates, and supports corporate communications for the BWWB by establishing and maintaining cooperative relationships with representatives of the local media to include print, digital, and broadcast; provide public information and ensure BWWB's overall credibility of communication channels;

1. Assists the Communications Manager with implementing communication strategies for BWWB.
2. Fields and directs responses to all media related inquiries and events.
3. Works closely with the company's public relations firm on ideas and strategies to constantly strengthen the image and goals of the utility.
4. Develops contacts and relationships with media representatives to create opportunities for BWWB products and services to maintain a positive image in the public's view. Maintains public relations database and contacts.
5. Applies journalistic writing, grammar, editing, proofreading and interviewing principles.
6. Develops ideas and opportunities for feature articles, interviews, presentations, and other public relations activities that promote awareness of the utility and the services that BWWB provides.
7. Prepares press releases and media alerts on various subjects relating to BWWB as needed. Assist the Communications Manager with public speaking engagements, presentations, and preparation of articles for publication.
8. Oversees and manages content of BWWB-TV along with the IT and Human Resources departments.
9. Develops, implements and manages social media systems such as Twitter, Facebook and other similar platforms. Plans and executes campaigns to grow the reach of the BWWB social media channels.
10. Prepares, develops and writes public service announcements for various media outlets and ensure PSA's are presented by various media outlets.



## FY 2020 APPROVED BUDGET DOCUMENT

### **Communications Coordinator:**

Responsible for investigating and resolving complex and sensitive service-related disputes involving customers; analyzing existing and proposed community-based programs and providing recommendations for improvements in customer and community relations.

1. Serves as liaison to consumer and regulatory agencies to build consensus and strengthen rapport in support of strategic direction, mission and goals.
2. Analyzes and recommends improvements in customer service policies, systems, programs and services.
3. Develops and implements innovative consumer programs and services targeted to specific consumer needs.
4. Provides opportunities for consumer involvement and input on service-related issues and concerns to demonstrate commitment and responsiveness to customer needs.
5. Develops strong and trusted relationships with customers through timely and accurate communications.
6. Manages all calls of the Communications Manager to ensure excellent customer service and satisfaction.
7. Resolves escalated customer issues in an accurate and timely manner.
8. Maintains and updates documents related to customer inquiries and public relations reports.
9. Develops new growth opportunities in every customer communication.
10. Coordinates calls, meetings and communications between management and customers.
11. Assists in developing public relations initiatives.
12. Assists public relations team in developing marketing materials and proposals.
13. Occasionally attends community events, neighborhood association meetings, Citizens Advisory Board (City of Birmingham) meetings, Utilities Committee meetings, etc.



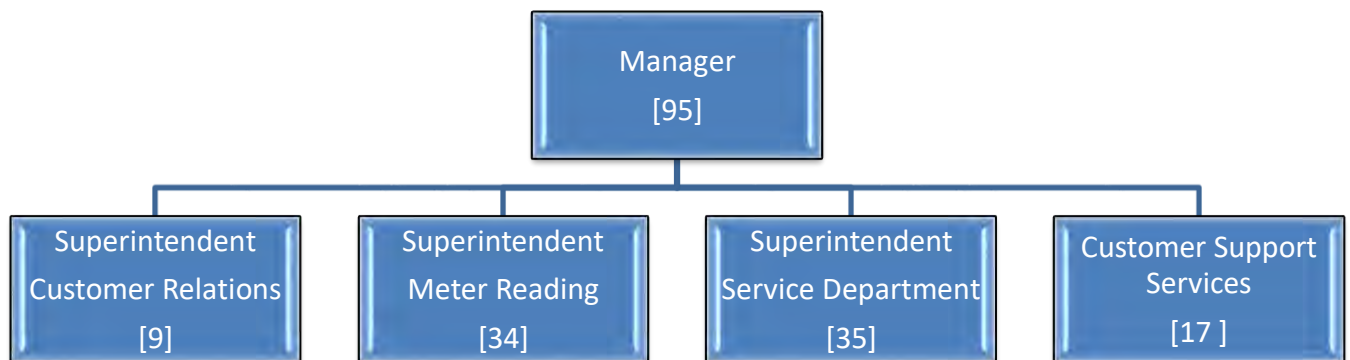


## FY 2020 APPROVED BUDGET DOCUMENT

### Customer Support Services

#### OVERVIEW

The Customer Support Service Department is responsible for maintaining and ensuring operational standards of excellence and directing supervisors and team leaders to ensure professional quality service is provided to customers in the areas of Meter Reading, Field Services and Customer Relations. Work successfully with other departments to ensure organizational goals, policies and procedures are met.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

Customer Support Service is committed to providing accurate meter reading, quality professional field services and making timely billing adjustments to resolve customers concerns in the five leading municipalities. Our goal is to improve the public perception of BWBB as a leader in the water industry.

### SUMMARY OF ACTIVITIES

- Read residential, commercial and small industrial water meters on handheld computers.
- Ensure the loading and unloading of meter reading handhelds are performed each day.
- Maintain the GeoCode Route Smart system using ArcView, ArcGIS, Arc info, and ArcMap. Code system with new roads, streets and alleys to ArcGIS map.
- Create sequencing and travel paths for efficiency in meter reading for geocoded locations.
- Review, edit and release implausible meter readings.
- Identify and investigate account issues such as high bills and provide explanations regarding customers' bills/service.
- Disconnect water service at customers' premises and install new meters when necessary.
- Shut water off for plumbing defects or irregularities as requested.
- Inspect water services for correct installation or any other irregularities, make repairs, advise customer of needed repairs or discontinue service if unauthorized connection is discovered.
- Responsible to use the SAP billing system/BPEM cases to process, investigate and make corrections for billing errors, misread meters and leak adjustments.
- Provide detailed information to third party collection agency (account verification) on customers pertaining to service billing information on accounts charged-off in SAP.



## FY 2020 APPROVED BUDGET DOCUMENT

### CUSTOMER SUPPORT SERVICES DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 5,575,155.31	\$ 5,666,538.41	\$ 91,383.10	1.61%
Cafeteria Expense	22,000.00	22,000.00	0.00	0.00%
Transportation Expense	240,885.70	220,000.00	(20,885.70)	-9.49%
Uniforms	9,000.00	8,200.00	(800.00)	-9.76%
Meters	10,000.00	10,000.00	0.00	0.00%
General Inventory Consumption	30,900.00	28,000.00	(2,900.00)	-10.36%
Facilities Other	5,000.00	4,500.00	(500.00)	-11.11%
Utilities - Electric	113,560.00	116,060.00	2,500.00	2.15%
Uniforms - Non-Stock	26,000.00	24,000.00	(2,000.00)	-8.33%
Bad Debt Collections Expense	250,000.00	230,000.00	(20,000.00)	-8.70%
Utilities - Gas/Water	23,000.00	30,000.00	7,000.00	23.33%
Supplies & Expenses	36,454.16	40,460.80	4,006.64	9.90%
Fuel	225,355.00	225,355.00	0.00	0.00%
Materials Collecting	8,300.00	8,299.96	(0.04)	0.00%
Materials Meter Reading	25,944.80	25,944.80	0.00	0.00%
Travel Misc Other	5,094.19	6,200.64	1,106.45	17.84%
Other O&M Expenses	11,436.98	15,966.43	4,529.45	28.37%
<b>TOTAL O&amp;M</b>	<b>\$ 6,618,086.14</b>	<b>\$ 6,681,526.04</b>	<b>\$ 63,439.90</b>	<b>0.95%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$63,440 or 0.95% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Overtime is projected to increase based on current year spending trends resulting from new staffing.



# FY 2020 APPROVED BUDGET DOCUMENT

## PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - CUSTOMER SUPPORT SERVICES	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - INDUST. & COMMER. ACCTS	1.00	0.00	0.00	0.00	0.00
SUPERINTENDENT - SERVICE REPRESENTATIVES	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - CUSTOMER RELATIONS	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - METER READERS	1.00	1.00	1.00	1.00	1.00
BUSINESS SYSTEMS ANALYST	1.00	2.00	2.00	2.00	2.00
COLLECTIONS SPECIALIST - SENIOR	1.00	1.00	1.00	0.00	1.00
COLLECTIONS SPECIALIST II	0.00	0.00	6.00	7.00	7.00
CUSTOMER SUPPORT SPECIALIST - TEAM LEADER	2.00	1.00	2.00	2.00	2.00
CUSTOMER SUPPORT SPECIALIST III	10.00	10.00	12.00	12.00	11.00
FIELD SERVICE TECHNICIAN - TEAM LEAD	5.00	5.00	5.00	5.00	5.00
FIELD SERVICE TECHNICIAN	29.00	29.00	29.00	29.00	29.00
METER READER - TEAM LEADER	4.00	4.00	4.00	4.00	4.00
METER READER - SENIOR	8.00	7.00	6.00	7.00	7.00
METER READER II	9.00	11.00	8.00	8.00	8.00
METER READER TRAINEE	11.00	10.00	15.00	14.00	14.00
GIS TECHNICIAN	1.00	1.00	1.00	1.00	1.00
	86.00	85.00	95.00	95.00	95.00
	0	0	0	0	0

## KEY PERFORMANCE MEASURES

1. Maintain meter reading performance of 95% to ensure accurate billing and consumption information for customers.
2. Confirm and retain a delinquency rate of 95% to ensure debt collection recovery prior to the accounts being written off.
3. Manage all debt collection to ensure 95% compliance with BWB rules and standards.
4. Investigate and respond to 100% of customer and employees' issues/concerns as they relate to meter reading, billing issues, meter service and repair within 72 hours of receipt.
5. Perform preventive and predictive maintenance on essential equipment to maintain equipment readiness of 100%.



## FY 2020 APPROVED BUDGET DOCUMENT

### Industrial and Commercial Accounts

#### OVERVIEW

The growth of our customer base translates to greater water usage. This growth assists BWWB in having dependable sources of revenue to maintain and expand the quality services. We currently sell potable water to residential, commercial (non-residential), and wholesale customers. In addition, we also sell non-potable raw water to industrial clients.

Alabama Department of Environmental Management (ADEM) defines a consecutive system as “A public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.” (ADEM Admin. Code r. 335-7-1-.01). BWWB has:

- Four sole source consecutive systems (Graysville Water Works, Mulga Water Department, West Jefferson Water System and Brookside Water System)
- Two “take or pay” consecutive systems which are required to take a minimum consumption (Pine Bluff Water Authority and Reimpl-Pine Mtn. Water)
- Two compliance systems (Alabama Power and University of Alabama - Birmingham)
- Four emergency connections (Shelby County Water, Trussville Water, Blount County Water and Bessemer Water)

The consecutive systems’ distribution systems have been optimized to reduce disinfection byproducts. They have also been designed and/or upgraded to mimic BWWB’s system (compliance, standard operating procedures, etc.). Each consecutive system is able to maintain water services for at least 24 hours (non-emergency) as needed for BWWB system repair. BWWB conducts water quality testing for its consecutive systems and has assisted with leak surveys in the past.

The largest non-potable water customer is US Steel. In the 1980s, their water consumption averaged 35-40 MGD; however, their usage levels dropped significantly once unfavorable market conditions lead to the closure of a Fairfield blast furnace. The closure of the Fairfield plant led to reductions in water demands as the population declined and subsequent companies closed. US Steel’s water consumption is currently 2 MGD. US Steel recently announced the restart of construction for an electric arc furnace; it is estimated to be completed in 2020 with a projected water consumption of 8-10 MGD.





## FY 2020 APPROVED BUDGET DOCUMENT

The following data is a comparison of the Consecutive System consumption from 2016 to 2018. The data indicates the Consumption and Revenue of water from each system for the same period. Note: The reduction in consumption and revenue for Graysville Water is due to the repair of an ongoing leak, dropping the water loss of approximately 55% to 25%. Also, we have four Emergency connections, Shelby County Water, Trussville Water, Blount County Water and Bessemer Water.

### **Consumption in CCF:**

<b>Water System:</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Graysville Water Works	486,633	333,179	283,274
Mulga Water Department	203,045	181,990	191,266
West Jefferson Water System	162,779	140,671	148,526
Brookside Water System	110,003	105,350	108,853
Pine Bluff Water Authority	121,712	116,321	115,111
Remlap-Pine Mtn. Water	27,498	30,165	30,066
<b>Total Consumption:</b>	<b>1,111,670</b>	<b>907,676</b>	<b>877,096</b>

### **Revenue:**

<b>Water System:</b>	<b>2016</b> (\$3.51 per CCF)	<b>2017</b> (\$3.65 per CCF)	<b>2018</b> (\$3.76 per CCF)
Graysville Water Works	\$1,708,082.00	\$1,216,103.00	\$1,065,110.00
Mulga Water Department	\$712,688.00	\$664,263.00	\$719,160.00
West Jefferson Water System	\$571,354.00	\$513,449.00	\$558,458.00
Brookside Water System	\$386,111.00	\$384,528.00	\$409,287.00
Pine Bluff Water Authority	\$427,209.00	\$424,572.00	\$432,817.00
Remlap-Pine Mtn. Water	\$96,518.00	\$110,102.00	\$113,048.00
<b>Total Annual Revenue:</b>	<b>\$3,901,962.00</b>	<b>\$3,313,017.00</b>	<b>\$3,297,881.00</b>



## FY 2020 APPROVED BUDGET DOCUMENT

The following data is a comparison of base charge from 2016 to 2018 plus revenue.

### **Meter Base Charge:**

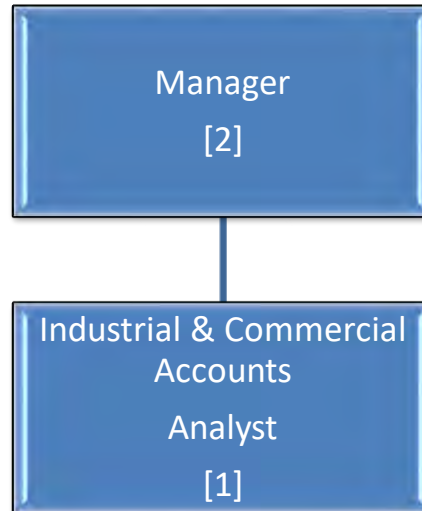
<b><u>Water System:</u></b>	<b><u>2016</u></b>	<b><u>2017</u></b>	<b><u>2018</u></b>
Graysville Water Works (3 - 4" Meters)	\$15,745.00	\$16,359.00	\$16,833.00
Mulga Water Department (2 - 4" Meters)	\$10,497.00	\$10,906.00	\$11,222.00
West Jefferson Water System (1 - 8" Meter)	\$15,893.00	\$16,513.00	\$16,992.00
Brookside Water System (2 - 4" Meters)	\$10,496.00	\$10,906.00	\$11,222.00
Pine Bluff Water Authority (1 - 4" and 1 - 2" Meter)	\$6,894.00	\$7,163.00	\$7,370.00
Remlap-Pine Mtn. Water (1 - 2" Meter)	\$1,646.00	\$1,710.00	\$1,759.00
<b><u>Total Annual Base Charge:</u></b>	<b>\$61,171.00</b>	<b>\$63,557.00</b>	<b>\$65,398.00</b>

### **Revenue Plus Base Charge:**

<b><u>Water System:</u></b>	<b><u>2016</u></b>	<b><u>2017</u></b>	<b><u>2018</u></b>
Graysville Water Works	\$1,723,827.00	\$1,232,462.00	\$1,081,943.00
Mulga Water Department	\$723,185.00	\$675,169.00	\$730,382.00
West Jefferson Water System	\$587,247.00	\$529,962.00	\$575,450.00
Brookside Water System	\$396,607.00	\$395,434.00	\$420,509.00
Pine Bluff Water Authority	\$434,103.00	\$431,735.00	\$440,187.00
Remlap-Pine Mtn. Water	\$98,164.00	\$111,812.00	\$114,807.00
<b><u>Total Revenue Plus Base:</u></b>	<b>\$3,963,133.00</b>	<b>\$3,376,574.00</b>	<b>\$3,363,279.00</b>



## FY 2020 APPROVED BUDGET DOCUMENT



### MISSION

The BWVB is committed to providing the highest quality of water to meet the needs and expectations of our customers and stakeholders. Our services enhance the economic, social and environmental well-being of the communities we serve.

### SUMMARY OF ACTIVITIES

- Manage company initiatives to ensure resolution of compliance issues, annual rate notification, technical/regulatory notifications and service calls.
- Coordinate with internal departments to ensure all filings are complete and ready for the annual consumer confidence report for public consumption.
- Act as a proactive liaison between BWVB and industrial/commercial/wholesale customers, helping with water issues. Communicates with individuals and groups face-to-face and hosts one-on-one meetings by telephone or in person.
- Meet compliance issues per ADEM with our consecutive partners. Provide reporting to the Office of Water Resources.
- Manage secured customer website containing real-time SCADA data to ensure integrity for customers' reporting dashboards are accurately reflected.
- Coordinate the planning requirements and execution for the annual raw water conference. This includes internal departments, customers and industry agencies.
- Proactively monitors customer reporting data to design strategies that will support compliance and consistency according to the ADEM requirements.
- Works with customers to develop action plans based on findings from ADEM system audits.
- Responsible for creating and maintaining emergency contracts for customers and



## FY 2020 APPROVED BUDGET DOCUMENT

- consecutive systems to support any deviation in normal production of raw water.
- Meet and communicate orally and in writing with customers, other city departments, and service providers to discuss water operation issues.
- Provide resolution to service calls, Mayor issues, and raw water updates to our customers.
- Provide onsite training and water system presentations.
- Provide oversight in the administration of contracts relating to industrial/wholesale/commercial water customers.
- Conduct annual rate review and test calculation on rate schedule and billing. Send notification of rate change to our customers and respond to any billing questions.
- Demonstrate ongoing efforts to improve operations, decrease turnaround times, streamline work processes and work cooperatively and jointly to provide quality, seamless customer service.
- Review reports and research discrepancies relating to unaccounted for water and account contracts.
- Provide reporting for executive briefing on the activity of customers and impact to revenue.
- Accountable to track and report on non-revenue water and volume and status of collections.

The BWWB works with each of our consecutive systems to provide the best service and water quality possible. We had some major challenges in 2004, when ADEM changed their regulation on disinfection byproducts and how the water moved through our system to our consecutive systems. Because of these changes, BWWB had to rethink how we delivered water to their systems. We started by upgrading each meter site with new technology and safer sample locations, which is now an ADEM standard. We also started meeting on a regular basis with the system's General Manager, Board, Council and Mayor to promote better communications. This played a significant role in enhancing the partnership we have today, which includes helping the consecutive systems with system issues to better improve their ability to purchase even more water as they grow. As we have assisted these systems, we have configured their operations to meet our standards, so in the event a system wishes to sell to the BWWB, it will facilitate a smoother transition. Below is a list of some of the ongoing services provided by the Department.

- 24/7 customer assistance
- Leak Survey
- Lab Testing
- Planning and conducting of the Consumer Conference Report (CCR) Annual Conference
- Ongoing CCR Guidance
- Annual onsite meeting with ADEM (Sanitary Survey) 100% pass



## FY 2020 APPROVED BUDGET DOCUMENT

- Compliance Optimization Standards
- Mapping of their System and overlaying into our system
- Training Classes on site
- Automatic Flushing system
- ADEM approved Sample Station
- Lead and copper sampling guidance
- Emergency assistance of materials
- Tank maintenance program
- Tank fluctuation for water quality
- Meter testing at our meter test shop
- SCADA web site for each system
- Annual master meter testing and report
- Quarterly compliance testing report review
- Emergency pump station assistance
- Technical advice on overall distribution needs
- Assisting customers with billing issues



## FY 2020 APPROVED BUDGET DOCUMENT

### INDUSTRIAL & COMMERCIAL ACCOUNTS DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 230,242.93	\$ 244,606.94	\$ 14,364.01	5.87%
Cafeteria Expense	1,100.00	1,100.00	0.00	0.00%
Mileage Reimbursement	430.60	430.60	0.00	0.00%
Transportation Expense	2,500.00	2,500.00	0.00	0.00%
Uniforms	1,000.00	1,000.00	0.00	0.00%
General Inventory Consumption	2,000.00	2,000.00	0.00	0.00%
Facilities Other	2,500.00	2,500.00	0.00	0.00%
Utilities - Electric	3,000.00	3,000.00	0.00	0.00%
Uniforms - Non-Stock	1,500.00	1,500.00	0.00	0.00%
Utilities-Telephone	1,000.00	1,000.00	0.00	0.00%
Utilities - Gas/Water	750.00	750.00	0.00	0.00%
Supplies & Expenses	8,407.00	9,247.70	840.70	9.09%
Fuel	4,000.00	5,000.00	1,000.00	20.00%
Misc Gen Exp Membership Dues	1,722.40	1,722.40	0.00	0.00%
Travel Misc Other	2,122.58	11,195.60	9,073.02	81.04%
<b>TOTAL O&amp;M</b>	<b>\$ 262,275.51</b>	<b>\$ 287,553.24</b>	<b>\$ 25,277.73</b>	<b>8.79%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$25,278 or 8.79% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Travel is projected to increase based on current year spending trends resulting from training needs.





## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	201 6	201 7	201 8	201 9	202 0
MANAGER - INDUSTRIAL & COMMERCIAL ACCTS	0.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - INDUST. & COMM. ACCTS	0.00	1.00	1.00	1.00	1.00
	0.00	2.00	2.00	2.00	2.00

### KEY PERFORMANCE MEASURES

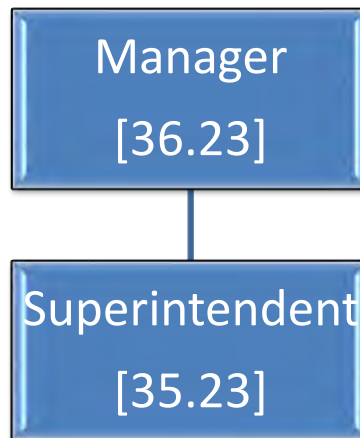
1. Manage all industrial and commercial accounts to ensure 100% compliance with all local, state and BWB regulations and requirements.
2. Reviewing monthly SAP reporting to make sure that 100% of accounts are read and billed per their contract requirements.
3. Review Consumer Confidence Report (CCR) information with ADEM at all consecutive locations to ensure 100% reliability.
4. Completing SCADA and meter upgrades at all entry points and provide updated web pages to our consecutive system partners at 100%.
5. Investigate and respond to 100% of consecutive and raw water issues/concerns as it relates to meter reading, billing issues, meter service and repair within 72 hours of receipt.



## FY 2020 APPROVED BUDGET DOCUMENT

### Call Center

The Customer Service-Call Center is responsible for ensuring that operational standards of excellence for the Call Center Department are met for all water and sewer customers in the service territory, while following through on customer inquiries related to new connections, disconnects, transfer service requests, refunds, account adjustments and invoice related issues.





## FY 2020 APPROVED BUDGET DOCUMENT

### **MISSION**

The Customer Service-Call Center Team is committed to upholding the highest standards of customer service outlined in the vision and goals of the BWWB. We are determined to provide the highest quality of service to our customers and stakeholders while understanding the critical need to make our customers' experience as unique and satisfactory as possible.

### **SUMMARY OF ACTIVITIES**

- Answer incoming calls concerning customer service records and services. Assist walk-in customers in the Payment Center Lobby and promptly provide customers with information and explanations regarding their bills as needed in English, Spanish and/or Sign Language for the hearing impaired.
- Take applications for new service, discontinue service and update customers records.
- Provide detailed information and/or instructions to requesting parties concerning BWWB services and billing information, i.e. deposit requirements, rates, meter reading, disconnect dates, inquiries related to refunds, account adjustments and invoicing issues.
- Initiate work orders for service or repairs.
- Initiate calls to delinquent account holders regarding the Collections Department operating procedures after review of customer's account history.
- Maintain and improve customer satisfaction by resolving customer issues.
- Review, investigate and respond to the State Attorney General's office regarding consumer complaints.
- Research, investigate and resolve BBB (Better Business Bureau) complaints from residential and commercial customers.



## FY 2020 APPROVED BUDGET DOCUMENT

### CALL CENTER DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment Item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$1,746,904.42	\$1,806,519.76	\$ 59,615.34	3.30%
Uniforms	120.00	120.00	0.00	0.00%
Uniforms - Non-Stock	80.00	200.00	120.00	60.00%
Utilities-Telephone	672.56	420.35	(252.21)	-60.00%
Supplies & Expenses	21,017.50	15,132.60	(5,884.90)	-38.89%
Misc Gen Exp Membership Dues	1,291.80	1,119.56	(172.24)	-15.38%
Materials Customer Accounting	15,000.00	14,000.00	(1,000.00)	-7.14%
Travel Misc Other	3,121.45	5,597.80	2,476.35	44.24%
TOTAL O&M	\$1,788,207.73	\$1,843,110.07	\$ 54,902.34	2.98%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$54,902 or 2.98% from the 2019 Approved Budget. The major reason for the variance is:

- Merit and Cost of Living Allowance increases.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - CALL CENTER	1.00	1.00	1.00	1.00	1.00
CALL CENTER SUPERINTENDENT	1.00	1.00	1.00	1.00	1.00
CALL CENTER TEAM LEADER	2.00	2.00	2.00	2.00	2.00
CALL CENTER REP III	12.00	8.00	8.00	8.00	8.00
CALL CENTER REP II	4.00	4.00	4.00	7.00	7.00
CALL CENTER REP I	9.13	18.00	18.00	15.00	15.00
OPERATOR - TELEPHONE	2.73	2.73	2.23	2.23	2.23
	<b>31.85</b>	<b>36.73</b>	<b>36.23</b>	<b>36.23</b>	<b>36.23</b>

### KEY PERFORMANCE MEASURES

1. Sustain an average talk time of within 3 minutes annually.
2. Maintain an average wait time of under 3 minutes annually.
3. Maintain an average abandonment call rate of less than 10% annually.
4. Answer and handle (investigate and resolve) over 95% of customer calls annually.
5. Maintain a monthly quality score of 85% on six random customer calls.
6. Initiate 100% of field service work orders from customers.

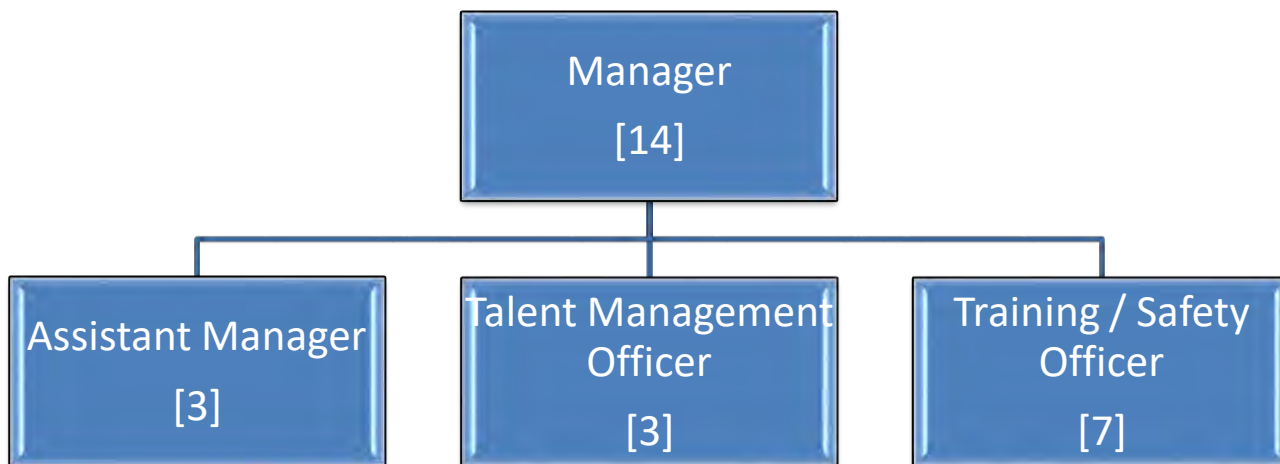


## FY 2020 APPROVED BUDGET DOCUMENT

### Human Resources

#### OVERVIEW

Provide overall strategic HR leadership for the BWWB. Oversee the development and implementation of human resources policies, programs and services, including recruitment, selection, retention, legal compliance, employee benefits and compensation, employee relations, employment practices and procedures, organizational development and training, performance management, human resources information system, employee communications, and safety and risk management areas and programs. Lead in the development and implementation of a comprehensive employee strategy to support the organization's strategic goals.







## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To recruit, develop, reward and retain a high performing and innovative workforce committed to achieving BWWB's vision and mission.

### SUMMARY OF ACTIVITIES

- Plan, develop, organize, implement, direct and evaluate the organization's human capital management function and performance.
- Act as a strategic business partner and advisor to the General Manager, Executive Staff, Management and all levels of employees throughout the organization.
- Provide leadership in the critical area of recruitment by developing the most creative and cost-effective ways of generating high-quality candidates in the marketplace for BWWB.
- Responsible for advising management to ensure complete compliance with all federal, state and local laws related to employment, benefits, compensation and training.
- Oversee employee benefit programs including medical, dental, life, and disability insurance, pension plan, 457 plan, paid time off plans, workers compensation, etc.
- Organizational Learning & Development to ensure programs are aligned with business strategy and support career development and succession planning goals.
- Develop a highly effective new hire orientation program that emphasizes the critical importance and value of welcoming and integrating new employees into the corporate culture.
- Administer an effective wage and salary administration program to support business goals.
- Oversee personnel record keeping related to new hires, employee reviews, promotions, transfers, separations and exit interviews.
- Oversee job analyses process to establish the specific requirements of individual jobs within each department for the creation and oversight of job descriptions.
- Oversee safety and risk management programs in compliance with regulatory standards and business needs.



## FY 2020 APPROVED BUDGET DOCUMENT

### HUMAN RESOURCES DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 1,182,298.19	\$1,194,903.91	\$12,605.72	1.05%
Training - HR	156,630.24	156,000.00	(630.24)	-0.40%
Employee Retirement/Anniversary	39,157.56	39,000.00	(157.56)	-0.40%
Flexible Benefit	27,410.29	27,400.00	(10.29)	-0.04%
Health Club	71,660.29	73,202.00	1,541.71	2.11%
Employee Assistance Program	34,262.86	34,000.00	(262.86)	-0.77%
Employee Recruiting	43,060.00	44,782.40	1,722.40	3.85%
Tuition Reimbursement	67,444.98	67,173.60	(271.38)	-0.40%
Workers Compensation	505,837.36	538,250.00	32,412.64	6.02%
Facilities Other	10,088.40	10,088.40	0.00	0.00%
Insurance	430,000.00	430,000.00	0.00	0.00%
Supplies & Expenses	46,911.06	46,238.50	(672.56)	-1.45%
Structural Expenses	29,424.50	29,424.50	0.00	0.00%
Travel Misc Other	27,468.70	33,586.80	6,118.10	18.22%
Consultants	96,000.00	87,500.00	(8,500.00)	-9.71%
Other O&M Expenses	44,593.82	44,309.88	(283.94)	-0.64%
<b>TOTAL O&amp;M</b>	<b>\$ 2,812,248.25</b>	<b>\$2,855,859.99</b>	<b>\$43,611.74</b>	<b>1.53%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$43,612 or 1.53% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Workers compensation is projected to increase based on current year spending trends.
- Travel is projected to increase based on current year spending trends resulting from training needs.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - HUMAN RESOURCES	1.00	1.00	1.00	1.00	1.00
ASSISTANT HR MANAGER	1.00	1.00	1.00	1.00	1.00
TALENT MANAGEMENT OFFICER	1.00	1.00	1.00	1.00	1.00
TRAINING / OD & SAFETY OFFICER	1.00	1.00	1.00	1.00	1.00
HUMAN RESOURCES BUSINESS PARTNER II	2.00	1.00	1.00	1.00	1.00
HUMAN RESOURCES BUSINESS PARTNER	0.00	1.00	1.00	1.00	1.00
COMP / BENEFITS / HRIS ADMINISTRATOR	1.00	1.00	1.00	1.00	1.00
HUMAN RESOURCES ASSISTANT	0.80	1.00	1.00	1.00	1.00
TRAINING & OD SPECIALIST	1.00	1.00	1.00	1.00	1.00
TRAINING SPECIALIST	1.00	1.00	1.00	1.00	1.00
TRAINING COORDINATOR	1.00	1.00	1.00	1.00	1.00
SAFETY / RISK MANAGEMENT SUPERVISOR	0.00	1.00	1.00	1.00	1.00
SAFETY / RISK MANAGEMENT SPECIALIST	0.00	1.00	1.00	1.00	1.00
SAFETY SPECIALIST	1.00	0.00	0.00	0.00	0.00
RISK MANAGEMENT SPECIALIST	1.00	0.00	0.00	0.00	0.00
SAFETY / RISK MANAGEMENT COORDINATOR	0.00	1.00	1.00	1.00	1.00
	12.80	14.00	14.00	14.00	14.00



## FY 2020 APPROVED BUDGET DOCUMENT

### KEY PERFORMANCE MEASURES

1. Monitor and evaluate the employee benefit program's compliance, structure and cost annually against industry trends to determine appropriate resolutions for reducing cost while maintaining quality and value.
2. Update HR policies and procedures annually to certify 100% compliance with all federal, state and local employment laws and requirements.
3. Investigate and resolve 100% of HR complaints in accordance with BWWB employee relations ratings.
4. Maintain an average time-to-fill in compliance with BWWB recruiting and hiring standards.
5. Lead and support an organization-wide employee engagement strategy that reinforces an engagement score consistent or above the global benchmark of like-sized organizations.
6. Manage and distribute quarterly reports on HR metrics approved by senior management.
7. Report annual worker's compensation, personal injury and property claim costs and manage the budget.
8. Generate annual external training revenue of \$5500 by delivering new and unique training programs and courses.
9. Develop and administer annual organizational programs and training solutions which impact behavioral change (Kirkpatrick Model Level 3) and business results (Kirkpatrick Model Level 4).
10. Implement annual preventive Safety Plans aimed at reducing vehicle accidents and personal injury costs.



# FY 2020 APPROVED BUDGET DOCUMENT

## Wellness and Health Management

### OVERVIEW

The Wellness and Health Management programs (provided to employees and spouses covered under the BWWB health insurance plan) are provided to increase employee productivity & wellbeing, and to help control and decrease future health insurance costs by preventing or managing certain medical conditions.

### MISSION

Supports the HR Mission statement:

To recruit, develop, reward and retain a high-performing and innovative workforce committed to achieving BWWB's vision and mission.

### SUMMARY OF ACTIVITIES

- Humana Go365 Rewards Program – help participants to be healthier and more productive, reduce health claims cost, reduce unscheduled absences, reduce lifestyle risk factors for chronic conditions and fewer emergency room visits.
- Abacus Diabetes Rewards Program – assist participants with pre-diabetes or diabetes with improved adherence to care standards, provide lifestyle and behavioral support and increase medication adherence.

### WELLNESS & HEALTH MANAGEMENT DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
BWWB Wellness Expense	\$295,071.79	\$294,530.40	\$ (541.39)	-0.18%
TOTAL O&M	\$295,071.79	\$294,530.40	\$ (541.39)	-0.18%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget decreased by \$542 or 0.18% from the 2019 Approved Budget.

### PERSONNEL SUMMARY

No personnel in this cost center.



## FY 2020 APPROVED BUDGET DOCUMENT

### Water Watchers

#### OVERVIEW

In a continuing effort to educate our community, the BWWB extends the Young Water Ambassador Program to Birmingham, Jefferson and Shelby County High School students with the primary objective of effectively increasing the awareness of water quality, conservation and pollution throughout our communities. Our goal surfaces around promoting understanding, appreciation, enjoyment and stewardship of our water resources.

#### MISSION

Falls under the HR Mission Statement: To recruit, develop, reward and retain a high-performing and innovative workforce committed to achieving BWWB's vision and mission.

#### SUMMARY OF ACTIVITIES

YWA students are exposed to the following:

- Visit the EnviroLab and learn the functions and responsibilities of the teams.
- Visit the Call Center and listen to customer calls.
- Visit Water Treatment Plants and learn about how the water is treated.
- Experience Distribution Training – including a main break simulation.
- Learn the dynamics of Public Speaking taught by the Public Relations Specialist.
- Learn about skills such as making water taps; fire hydrants and how to put a meter together.
- Visit Birmingham Southern College's Southern Environmental Center and learn the importance of protecting our environment.
- Visit Turkey Creek Nature preserve to learn about various endangered species of fish with our water sources (while in canoes on the water source).
- Visit the Cahaba River on a guided tour to learn about the protection and restoration of the river.
- Numerous community service projects, such as cleaning up trash in community parks and around local schools; participate in functions spearheaded by the Public Relations department, such as Hydrate the City (sharing information with our citizens about the importance of staying hydrated).
- Ensure the cleanliness of the grounds as well as inside of the MLK Recreation Center which was our reporting location this past year.





## FY 2020 APPROVED BUDGET DOCUMENT

### WATER WATCHERS DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 283,310.54	\$ 284,311.98	\$ 1,001.44	0.35%
Transportation Expense	48,000.00	62,000.00	14,000.00	22.58%
General Inventory Consumption	1,000.00	1,000.00	0.00	0.00%
Rent / Storage Facilities	2,000.00	1,500.00	(500.00)	-33.33%
Uniforms - Non-Stock	3,500.00	4,500.00	1,000.00	22.22%
Supplies & Expenses	8,000.00	9,000.00	1,000.00	11.11%
Fuel	5,000.00	5,000.00	0.00	0.00%
TOTAL O&M	\$ 350,810.54	\$ 367,311.98	\$16,501.44	4.49%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$16,501 or 4.49% from the 2019 Approved Budget. The major reason for the variance is:

- Transportation expenses are projected to increase based on historical spending trends.

### PERSONNEL SUMMARY

The BWWB hires 100 Water Watchers and 10 Ambassadors in Training annually during the summer.

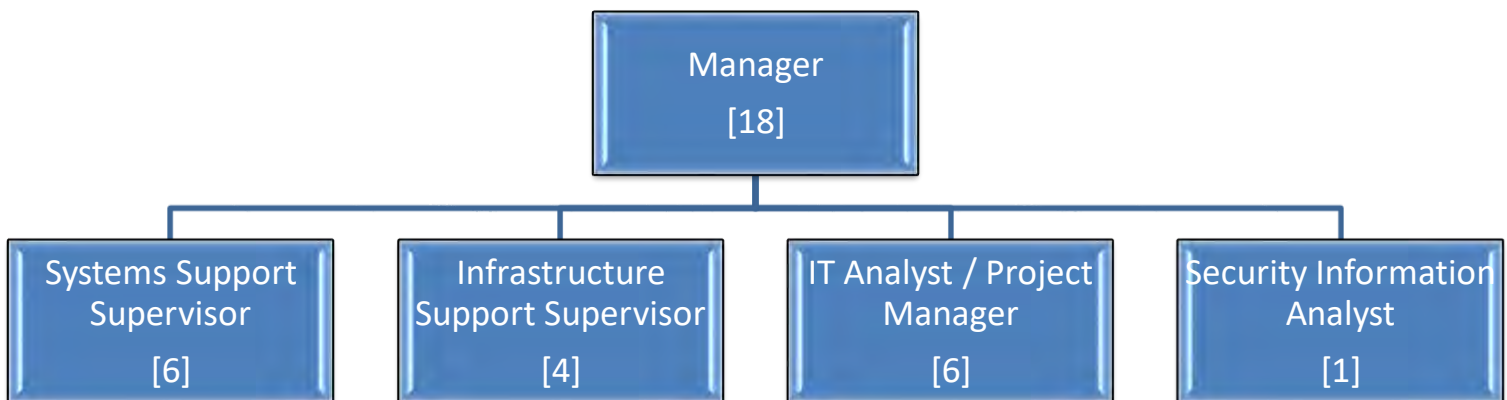


## FY 2020 APPROVED BUDGET DOCUMENT

### Information Technology

#### OVERVIEW

The Information Technology (IT) Department focuses on the overall computing needs of BWWB. The IT Team is responsible for the fulfilment of data processing performed within BWWB, including equipment selection, systems analysis, programming, operations and control. This includes hardware, software, telecommunications and generally anything involved in the transmittal of information or the systems that facilitate communication. The scope of responsibility includes several types of physical equipment, virtual systems, management of automation tools, operating systems and application software used to perform essential business functions. Key responsibilities also include technology architectures, methodologies and regulations governing the use and storage of data. The IT Team focuses on understanding technology issues, patterns and trends to aid BWWB in strategic decision-making and overall service delivery.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To provide technology solutions and service delivery excellence in alignment with BWWB strategic goals and objectives. Furthermore, seeking to anticipate and respond effectively with useful, reliable and secure technological services and solutions for BWWB.

### SUMMARY OF ACTIVITIES

- Supports company-wide use of digital telephony systems which includes testing, installation, configuration, monitoring and maintenance.
- Supports application software utilized by various BWWB departments which includes testing, installation, configuration, monitoring and maintenance.
- Manages configuration management process which involves identifying, controlling, maintaining and verifying the versions of all configuration items in the BWWB technical environment.
- Provides Help Desk support to the entire BWWB employee-base with regard to requests for service, including problems, technical modifications and request for IT services.
- Manages the desktop hardware/software, mobile device hardware/software and endpoint-based application software for BWWB which includes software maintenance, upgrades and the creation of new images.
- Provides support to BWWB end users for laptops, desktops, mobile devices and applications.
- Responsible for end user computing operating systems which includes change control, break-fix diagnosis, patch management, anti-virus management and end user acclimation.
- Responsible for BWWB's server systems, data storage platforms and network connectivity. Components which includes design, installation, configuration, monitoring and maintenance.
- Responsible for the availability, integrity and confidentiality of BWWB IT systems to ensure their maintenance is compliant with defined organizational service levels.
- Maintains specific utility-wide services related to electronic mail, internet connectivity, web platforms and network connectivity (data, voice).
- Installs, configures and supports the local area network (LAN), wide area network (WAN), wireless and related network segments to ensure operability and availability.
- Maintains company data backup/restoral systems and processes.
- Maintains company business data replication systems and processes.
- Maintains infrastructure for company firewall and other security-related systems.
- Maintains a persistent focus on detecting and preventing cyber threats to the organization's computing environment.
- Identify risks and weaknesses within the organization's computing infrastructure (software, hardware, networks) and determines steps for remediation.
- Plans, implements, and maintains security measures for the protection of computer networks and information.
- Provides internal technical leadership for responding to computer security breaches and viruses.



## FY 2020 APPROVED BUDGET DOCUMENT

- Performs vulnerability testing, risk analyses and cyber security related assessments.
- Collaborates with appropriate BWWB areas to train employees on cyber security awareness and operational procedures.
- Evaluates end user business needs to recommend, develop, implement and support solutions to meet those needs.
- Analyzes user requirements, procedures and problems to automate or improve existing systems/applications, and design/develop new solutions.
- Plans project stages and assesses operational implications throughout the project management lifecycle.
- Handles programming and/or configuration for vendor-developed software.
- Provides custom programming solutions and applications.
- Provides support for cloud-based applications supported by the IT Team.
- Responsible for the BWWB's intranet and internet websites which includes content management and administration.
- Performs exploratory analysis of internal and external data sets in order to draw conclusions about the information.
- Focuses on streamlining the lifecycle of information with electronic document management and automated workflows (capture, manage, store, preserve, deliver).
- Leads and manages major technology projects to achieve business strategy and vision.
- Oversees process improvement projects/initiatives which are integrated with the technical processing environment.
- Develops, publishes and enforces policies and processes governing corporate data, including but not limited to data collection, warehousing, data validation, integrity, timeliness, protection, relationships and ownership.
- Champions and oversees the key business process for change control, incident (outages) management and problem (post-incident review) management
- Handles risk management within the information technology segment associated with the ownership, involvement, operation, influence, adoption and use of technology across BWWB.
- Performs analytical, process management and administrative duties in support of IT key processes and operational business goals.



## FY 2020 APPROVED BUDGET DOCUMENT

### INFORMATION TECHNOLOGY DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 1,574,857.55	\$ 1,512,296.38	\$ (62,561.17)	-4.14%
Mileage Reimbursement	861.20	861.20	0.00	0.00%
Permits	1,100,000.00	1,100,000.00	0.00	0.00%
Uniforms - Non-Stock	750.00	750.00	0.00	0.00%
Utilities-Telephone	400,000.00	300,000.00	(100,000.00)	-33.33%
Supplies & Expenses	12,566.30	8,044.20	(4,522.10)	-56.22%
Software Maintenance Support	1,050,000.00	1,175,000.00	125,000.00	10.64%
NonCapital Software Replacement	800,000.00	850,000.00	50,000.00	5.88%
Equipment Maintenance/Support	120,000.00	120,000.00	0.00	0.00%
NonCapital Equipment Replacement	57,000.00	80,000.00	23,000.00	28.75%
Misc Gen Exp Membership Dues	3,875.40	3,444.80	(430.60)	-12.50%
Travel Misc Other	14,416.90	43,060.00	28,643.10	66.52%
Consultants	67,256.00	67,256.00	0.00	0.00%
TOTAL O&M	\$ 5,201,583.35	\$ 5,260,712.58	\$ 59,129.23	1.12%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$59,129 or 1.12% from the 2019 Approved Budget. The major reasons for the variance are:

- One position was eliminated.
- Telephone expenses are projected to decrease based on current year spending trends.
- Maintenance expenses are projected to increase for infrastructure and systems software based upon software added in 2019 and planned for 2020.
- Support for Cloud-related computing services are projected to increase based on current year spending trends and expanded usage in 2020.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - INFORMATION TECHNOLOGY	1.00	1.00	1.00	1.00	1.00
BUSINESS ANALYST / PROJECT MANAGER	4.00	4.00	4.00	4.00	4.00
BUSINESS SYSTEMS ARCHITECT	1.00	0.00	0.00	0.00	0.00
SR TECHNICAL ANALYST - INFRASTRUCTURE SUPV	1.00	1.00	1.00	1.00	1.00
IT SYSTEMS SUPPORT SUPERVISOR	1.00	1.00	1.00	1.00	1.00
BUSINESS SYSTEMS ANALYST	3.00	3.00	2.00	2.00	2.00
IT WEB INFORMATION SECURITY ANALYST	0.00	1.00	1.00	1.00	1.00
ROUTING / SWITCHING ANALYST	1.00	1.00	1.00	1.00	0.00
SAP TECHNICAL ANALYST	1.00	1.00	1.00	1.00	0.00
TECHNICAL ANALYST III	1.00	1.00	1.00	1.00	2.00
TECHNICAL SUPPORT ANALYST II	1.00	1.00	1.00	1.00	1.00
TECHNICAL SUPPORT ANALYST I	3.00	3.00	3.00	3.00	3.00
COMPUTER OPERATOR I	1.00	1.00	0.00	0.00	0.00
COMPUTER OPERATOR II	1.00	1.00	2.00	1.00	1.00
HELP DESK SPECIALIST	1.00	1.00	1.00	1.00	1.00
	<b>21.00</b>	<b>21.00</b>	<b>20.00</b>	<b>19.00</b>	<b>18.00</b>

### KEY PERFORMANCE MEASURES

1. Implement and manage Information Technology infrastructure changes with little to no impact on business processing while maintaining no less than a 99% quarterly change success rate.
2. Maintain no less than 99% business applications availability for all critical production systems.
3. Resolve Help Desk tickets with an average first response time of 45 minutes.
4. Maintain a monthly average Help Desk ticket work time of one hour.
5. Resolve direct and indirect customer impacting service disruptions within 60 minutes and determine the root cause within three business days.



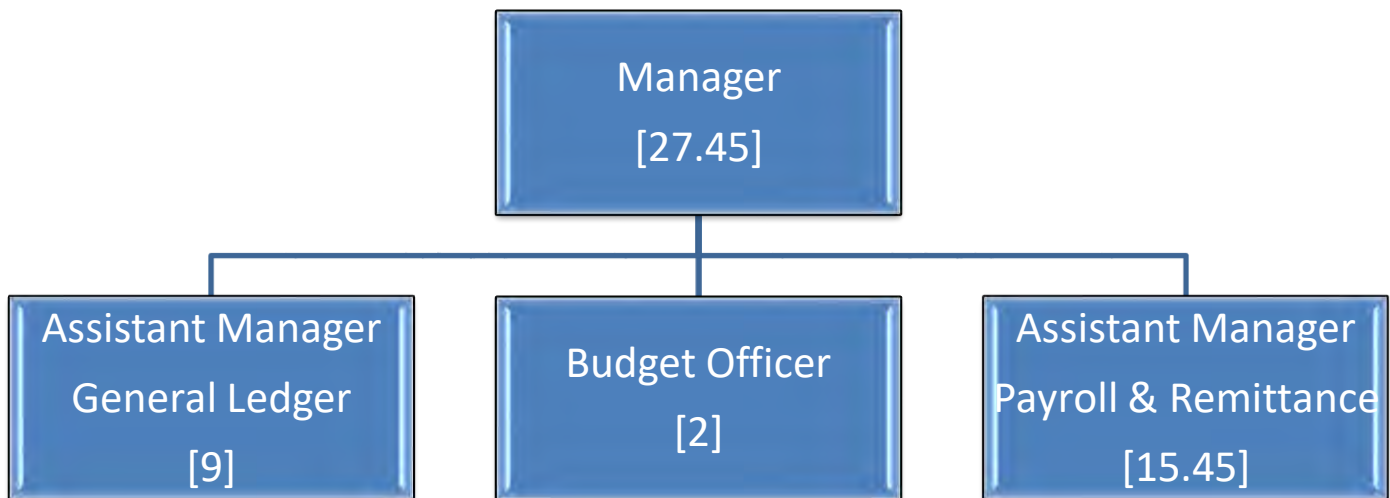


## FY 2020 APPROVED BUDGET DOCUMENT

### Accounting

#### OVERVIEW

The Accounting department's responsibilities include administering the organization's accounting principles, procedures, initiatives and internal controls, financial reporting and analysis, budgeting, payment processing, payroll, capital assets and depreciation, long-term debt, investments, accounts payable, accounts receivable, inventory, unclaimed property processing and reporting and providing accounting support for proposed cost of service studies, actuarial reviews, audits and system implementations.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To provide accurate and timely financial information for decision making and provide outstanding customer service and support to internal and external customers.

### SUMMARY OF ACTIVITIES

- Provide Board of Directors, Executive Management, Department Managers and Supervisors with accurate and timely financial information and support.
- Establish and maintain a strong system of internal controls.
- Review and research Operating & Maintenance budget variances.
- Process accurate and timely biweekly and supplemental payrolls.
- Process customer payments remitted electronically and via mail.
- Provide outstanding customer service while processing walk-in and drive-through customer payments.
- Process all vendor invoices on a timely basis, while taking advantage of eligible discounts.
- Maintain the general ledger and related subsidiary ledgers.
- Analyze capital purchases and developer contributions for proper recording and depreciation.
- Reconcile all balance sheet accounts monthly.
- Conduct annual physical inventory counts.
- Process and report unclaimed property.
- Provide management of the annual audits.
- Provide support for system implementations.
- Provide pension benefit estimates.
- Provide data and support for cost of service studies, actuarial analysis, benchmarking surveys and other initiatives.
- Analyze costs for system development projects.



## FY 2020 APPROVED BUDGET DOCUMENT

### ACCOUNTING DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 1,844,331.60	\$ 1,731,048.62	\$ (113,282.98)	-6.54%
Cafeteria Expense	3,014.20	2,153.00	(861.20)	-40.00%
Mileage Reimbursement	1,937.70	1,119.56	(818.14)	-73.08%
Permits	2,100.00	2,310.00	210.00	9.09%
Misc NonOperating Expense	65,000.00	62,000.00	(3,000.00)	-4.84%
Supplies & Expenses	47,952.78	45,851.03	(2,101.75)	-4.58%
Misc Gen Exp Membership Dues	8,221.01	6,339.29	(1,881.72)	-29.68%
Materials Collecting	18,500.00	15,500.00	(3,000.00)	-19.35%
Travel Misc Other	34,923.51	36,262.85	1,339.34	3.69%
OTHER O&M EXPENSES	7,473.43	6,306.00	(1,167.43)	-18.51%
<b>TOTAL O&amp;M</b>	<b>\$ 2,033,454.23</b>	<b>\$ 1,908,890.35</b>	<b>\$ (124,563.88)</b>	<b>-6.53%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget decreased by \$124,564 or 6.53% from the 2019 Approved Budget. The major reason for the variance is:

- One position was transferred from Accounting (Treasury) to the Executive Department.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - ACCOUNTING	1.00	1.00	1.00	1.00	1.00
ASSISTANT ACCOUNTING MANAGER	2.00	1.00	1.00	2.00	2.00
ACCOUNTANT III	2.00	4.00	4.00	3.00	3.00
ACCOUNTANT II	4.00	1.00	2.00	3.00	3.00
ACCOUNTANT I	1.00	1.00	0.00	1.00	1.00
ACCOUNTS PAYABLE CLERK II	2.00	2.00	2.00	2.00	2.00
OFFICER - BUDGET	1.00	1.00	1.00	1.00	1.00
BUDGET ACCOUNTANT II	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - PAYMENT CENTER	1.00	0.00	0.00	1.00	1.00
SUPERVISOR-CASHIERS	1.00	0.00	0.00	1.00	1.00
CASHIER TEAM LEADER	2.00	0.00	0.00	2.00	2.00
CASHIER III	0.00	0.00	0.00	1.00	1.00
CASHIER II	4.00	0.00	0.00	2.00	2.00
CASHIER I	3.60	0.00	0.00	4.45	4.45
REMITANCE PROCESSING SPECIALIST III	2.00	0.00	0.00	2.00	2.00
	<b>27.60</b>	<b>12.00</b>	<b>12.00</b>	<b>27.45</b>	<b>27.45</b>

### KEY PERFORMANCE MEASURES

1. Administer the accounting principles, procedures and programs to certify 100% compliance with the utility industry and generally accepted accounting reporting requirements.
2. Manage the annual budgeting process for the organization by analyzing statistical data to increase financial productivity.
3. Process payroll production biweekly to maintain 100% organizational and statutory compliance.
4. Review Payroll production processes and procedures yearly to ensure corporate governance and financial security.
5. Review and pay all requisitions to ensure 100% compliance with BWWB accounting policies, principles and procedures.
6. Monitor all trusted accounts activity to maintain 100% compliance with bond agreements.
7. Conduct monthly and year-end reconciliation for all general ledger accounts within the organization.
- 8.



## FY 2020 APPROVED BUDGET DOCUMENT

### Purchasing

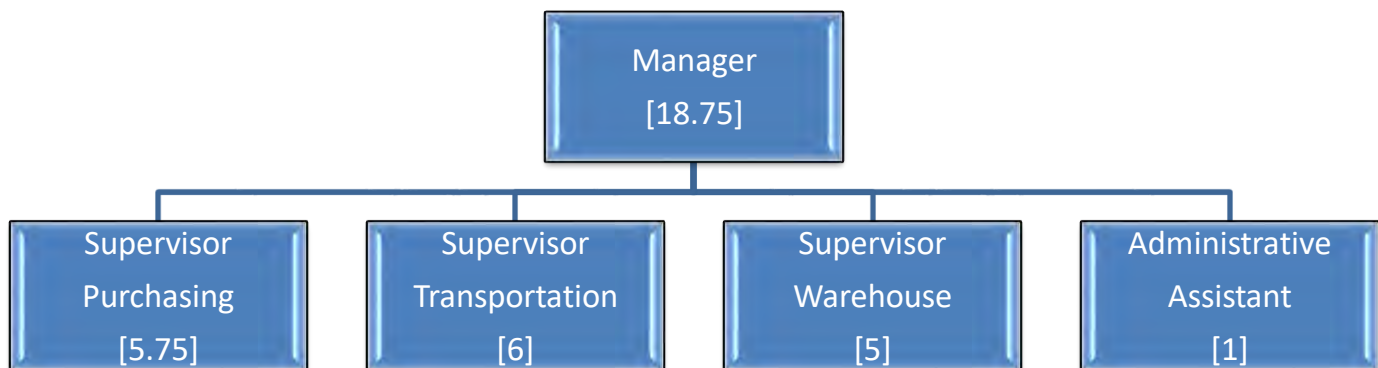
#### OVERVIEW

The Purchasing Department is responsible for purchasing all material utilized by the BWWB. Purchasing has several groups that perform duties such as the oversight of building cleaning and maintenance, inventory control (warehouse), fleet maintenance (transportation) and management of main campus utilities.

The Warehouse group is responsible for ordering, storing and issuing materials, tools, safety supplies, uniformed t-shirts, hats and various miscellaneous items needed to install and repair water mains and services and to equip the personnel performing those services. The Warehouse staff also receives, directs and delivers shipments for all areas of the organization, as needed.

The Transportation group maintains the BWWB's current fleet of vehicles (approximately 336 vehicles). The BWWB spends approximately \$2 million annually for vehicle purchases and maintenance. Transportation staff run diagnostics on large vehicles and diesel engines to perform repairs. Major repairs, which includes large equipment, are outsourced.

The Department has other responsibilities that include the BWWB's HUB program which is designed to encourage the participation of Historically Underutilized Businesses in construction projects. Its goal is to exercise positive financial control over purchases and to meet the needs of internal customers and all BWWB departments by acquiring the most appropriate products and services at the lowest possible prices.



#### MISSION



## FY 2020 APPROVED BUDGET DOCUMENT

To provide excellent service and meet the needs of internal customers by acquiring the most appropriate products and services at the lowest possible prices, operate an efficient warehouse, and provide reliable and well-maintained vehicles.

It is the intent of the BWVB to foster competition among contractors, suppliers and vendors that will result in better quality and more economical services through the BWVB's Historically Underutilized Business (HUB) program.

### **SUMMARY OF ACTIVITIES**

- Responsible for the purchase of supplies, materials, equipment and services necessary for the operation of BWVB's system in compliance with bid laws and other regulations.
- Develop the organization's procurement policies and procedures, teach procurement classes and Alabama State Bid Law to help potential suppliers to qualify for future consideration.
- Direct the development of formal and informal bids, including requests for bids, requests for quotes/qualifications, requests for information and requests for proposal. Bid goods and services to meet Alabama State Bid Law and ensure all applicable legal and contractual provisions are met.
- Work with the Board of Directors to establish and execute a strategy that will increase minority and HUB participation. This includes attending conferences and seminars, meeting with vendors, preparing reports and monitoring the budget.
- Review purchase order claims & contracts for compliance to company policy.
- Order, store and issue materials needed to install and repair water mains and services.
- Review and investigate material count discrepancies related to receipts and issues in the warehouse.
- Responsible for the purchase of all company vehicles and equipment for day-to-day operations.
- Responsible for the proper maintenance of the entire fleet of vehicles.
- Inspect and perform minor repair and maintenance on material handling equipment.
- Review, evaluate and approve specifications for issuing and awarding bids to suppliers through the bid process.

### **PURCHASING DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY**



## FY 2020 APPROVED BUDGET DOCUMENT

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 1,138,632.48	\$ 1,172,106.64	\$ 33,474.16	2.86%
Cafeteria Expense	22,994.04	19,693.92	(3,300.12)	-16.76%
Transportation Expense	183,200.00	167,449.00	(15,751.00)	-9.41%
Facilities Other	21,000.00	21,000.00	0.00	0.00%
Distributions Mains	25,000.00	15,000.00	(10,000.00)	-66.67%
Janitorial Services	125,175.00	104,312.50	(20,862.50)	-20.00%
HVAC	41,725.00	54,242.50	12,517.50	23.08%
Utilities - Electric	280,700.00	298,058.00	17,358.00	5.82%
Utilities - GasWater	74,500.00	94,398.00	19,898.00	21.08%
Supplies & Expenses	31,229.84	41,896.99	10,667.15	25.46%
Fuel	23,900.00	26,900.00	3,000.00	11.15%
Miscellaneous Property	7,510.50	13,185.10	5,674.60	43.04%
Structural Expenses	154,382.50	129,347.50	(25,035.00)	-19.35%
Misc Gen Exp Membership Dues	8,202.93	11,398.84	3,195.91	28.04%
Materials Collecting	41,500.00	50,000.00	8,500.00	17.00%
Travel Misc Other	8,889.87	10,591.90	1,702.03	16.07%
Other O&M Expenses	19,367.00	18,730.63	(636.37)	-3.40%
<b>TOTAL O&amp;M</b>	<b>\$ 2,207,909.16</b>	<b>\$ 2,248,311.52</b>	<b>\$ 40,402.36</b>	<b>1.80%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$40,402 or 1.80% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Utilities are projected to increase based on current year spending trends





# FY 2020 APPROVED BUDGET DOCUMENT

## PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - PURCHASING	1.00	1.00	1.00	1.00	1.00
SUPERVISOR - PURCHASING	1.00	1.00	1.00	1.00	1.00
COORDINATOR - PURCHASING	1.00	1.00	1.00	1.00	1.00
BUYER	1.00	1.00	1.00	1.00	1.00
ADMINISTRATIVE ASSISTANT III	1.00	1.00	1.00	1.00	1.00
ATTENDANT - BUILDING / MESSENGER II	1.00	1.00	1.00	1.00	1.00
ATTENDANT - BUILDING / MAINTENANCE	0.75	0.75	0.75	0.75	0.75
SUPERVISOR - WAREHOUSE	1.00	1.00	1.00	1.00	1.00
SENIOR MATERIALS HANDLER - TEAM LDR	1.00	1.00	1.00	1.00	1.00
MATERIALS HANDLER	3.00	3.00	3.00	3.00	3.00
SUPERVISOR - TRANSPORTATION	1.00	1.00	1.00	1.00	1.00
SR AUTOMOTIVE TECHNICIAN	1.00	1.00	1.00	1.00	1.00
AUTOMOTIVE TECHNICIAN II	1.00	1.00	1.00	1.00	1.00
AUTOMOTIVE TECHNICIAN	3.00	3.00	3.00	3.00	3.00
CLERICAL ASSISTANT	1.00	1.00	1.00	1.00	1.00
	<b>18.75</b>	<b>18.75</b>	<b>18.75</b>	<b>18.75</b>	<b>18.75</b>

## KEY PERFORMANCE MEASURES

1. Monitor and evaluate price and cost control for the organization by reducing cost for all supplies, materials and contracts.
2. Regulate all BWWB bids to ensure 100% compliance with Alabama Competitive Bid Laws and BWWB Purchasing Requirements and Guidelines.
3. Review and approve all purchase orders and requisitions to ensure 100% compliance with BWWB company policies and procedures.
4. Manage performance and preventive maintenance on vehicles and equipment to ensure 100% compliance with BWWB and manufacturer's specifications.
5. Maintain the BWWB's fleet to improve asset life and reduce unplanned maintenance activities or breakdowns by 5%.
6. Track and manage fleet to sustain downtime by 10% and availability by no less than 90% annually.
7. Track and manage warehouse inventory to maintain no more than 10% lost or damaged materials and supplies annually.



## FY 2020 APPROVED BUDGET DOCUMENT

### EnviroLab/Water Quality

#### OVERVIEW

The EnviroLab is one of the largest utility-owned certified laboratories in the state of Alabama among drinking water systems. In 1993, the EnviroLab had six employees. Due to the growth of the system, regulatory demands, customer complaints and inquiries as well as source water monitoring and plant optimization, the department has grown to include Water Quality Operations and Regulatory Compliance. The BWWB Enviro-Lab is a state-of-the-art, on-site, testing laboratory that provides immediate access to analytical data and quality control information to help optimize the filter plants' daily operations and ensure the safety of the drinking water supply. EnviroLab tests over 100,000 different parameters and more than 60,000 samples each year while also performing as a testing lab for six consecutive systems and as a secondary lab for two contract labs.

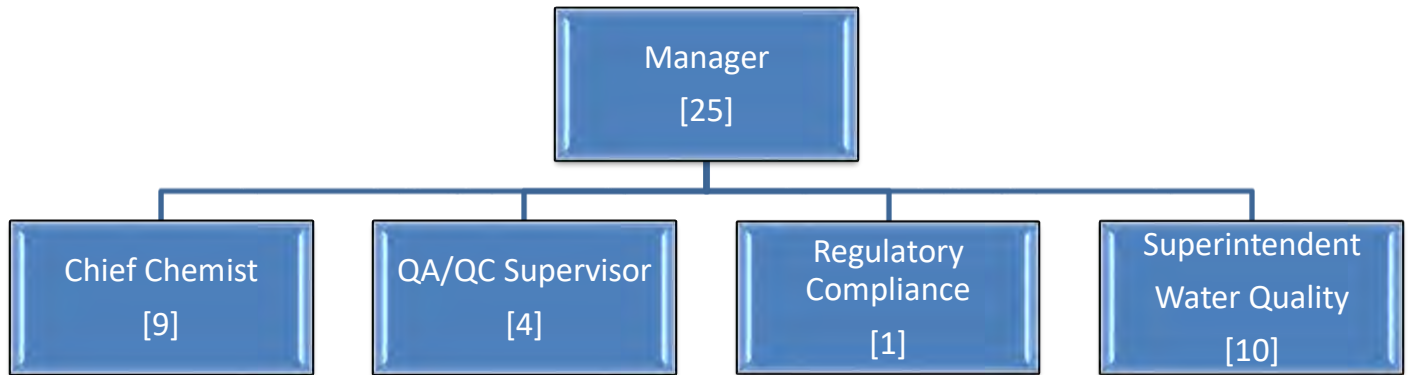
The Laboratory is currently certified to analyze the following drinking water parameters:

- Primary Metals and Minerals
- Secondary Inorganics
- Volatile Organic Compounds (VOCs)
- Pesticides, Herbicides
- Synthetic Organic Compounds Trihalomethanes (THMs),
- Haloacetic Acids (HAAs),
- Total Organic Carbon, Nutrients - Chlorite, Bromide
- Total Coliform, Fecal Coliform & *E. coli* - (Bacteriological)

Water Quality Operations is one of the BWWB's first lines of defense for investigating customer complaints of discoloration and taste & odor within the distribution system. The team routinely monitors the quality of the water within the distribution system by flushing or unidirectional flushing. This is used to remove sediment from the distribution water mains throughout the system, as well as in areas known for low chlorine residuals or frequent discoloration complaints.



## FY 2020 APPROVED BUDGET DOCUMENT





## FY 2020 APPROVED BUDGET DOCUMENT

### Analysis Methods for Detection

#### *Conventional Methodologies*

- *Gas Chromatography Mass Spectrometer*





## FY 2020 APPROVED BUDGET DOCUMENT

### **MISSION**

To maintain the highest quality of water for the BWWB system through routine monitoring, legally defensible data, flushing (both conventional and unidirectional) and keeping our customers educated about water concerns, while maintaining quality, service, integrity and reliability.

### **SUMMARY OF ACTIVITIES**

- Approve testing data and submit to ADEM.
- Maintain the Laboratory Information Management System (LIMS).
- Perform internal audits of the EnviroLab.
- Perform routine flushing to rid the system of unpleasant water quality issues.
- Collect samples that are analyzed for microbiology parameters and wet chemistry parameters.
- Maintain all water quality equipment throughout the distribution system.
- Compliance testing for consecutive systems.
- Lead and copper testing.
- Prepare the annual Consumer Confidence Report.
- Install flushing stations, sampling stations, and hydrants.
- Maintain flushing throughout all gradients.



## FY 2020 APPROVED BUDGET DOCUMENT

### ENVIROLAB DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$1,801,067.72	\$1,914,678.66	\$ 113,610.94	5.93%
Cafeteria Expense	8,722.40	8,722.40	0.00	0.00%
Transportation Expense	23,000.00	23,000.00	0.00	0.00%
Contractor Charges	50,000.00	50,000.00	0.00	0.00%
Facilities Other	100,000.00	95,000.00	(5,000.00)	-5.26%
CCR/Lead Copper Expense	97,315.60	98,607.40	1,291.80	1.31%
Supplies Purification	370,000.00	325,000.00	(45,000.00)	-13.85%
Material Equipment Purification	140,000.00	150,000.00	10,000.00	6.67%
Sampling	45,000.00	40,000.00	(5,000.00)	-12.50%
Utilities - Electric	110,000.00	117,638.62	7,638.62	6.49%
Utilities - Gas/Water	57,750.00	57,750.00	0.00	0.00%
Fuel	37,000.00	47,500.00	10,500.00	22.11%
Miscellaneous Property	15,000.00	16,500.00	1,500.00	9.09%
Travel Misc Other	15,981.78	25,836.00	9,854.22	38.14%
Other O&M Expenses	35,359.08	32,695.28	(2,663.80)	-8.15%
<b>TOTAL O&amp;M</b>	<b>\$2,906,196.58</b>	<b>\$3,002,928.36</b>	<b>\$ 96,731.78</b>	<b>3.22%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$96,731 or 3.22% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- One position was added to the department in 2019.
- Supplies expenses are projected to decrease based on current year spending trends.



# FY 2020 APPROVED BUDGET DOCUMENT

## PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - ENVIROLAB	1.00	1.00	1.00	1.00	1.00
ASSISTANT MANAGER - CHIEF CHEMIST	1.00	1.00	1.00	1.00	1.00
QUALITY CONTROL ASSURANCE OFFICER	1.00	1.00	1.00	1.00	1.00
QUALITY CONTROL SPECIALIST	2.00	2.00	2.00	2.00	2.00
LAB DATA COORDINATOR	1.00	1.00	1.00	1.00	1.00
CHEMIST II	2.00	1.00	1.00	1.00	1.00
CHEMIST I	2.00	2.00	2.00	2.00	2.00
LAB TECHNICIAN III	1.00	2.00	2.00	2.00	2.00
LAB TECHNICIAN II	0.00	1.00	2.00	2.00	2.00
LAB TECHNICIAN I	3.00	2.00	1.00	1.00	1.00
REGULATORY COMPLIANCE SPECIALIST	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - WATER QUALITY OPERATIONS	1.00	1.00	1.00	1.00	1.00
TECHNICAL SERVICE COORDINATOR I	1.00	1.00	1.00	1.00	1.00
WATER QUALITY TECH - TEAM LEADER	0.00	1.00	1.00	1.00	1.00
WATER QUALITY TECHNICIAN II	5.00	4.00	4.00	4.00	4.00
WATER QUALITY TECHNICIAN I	2.00	2.00	2.00	2.00	2.00
UTILITY WORKER I (LIGHT DUTY)	0.00	0.00	0.00	1.00	1.00
	<b>24.00</b>	<b>24.00</b>	<b>24.00</b>	<b>25.00</b>	<b>25.00</b>

## KEY PERFORMANCE MEASURES

1. Collect and perform bacteriological testing on 210 – 240 samples monthly for the Filter Plants, Raw Water Sources and Distribution to maintain 100% compliance with Alabama Department of Environmental Management (ADEM).
2. Collect and perform disinfection byproducts (TTHMs, HAA5 and TOC) testing on 26 samples monthly and quarterly at Distribution, consecutive systems master meters and water treatment plants (entry point) to maintain 100% compliance with ADEM regulations.
3. Collect and perform Distribution System Evaluation (DSE) testing on 12 samples bi-monthly (every 60 days) to maintain 100% compliance with ADEM regulations.
4. Collect and perform inorganic/organic chemicals (primary, synthetic and volatile) testing monthly and quarterly at all Filter Plants to maintain 100% compliance with ADEM regulations.
5. Collect and perform secondary inorganic drinking water contaminants testing every first and third quarter at all Filter Plants to maintain 100% compliance with ADEM regulations.
6. Collect and perform unregulated volatile and synthetic organic chemicals testing every first and third quarter at all Filter Plants to maintain 100% compliance with ADEM regulations.





## FY 2020 APPROVED BUDGET DOCUMENT

7. Perform and analyze lead and copper testing on 50 samples at predetermined customer tap locations every three years to maintain 100% compliance with ADEM.
8. Perform and analyze lead and copper corrosivity testing semi-annually from a representative entry point to the water distribution system per filter plant to maintain 100% compliance with ADEM regulations.
9. Perform and analyze radiological contaminants testing annually at all Filter Plants to maintain 100% compliance with ADEM regulations.
10. Collect and perform Long Term 2 (LT2) testing for Giardia, Cryptosporidium, E. coli and Turbidity bi-monthly at all Filter Plants to maintain 100% compliance with ADEM regulations.
11. Collect and monitor additional raw water and source water (Project 400, Inland and Project 77) testing as needed to maintain 100% compliance with ADEM regulations.
12. Perform and document monthly facility and equipment maintenance to certify 100% compliance with the Clean, Paint, and Repair (CPR) program.
13. Analyze and record testing samples for consecutive systems to maintain 100% compliance with ADEM regulations.
14. Maintain lab certification by passing the Annual Audit for Organic, Bacteriological and Inorganic analysis according to the Environmental Protection Agency (EPA) certification regulations and guidelines.
15. Retain 100% of the required 14-day testing turnaround time (TAT) for all samples.
16. Sustain the Minimum Detection Limits (MDL) and Reporting Limits (RL) to certify 100% compliance with the Environmental Protection Agency (EPA) methods.
17. Perform and document monthly preventive and predictive maintenance on essential testing and flushing equipment to maintain equipment readiness of no less than 90%.
18. Investigate and respond to no less than 95% of customer water quality complaints within 2 hours of receipt of customer complaint to remove sediment, eliminate low chlorine residual and/or to resolve taste, color and air concerns.
19. Operate and record over 250 flushing points monthly through conventional flushing to minimize the loss of chlorine residual in the distribution system.
20. Operate and record over 5 flushing points bi-annually through unidirectional flushing to remove impurities in the distribution system.
21. Perform and document monthly facility and property maintenance to certify 100% compliance with the Clean, Paint, and Repair (CPR) program.



## FY 2020 APPROVED BUDGET DOCUMENT

### Purification

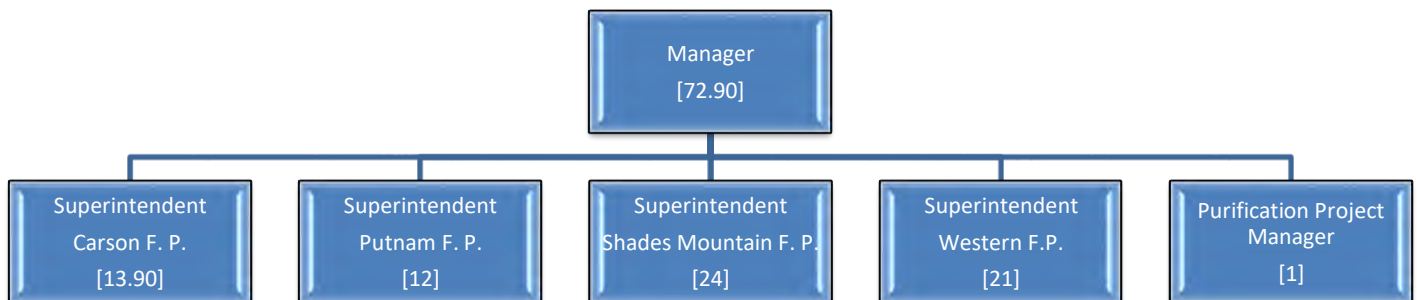
#### OVERVIEW

The BWWB produces potable water to serve approximately 650,000 people in Jefferson County and several surrounding counties. Four water filtration plants process and treat the raw water as follows:

<u>Filtration Plant</u>	<u>Rated Capacity</u>	<u>Source of Supply</u>
Shades Mountain	80 MGD	Cahaba River – Lake Purdy
Putnam	24 MGD	Mulberry Fork, Smith Lake or Inland Lake
Western	60 MGD	Mulberry Fork or Smith Lake
H. Y. Carson	25 MGD	Inland Lake, Smith Lake or Mulberry Fork

Alabama Department of Environmental Management (ADEM) requires Grade Four Certified Operators at each filtration plant to ensure water quality and quantity meets or exceeds state and federal regulations. Each plant is recognized annually for meeting and/or exceeding standards.

The department's goal is to ensure that local and federal drinking water regulations are implemented and enforced to be recognized at the national level for safe and clean water.





# FY 2020 APPROVED BUDGET DOCUMENT







# FY 2020 APPROVED BUDGET DOCUMENT





# FY 2020 APPROVED BUDGET DOCUMENT

## MISSION

To provide our customers with the highest quality water possible. To provide efficient, effective and reliable water services in a manner that respects the natural environment.

## SUMMARY OF ACTIVITIES

## AWARDS

### Carson

2018 AWPCA Best Operated Plant Award 20.1 – 30.0 MGD

Partnership for Safe Drinking Water President's Award (3 Year)

Water Quality Fluoridation Award from the CDC

### Putnam

AWPCA Award of Excellence for Surface Water plant Category 20.1 to 30 MGD

Water Quality Fluoridation Award from the CDC

ADEM AWOP 7 Year Optimized Plant Award

Partnership for Safe Drinking Water President's Award (2 Year)

AWWA Alabama/Mississippi Section Operator of the Year Award: Bill Shikle (2-time Recipient)

### Western

Water Quality Fluoridation Award from the CDC

Partnership Award of Excellence 4-year award

### Shades Mountain

ADEM AWOP 7-year Optimized plant award

AWPCA Award of Excellence for Surface water greater than 60 MGD

Water Quality Fluoridation Award from the CDC



## FY 2020 APPROVED BUDGET DOCUMENT

### PURIFICATION DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 4,522,103.80	\$ 4,621,149.03	\$ 99,045.23	2.14%
Cafeteria Expense	5,374.85	5,094.96	(279.89)	-5.49%
Power	2,916,613.00	2,970,799.00	54,186.00	1.82%
Transportation Expense	48,500.00	47,000.00	(1,500.00)	-3.19%
General Inventory Consumption	14,150.00	13,850.00	(300.00)	-2.17%
Chemicals	5,147,832.66	4,992,407.17	(155,425.49)	-3.11%
Materials Structure Purification	191,500.00	183,500.00	(8,000.00)	-4.36%
Supplies Expense Purification	338,500.00	332,500.00	(6,000.00)	-1.80%
Sludge Handling Purification	13,800.00	13,800.00	0.00	0.00%
Materials Equipment Purification	405,000.00	349,000.00	(56,000.00)	-16.05%
Materials Other P&P Maintenance	50,000.00	50,000.00	0.00	0.00%
Materials Electrical P&P Maintenance	29,800.00	33,500.00	3,700.00	11.04%
Uniforms - Non-Stock	88,200.00	92,950.00	4,750.00	5.11%
Utilities-Telephone	17,900.00	18,900.00	1,000.00	5.29%
Utilities - Gas/Water	75,000.00	94,500.00	19,500.00	20.63%
Pump Expense Electrical P&P	81,000.00	66,000.00	(15,000.00)	-22.73%
Fuel	79,975.00	75,525.00	(4,450.00)	-5.89%
Miscellaneous Property	45,063.00	54,242.50	9,179.50	16.92%
Misc Gen Exp Membership Dues	17,641.69	13,822.26	(3,819.43)	-27.63%
Travel Misc Other	9,379.29	18,731.10	9,351.81	49.93%
Other O&M Expenses	49,360.02	39,964.76	(9,395.26)	-23.51%
<b>TOTAL O&amp;M</b>	<b>\$ 14,146,693.31</b>	<b>\$ 14,087,235.78</b>	<b>\$ (59,457.53)</b>	<b>-0.42%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget decreased by \$59,458 or 0.42% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Power expenses are projected to increase based on Alabama Power projections.
- Chemical expenses are projected to decrease based on projected pricing.
- Non-capital equipment spending is projected to decrease based on current year spending trends.



# FY 2020 APPROVED BUDGET DOCUMENT

## PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - WATER TREATMENT	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - FILTER PLANT - SENIOR	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - FILTER PLANT	3.00	3.00	3.00	3.00	3.00
OPERATOR - FILTER - CHIEF	1.00	1.00	1.00	1.00	1.00
OPERATOR - FILTER - SENIOR	3.00	3.00	3.00	3.00	3.00
OPERATER IV	4.00	4.00	4.00	4.00	4.00
OPERATOR III	8.00	12.00	12.00	12.00	12.00
OPERATOR II	4.00	7.00	8.00	9.00	9.00
OPERATOR I	8.00	1.00	1.00	0.00	0.00
OPERATOR TRAINEE	5.00	5.00	4.00	4.00	4.00
OPERATOR INTERN	0.00	2.18	2.90	2.90	2.90
WORKER - MAINTENANCE - PURIFICATION	12.00	12.00	15.00	12.00	12.00
PMW TRAINEE	4.00	4.00	1.00	3.00	3.00
SUPERVISOR - FILTER PLANT - MAINTENANCE	3.00	3.00	3.00	3.00	3.00
MAINTENANCE CREW LEADER	4.00	4.00	4.00	4.00	4.00
PURIFICATION SPECIAL PROJECTS COORDINATOR	1.00	1.00	1.00	1.00	1.00
RESIDUAL PLANT OPERATOR II	2.00	2.00	2.00	2.00	2.00
RESIDUAL PLANT OPERATOR I	5.00	5.00	5.00	5.00	5.00
SOLIDS HANDLER I	2.00	2.00	2.00	2.00	2.00
	<b>71.00</b>	<b>73.18</b>	<b>73.90</b>	<b>72.90</b>	<b>72.90</b>

## KEY PERFORMANCE MEASURES

1. Process the water to maintain 100% compliance with all BWWB, state and federal regulations relative to water purification and treatment.
2. Perform plant and facility maintenance to certify 100% compliance with the Clean, Paint, and Repair (CPR) program.
3. Collect daily water samples and perform required ADEM process testing and treatment for microbial contaminants and bacteria on site.
4. Adhere to all monthly ADEM requirements for water treatment control, monitoring and operations reporting.
5. Perform preventative and predictive equipment maintenance to maintain equipment readiness of 95% at water treatment plants.
6. Develop, maintain and record maintenance schedules for all equipment located at the water treatment plants on a daily, weekly and monthly timetable.
7. Process 10 – 15 million pounds of sludge (dry solids) annually through dewatering operations and deliver to BWWB landfills.





# FY 2020 APPROVED BUDGET DOCUMENT

## Security

### OVERVIEW

The Security Department is responsible for all matters related to the security of BWWB's critical facilities and personnel. We develop and enforce security policies to ensure a safe environment for employees and visitors, along with ensuring the safety and security of all water operations.

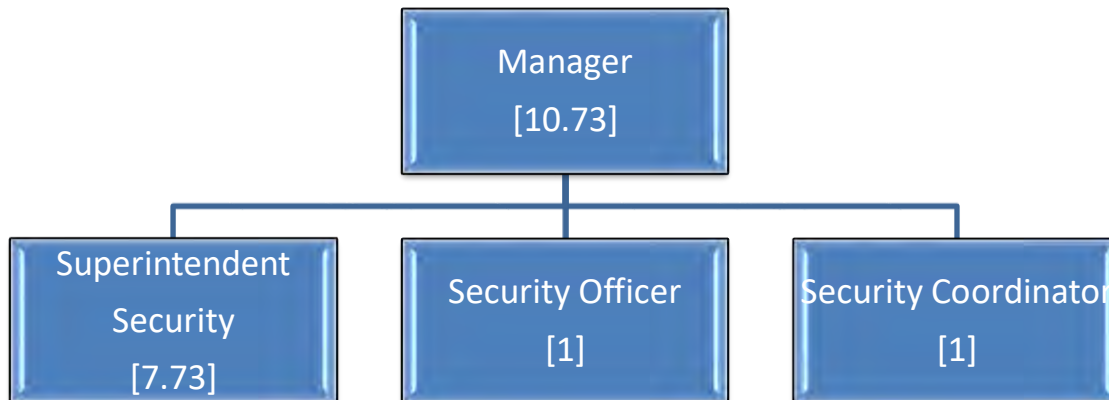
We currently have 10 full time employees and 1 part time employee. We have 5 console operator positions that monitor 24/7 from a central command center, an integrated security system that protects our 11 manned sites (four treatment plants, four intake pumping stations, two dams, and our main campus) and over 50 unmanned pump stations and tanks.

We have a staff that performs a number of functions including:

- Lead operational security-related activities to enhance the value of the Organization and brand.
- Writing articles in nationally recognized publications.
- Conduct nationwide presentations.
- Pushing the Organization's Security Department brand to a national and even international level.
- Managing the development and implementation of global security policy, standards, guidelines, and procedures to ensure ongoing maintenance our fully integrated physical security system.
- Updating our emergency response plan.
- Updating our vulnerability assessment.
- Developing relationships with DHS and local police
- Developing security outreach programs for all employees.
- Developing and conducting workplace violence prevention/ situational awareness training.
- Overseeing maintenance of all security equipment.
- Working with consultant engineers to design security improvements for additional sites.
- Keeping up-to-date with technology.
- Developing a loss prevention program.
- Developing and conducting ongoing training for security personnel.
- Developing and conducting security awareness training for all employees.
- Developing relationships with local EMAs.
- Conducting tabletop exercises with local and federal agencies.
- Conducting threat assessments for assets not deemed "critical" per the vulnerability assessment.
- Developing policies and procedures for each position in the department.



## FY 2020 APPROVED BUDGET DOCUMENT



### SECURITY MISSION

To strive for excellence by continuing its standing as one of the top security departments in the country by protecting BWWB's employees, customers, assets and reputation through leadership, exceptional staff, technology, and innovation while maintaining an environment that fosters teamwork and enables our department's employees to grow in their careers.

### SUMMARY OF ACTIVITIES

- The Department was recognized as one of the *"Top 500 Security Department's in North America"* by **Security Magazine** for the 7th year in a row.
- BWWB Security Department was profiled for its excellence in the Utility /Oil and Gas sector in the Security Top 500; the very first water utility to be profiled in the **Security 500** in the history of the rankings.
- BWWB Security Department was featured for its innovation and commitment to security in **Security Magazine's** article titled, "Essential to Life, Critical to Keep Secure".
- BWWB Security Department was a Subject Matter Expert Guest Columnist for **Security Systems News**; publishing the article "Liability Issues That Face Today's Security Management" and the article "Infrared Cameras Protect Major Water Utility".
- BWWB Security Department was requested to be a key stakeholder and writer of the new ANSI Standard, Active Shooter Prevention and Response, which will be widely regarded as the standard to which any organization should be held.
- The Department was selected to serve as a "co-author" in developing and writing new ANSI Standards for Risk Assessments for Critical Infrastructure.
- The Security Department has been requested by numerous utilities across the country to assist them with developing their Vulnerability Assessment (VA); as required by the new law that was passed a few months ago. All water utilities are required to update their VA using the new RAM-



## FY 2020 APPROVED BUDGET DOCUMENT

CAP Methodology. The BWWB Security Department was an integral part of the development of this new methodology. All Utilities serving over 100,000 customers are required to complete their VA by April 2020.

- The Department is continuing to work with the Department of Homeland Security to develop a minimum, average and maximum standard of security measures for water utilities. The Department volunteered to participate in this watershed program and will help developing future regulations in regard to water utilities.
- The Department co-authored, along with Security Directors from Canada, England, Central America, New Zealand and Israel, a white paper on Risk Metrics that was scheduled to be published fourth Quarter of 2019. This white paper will be used by security departments around the globe to enhance their ROI.
- Lead operational security related activities to enhance the value of the company and brand, by writing articles in national recognized publications, conducting nationwide presentations, and generally pushing the organization's Security Department's brand to a national and even international level.
- Manage the development and implementation of global security policy, standards, guidelines and procedures to ensure ongoing maintenance of security. Physical protection responsibilities will include asset protection, workplace violence prevention, access control systems, video surveillance, and more.
- Conduct organization-wide (and nationwide) workplace violence prevention training, situational awareness and security awareness training.
- Work with other executives to prioritize security initiatives and spending based on appropriate risk management and/or financial methodology.
- Oversee the development, implementation, and maintenance of the company's policies, standards, guidelines, processes, procedures and plans that will serve to govern and manage physical security for BWWB. These may include: Security Risk/Vulnerability Assessments, Perimeter Security, Lighting and Security Signage, CCTV and Video Management System/Analytics, Access Control Systems, Visitor Management Systems, Intrusion Detection Alarms and Guard Force Operations.
- Establish security policy to remain compliant with critical infrastructure standards, banking security standards and other relevant security standards.



## FY 2020 APPROVED BUDGET DOCUMENT

### SECURITY DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 722,052.21	\$ 739,658.99	\$ 17,606.78	2.38%
Cafeteria Expense	3,020.00	3,000.00	(20.00)	-0.67%
Mileage Reimbursement	3,210.00	1,600.00	(1,610.00)	-100.63%
Service Line	50.00	50.00	0.00	0.00%
Transportation Expense	2,000.00	1,500.00	(500.00)	-33.33%
Inventory Expense	160.00	160.00	0.00	0.00%
Uniforms	1,500.00	750.00	(750.00)	-100.00%
General Inventory Consumption	1,000.00	1,000.00	0.00	0.00%
Security Guards Expense	1,251,679.65	1,262,507.86	10,828.21	0.86%
Uniforms - Non-Stock	3,000.00	3,000.00	0.00	0.00%
Utilities-Telephone	1,000.00	750.00	(250.00)	-33.33%
Supplies & Expenses	27,500.00	27,500.00	0.00	0.00%
Fuel	5,184.00	4,176.00	(1,008.00)	-24.14%
Software Maintenance Support	6,000.00	9,000.00	3,000.00	33.33%
Equipment Maintenance/Support	40,000.00	40,000.00	0.00	0.00%
NonCapital Equipment Replacement	135,000.00	135,000.00	0.00	0.00%
Miscellaneous Property	61.00	60.00	(1.00)	-1.67%
Misc Gen Exp Membership Dues	8,000.00	10,000.00	2,000.00	20.00%
Travel Misc Other	4,407.42	8,800.00	4,392.58	49.92%
<b>TOTAL O&amp;M</b>	<b>\$2,214,824.28</b>	<b>\$2,248,512.85</b>	<b>\$ 33,688.57</b>	<b>1.50%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$33,689 or 1.50% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Travel is projected to increase based on current year spending trends resulting from training needs.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
SECURITY MANAGER	1.00	1.00	1.00	1.00	1.00
SECURITY SUPERINTENDENT	1.00	1.00	1.00	1.00	1.00
SECURITY COORDINATOR	1.00	1.00	1.00	1.00	1.00
SR SECURITY CONSOLE OPERATOR	1.00	1.00	1.00	1.00	1.00
SECURITY CONSOLE OPERATOR	4.00	4.00	4.00	4.00	4.00
SECURITY OFFICER	1.00	1.00	1.00	1.00	1.00
PT SECURITY OFFICER	0.80	0.80	0.80	0.73	0.73
SECURITY MAINTENANCE TECHNICIAN	1.00	1.00	1.00	1.00	1.00
	<b>10.80</b>	<b>10.80</b>	<b>10.80</b>	<b>10.73</b>	<b>10.73</b>

### KEY PERFORMANCE MEASURES

1. Maintain NIMS (National Incident Management System) compliance through the annual Tabletop training exercise and demonstrate lessons learned to enhance the BWWB's emergency readiness.
2. Perform and record quarterly security and facility testing to certify the Physical Integrated Security System is performing at no less than 98% accuracy.
3. Monitor and notify Security management team of 100% of security emergencies, threats and issues within 10 minutes.
4. Conduct and record annual security audits and risk assessments for all BWWB facilities and assets.
5. Perform and record monthly testing of all panic and hold up alarms to maintain equipment readiness.

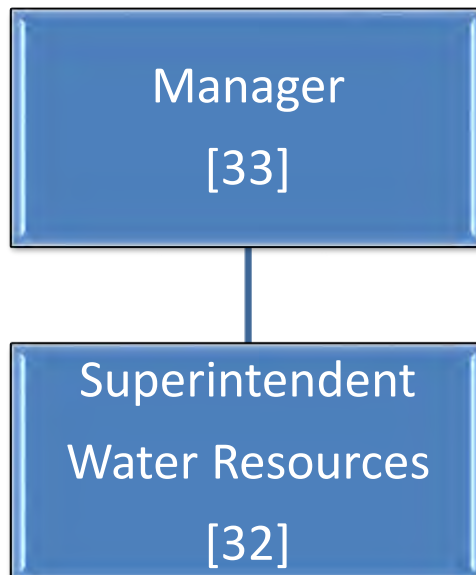


## FY 2020 APPROVED BUDGET DOCUMENT

### Water Resources

#### OVERVIEW

Ensure reliable and efficient operations at four intake stations, four industrial water pumping stations and six groundwater well sites, by supervising and reviewing operations of plants, tank sites, 115kv Substations, reservoirs, dams and other related sites. Maintain Raw Waters SCADA System and associated controls. Perform preventative maintenance at manned and unmanned stations. Lower power cost and chemical consumption through effective operations of facilities. Provide accurate data to SCADA, Purification, Engineering, and other departments as needed.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To provide an adequate supply of raw water to BWBB residential, commercial/industrial customers both now and for future generations that is of the highest quality possible by efficiently operating and maintaining all facilities throughout five counties located within central Alabama. Develop and implement the best management practices for watershed protection policies.

### SUMMARY OF ACTIVITIES

- Direct and assist supervisors of intake stations, pump stations, reservoirs and Radio/Electrical technician(s) in the repair of malfunctioning equipment and in arranging maintenance schedules of motors, cone valves, pumps and other associated appurtenances.
- Record and monitor all pump stations and reservoir data (Multilins, vibration levels, river/lake levels, packing, cooling water, chemical feeds).
- Maintain reservoir levels (tanks & basins) within the desired ranges with the least amount of starts and stops on motors and pumps.
- Perform and record preventative and predictive equipment maintenance to maintain equipment readiness.
- Perform and document monthly structural and ground maintenance in accordance with the Clean, Paint, and Repair (CPR) program.
- Collect 150 water samples monthly from intakes and source water throughout the service area for required ADEM testing and treatment of microbial contaminants and bacteria.
- Pre-treat raw water as directed by Water Treatment (Purification) to maintain compliance with all regulatory requirements.
- Consult with SCADA, Security, Filter Plants and Emergency Response Units as it relates to emergency, security and raw water supply concerns, issues and incidents.





## FY 2020 APPROVED BUDGET DOCUMENT

### WATER RESOURCES DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$2,179,004.34	\$2,245,619.31	\$ 66,614.97	2.97%
Cafeteria Expense	7,072.11	7,002.71	(69.40)	-0.99%
Power	4,630,606.39	4,644,974.00	14,367.61	0.31%
Mileage Reimbursement	20,660.44	20,660.44	0.00	0.00%
Transportation Expense	16,000.00	15,200.00	(800.00)	-5.26%
Supplies Expense	30,900.00	30,900.00	0.00	0.00%
Material Electrical Maintenance	35,200.00	35,200.00	0.00	0.00%
Utilities - Electric	45,400.00	50,400.00	5,000.00	9.92%
Uniforms - Non-Stock	39,199.00	40,199.00	1,000.00	2.49%
Utilities-Telephone	12,370.00	13,020.00	650.00	4.99%
Pump Expense Electrical	10,600.00	10,600.00	0.00	0.00%
Material Electrical Structures	62,500.00	62,500.00	0.00	0.00%
Other Structural Material	16,999.00	16,999.00	0.00	0.00%
Intake Material	28,000.00	28,000.00	0.00	0.00%
Reservoir Material	31,499.00	31,499.00	0.00	0.00%
Fuel	23,987.50	26,337.50	2,350.00	8.92%
Miscellaneous Property	23,609.35	23,609.35	0.00	0.00%
Structural Expenses	90,000.00	90,000.00	0.00	0.00%
Supplies Expenses	90,500.00	96,000.00	5,500.00	5.73%
Other O&M Expenses	44,876.08	46,143.70	1,267.62	2.75%
<b>TOTAL O&amp;M</b>	<b>\$7,438,983.21</b>	<b>\$7,534,864.01</b>	<b>\$ 95,880.80</b>	<b>1.27%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$95,881 or 1.27% from the 2019 Approved Budget. The major reason for the variance is:

- Merit and Cost of Living Allowance increases.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER WATER RESOURCES	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - WATER RESOURCES	1.00	1.00	1.00	1.00	1.00
SUPERVISOR / INLAND DAM & RESERVOIR	1.00	1.00	1.00	1.00	1.00
SUPERVISOR - CAHABA PUMP STATION	1.00	1.00	1.00	1.00	1.00
SUPERVISOR - PUMP STATION	3.00	3.00	3.00	3.00	3.00
SUPERVISOR - INLAND PUMP STATION	1.00	1.00	1.00	1.00	1.00
CARETAKER - LAKE PURDY	1.00	1.00	1.00	1.00	1.00
PUMP STATION OPERATOR	13.00	14.00	15.00	14.00	14.00
MUSEUM COORDINATOR	1.00	1.00	1.00	1.00	1.00
STATION OPEARTOR TRAINEE	4.00	3.00	2.00	3.00	3.00
WORKER - MAINTENANCE - PURIFICATION	6.00	6.00	6.00	6.00	6.00
	<b>33.00</b>	<b>33.00</b>	<b>33.00</b>	<b>33.00</b>	<b>33.00</b>

### KEY PERFORMANCE MEASURES

1. Record and monitor all pump stations and reservoir data (Multilins, vibration levels, river/lake levels, packing, cooling water, chemical feeds) with a 95% accuracy rate.
2. Maintain reservoir levels (tanks & basins) daily within the desired ranges with the least amount of starts and stops on motors and pumps.
3. Perform and record preventative and predictive equipment maintenance to maintain equipment readiness of no less than 90%.
4. Perform and document monthly structural and ground maintenance to certify 100% compliance with the Clean, Paint, and Repair (CPR) program.
5. Collect 150 water samples monthly from intakes and source water throughout our service area for required ADEM testing and treatment of microbial contaminants and bacteria.
6. Pre-treat raw water as directed by Water Treatment (Purification) for Shades Mountain Filter Plant to maintain 100% compliance with all regulatory requirements.
7. Consult with SCADA, Security, Filter Plants and Emergency Response Units as it relates to emergency, security and raw water supply concerns, issues and incidents.



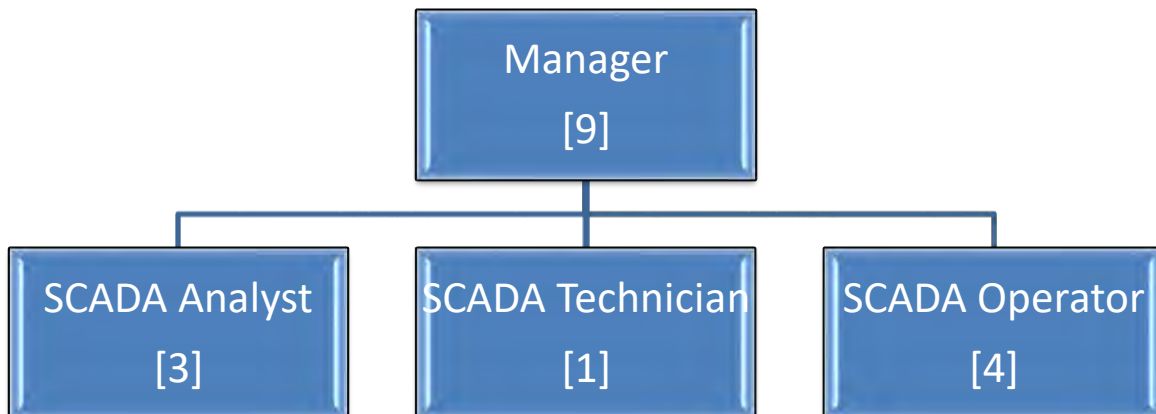
## FY 2020 APPROVED BUDGET DOCUMENT

### SCADA

#### OVERVIEW

**Supervisory Control And Data Acquisition (SCADA)** is the use of technology to monitor and control processes locally and remotely. SCADA systems usually have “analog” information (e.g. numbers indicating the water level in a tank) as well as digital or status information. They can send a status value (e.g. start a pump) as well as receive it (e.g. the pump has started). The computer can be used to summarize and display the data it is processing. Trends (graphs) of analog values over time are very common. Collecting the data and summarizing it into reports for operators and management are normal features of a SCADA system.

The BWWB’s SCADA system consists of Distributive Control System (DCS) equipment at all of the treatment plants and raw water pump stations and remote telemetry systems that connect the respective plant to tank sites, pump stations and pressure reducing stations that are miles away. The Central Operations Room and Emergency recovery (CORE) command center is connected to all of the major operational facilities of the BWWB. The CORE maintains programs and data that are necessary to support the entire SCADA system. During adverse weather conditions and operational challenges, the CORE becomes the heartbeat of the water system, and most critical operational decisions are made based on the data provided.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To maximize the functions of the SCADA System to assure that BWWB provides the highest quality water to its customers. To accomplish this with sincere effort, intelligent direction and skillful execution by providing superior controls, accurate data and great service.

### SUMMARY OF ACTIVITIES

- The SCADA Department's function is to program and configure the control system at all major BWWB water treatment plants and raw water pump stations. Our function allows these facilities to operate with automatic controls.
- Provide graphical user interface at each plant for operators' use.
- Acquire data on plant and distribution system operations.
- Provide data to management for analysis and decision making. This includes data for:
  - Optimum water delivery scenarios
  - Distribution studies
  - Rate studies
  - Operational data during drought prediction analysis
  - System operational data to predict necessary treatment plant construction upgrades
  - Growth projections for the overall water system
- Filter plant needs:
  - Daily reports
  - State (ADEM) reports
  - Chemical usage
  - System delivery
- Benefits from SCADA
  - Online access to distribution system operations for management
  - Improved historical view of system performance
  - Timely decision-making tool
- Customer Service
  - Perform the duties of the Emergency Switchboard Operator after normal work hours, weekends and holidays. Assist and coordinate BWWB personnel in after-hours emergencies to help limit the impact on customers.
  - Monitor and maintain operations for all communication equipment which include 690 Radios, Laptops, iPads and Air Cards.



## FY 2020 APPROVED BUDGET DOCUMENT

### SCADA DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 268,657.00	\$ 278,374.33	\$ 9,717.33	3.49%
Mileage Reimbursement	1,291.80	1,291.80	0.00	0.00%
Transportation Expense	1,500.00	1,500.00	0.00	0.00%
Uniforms	100.00	100.00	0.00	0.00%
General Inventory Consumption	150.00	150.00	0.00	0.00%
Facilities Other	7,000.00	7,000.00	0.00	0.00%
Other Office Materials	1,132.40	1,132.40	0.00	0.00%
Supplies Material	251.70	251.70	0.00	0.00%
Material Equipment	2,500.00	2,500.00	0.00	0.00%
Uniforms - Non-Stock	800.00	800.00	0.00	0.00%
Utilities-Telephone	600.00	600.00	0.00	0.00%
Fuel	2,000.00	2,000.00	0.00	0.00%
Communication Equipment	315,441.00	325,455.00	10,014.00	3.08%
Software Maintenance Support	15,000.00	32,179.00	17,179.00	53.39%
Equipment Maintenance/Support	150,000.00	172,864.00	22,864.00	13.23%
Miscellaneous Property	1,251.75	1,251.75	0.00	0.00%
Misc Gen Exp Membership Dues	1,291.80	1,291.80	0.00	0.00%
Travel Misc Other	8,740.03	8,612.00	(128.03)	-1.49%
<b>TOTAL O&amp;M</b>	<b>\$ 777,707.48</b>	<b>\$ 837,353.78</b>	<b>\$ 59,646.30</b>	<b>7.12%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$59,646 or 7.12% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Maintenance expenses are projected to increase based on current year spending trends.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - SCADA SYSTEM	1.00	1.00	1.00	1.00	1.00
SCADA SYSTEM ANALYST	2.00	2.00	2.00	2.00	2.00
SCADA SYSTEM ANALYST TRAINEE	1.00	1.00	1.00	1.00	1.00
SCADA SYSTEM OPERATOR II	1.00	1.00	0.00	1.00	1.00
SCADA SYSTEM OPERATOR	3.00	3.00	4.00	3.00	3.00
WIRELESS COMMUNICATION TECHNICIAN	2.00	2.00	2.00	1.00	1.00
	<b>10.00</b>	<b>10.00</b>	<b>10.00</b>	<b>9.00</b>	<b>9.00</b>

### KEY PERFORMANCE MEASURES

1. Conduct and record monthly maintenance of the SCADA system to confirm the system and servers will be operational 100% of the time.
2. Investigate and respond within 4 hours of notification and resolve problems within 24 hours.
3. Monitor SCADA operations of raw and finished water systems 24/7 to maintain 100% compliance with all BWVB, state and federal regulations.
4. Operate Raw Water Pump Stations to maintain a supply of water through operation of pumps and valves 100% of the time.
5. Perform preventative and predictive radio communication hardware equipment maintenance to sustain equipment readiness of no less than 98%.
6. Implement an annual strategy to reduce electricity usage cost.
7. Perform and verify the SCADA control system backup quarterly to confirm authenticity.



## FY 2020 APPROVED BUDGET DOCUMENT

### Electrical and Mechanical

#### OVERVIEW

Electrical & Mechanical Maintenance Department (E&M Shop) supports the maintenance of electrical and mechanical equipment throughout the entire BWWB system. The E&M Shop is on call twenty-four hours to repair and maintain the systems assets for the operation of machines, pumps and mechanical equipment, including fabrication.

The E&M Shop is responsible for the preventive and predictive program that increases the longevity of BWWB assets.

E&M Shop scope of responsibilities includes:

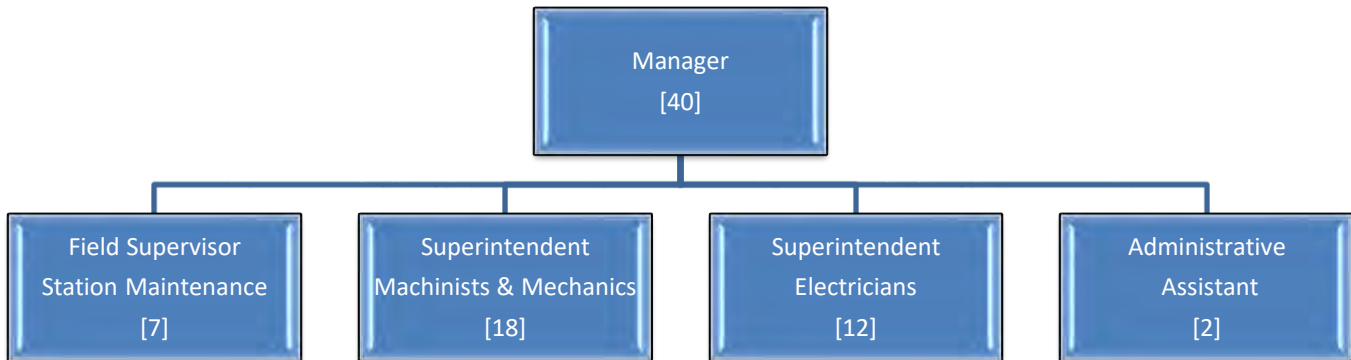
- 4 Filter Plants
- 51 Water Pumping Stations
- 8 Raw Water Facilities and 5 Lake Purdy Well Sites
- 51 Potable Water Tanks
- 22 Raw Water Tanks
- 40 Pressure Reducing Valve Stations
- 45 District Metering Area Sites
- 7 Raw Water Meters, 7 Consecutive system meters, 6 Cathodic Protection sites
- 15 Facilities/Buildings, 20 Lots and Right-of-Ways
- 31 Stationary Power Generators and 6 Trailer Mounted Portable Power Generators

Of these sites, 209 have Alabama Power meters and 178 are a SCADA site with Radio Telemetry.





## FY 2020 APPROVED BUDGET DOCUMENT



### MISSION

Our mission is to provide high quality electrical and mechanical support to maintain BWW's infrastructure at 100 percent with limited interruptions in service.

### SUMMARY OF ACTIVITIES

- Keep plants and all assets on a continuous improvement path for quality and efficiency
- Coordinate maintenance activities including facilities and production equipment
- Develop and implement a predictive and preventive program
- Maintain close coordination with production departments to resolve equipment breakdowns and other production related opportunities
- Tracking and controlling maintenance inventory
- Perform root cause analysis for any abnormal conditions and failures, take required corrective actions to prevent recurrences



## FY 2020 APPROVED BUDGET DOCUMENT

### ELECTRICAL & MECHANICAL DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 2,247,215.02	\$ 2,357,521.99	\$ 110,306.97	4.68%
Cafeteria Expense	3,295.96	3,295.96	0.00	0.00%
Power	1,634,184.00	1,658,696.70	24,512.70	1.48%
Transportation Expense	119,973.42	119,973.42	0.00	0.00%
General Inventory Consumption	9,919.63	10,172.56	252.93	2.49%
Material Structures/Tanks	20,000.00	15,000.00	(5,000.00)	-33.33%
Facilities Other	67,104.40	67,104.40	0.00	0.00%
SCADA Tanks & Standpipes	14,154.48	14,154.48	0.00	0.00%
SCADA Pump Station	8,256.72	8,256.72	0.00	0.00%
SCADA Plant Control	20,590.80	20,590.80	0.00	0.00%
Rent / Storage Facilities	48,531.86	60,000.00	11,468.14	19.11%
Material Electrical Pump Equip	309,890.86	312,132.64	2,241.78	0.72%
Uniforms - Non-Stock	49,132.96	49,632.96	500.00	1.01%
Utilities-Telephone	11,318.54	11,318.54	0.00	0.00%
Utilities - Gas/Water	16,799.50	16,799.50	0.00	0.00%
Material Electrical Structures	39,260.20	39,260.20	0.00	0.00%
SCADA Flow Metering Stations	16,360.40	16,360.40	0.00	0.00%
Fuel	169,263.78	165,780.88	(3,482.90)	-2.10%
NonCapital Equipment Replacement	59,544.26	59,544.26	0.00	0.00%
Miscellaneous Property	21,827.41	21,827.41	0.00	0.00%
Supplies	34,902.40	34,902.40	0.00	0.00%
Travel Misc Other	26,658.71	26,658.71	0.00	0.00%
Other O&M Expenses	68,760.42	68,760.42	0.00	0.00%
<b>TOTAL O&amp;M</b>	<b>\$ 5,016,945.73</b>	<b>\$ 5,157,745.35</b>	<b>\$ 140,799.62</b>	<b>2.73%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$140,800 or 2.73% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Power expenses are projected to increase based on Alabama Power projections.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - ELECTRICAL & MACHINE MAINTENANCE	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - ELECTRICAL	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - MECHANICAL	1.00	1.00	1.00	1.00	1.00
INDUSTRIAL CONTROL MASTER ELECTRICIAN	5.00	5.00	6.00	6.00	6.00
INDUSTRIAL CONTROL ELECTRICIAN - JOURNY	2.00	2.00	2.00	2.00	2.00
BUILDING MAINTENANCE ELECTRICIAN JOURNEYMAN	1.00	1.00	1.00	1.00	1.00
INSTRUMENTATION TECHNIAN	0.00	0.00	1.00	1.00	1.00
FIELD SUPERVISOR	1.00	1.00	1.00	1.00	1.00
MECHANIC - SENIOR	1.00	1.00	1.00	1.00	1.00
MAINTANANCE MECHANIC II	10.00	10.00	9.00	9.00	9.00
MAINTANANCE MECHANIC I	6.00	6.00	6.00	6.00	6.00
MACHINISTS	1.00	1.00	1.00	1.00	1.00
PROJECT COORDINATOR	1.00	1.00	1.00	1.00	1.00
STATION MAINTENANCE WORKER III	1.00	1.00	1.00	1.00	1.00
STATION MAINTENANCE WORKER II	2.00	2.00	2.00	2.00	2.00
STATION MAINTENANCE WORKER I	3.00	3.00	3.00	3.00	3.00
ADMINISTRATIVE ASSISTANT II	1.00	1.00	1.00	1.00	1.00
ADMINISTRATIVE ASSISTANT I	1.00	1.00	1.00	1.00	1.00
	<b>39.00</b>	<b>39.00</b>	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>

### KEY PERFORMANCE MEASURES

1. Perform preventive and predictive maintenance on essential equipment to maintain equipment readiness of no less than 80% at all remote pump stations.
2. Inspect, evaluate and repair 50 pressure reducing valves quarterly to confirm consistent operation.
3. Collect water samples monthly from all remote portable water tank sites throughout our service area in coordination with the EnviroLab.
4. Assess, coordinate and complete grounds maintenance monthly for all remote pump stations and tank sites.
5. Assign and distribute all SAP plant maintenance requests within 24 – 48 hours of receipt.
6. Resolve no less than 80% of work orders received annually.



## FY 2020 APPROVED BUDGET DOCUMENT

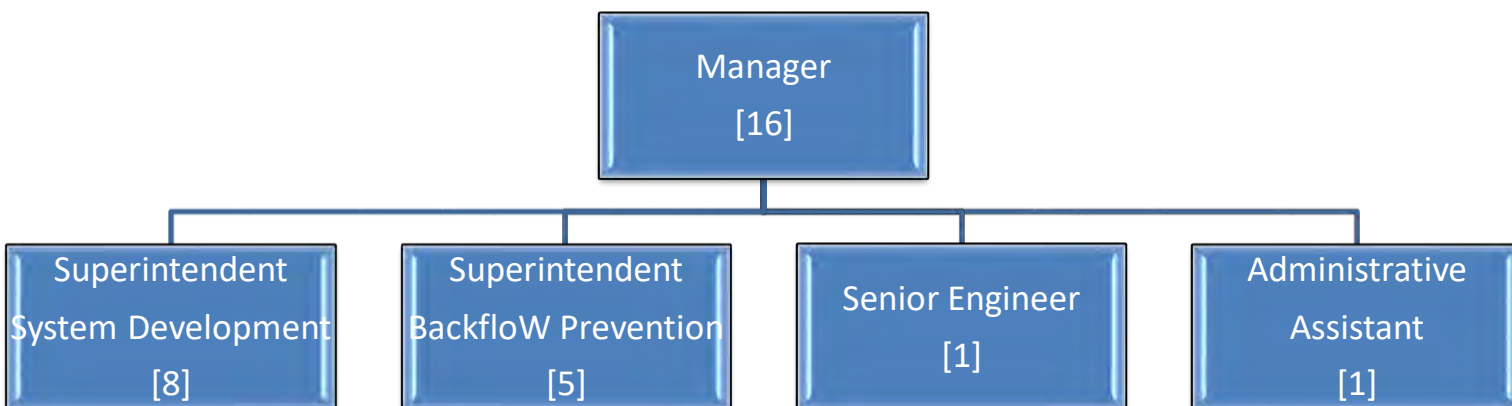
### System Development

#### OVERVIEW

System Development determines the Distribution System capacity in order to provide water service for individual customers and residential/commercial developments throughout the BWWB's service area.

The department prioritizes, designs and manages main replacement, relocation and reinforcement projects for the Buried Infrastructure Program funded by the BWWB's Capital Budget. The department prepares and implements contractual agreements relative to plans and specifications in conjunction with developers, governing bodies and the BWWB's capital improvements for the installation, replacement, reinforcement and relocation of water mains and related appurtenances in the Distribution System.

The department administers the BWWB's Backflow Prevention and Cross Connection Control Policy through field inspections, customer correspondence and compliance recordkeeping.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

Our mission is to administer the development of the Water Board's Distribution System so that superior water quality is delivered to customers at a minimal cost.

### SUMMARY OF ACTIVITIES

- Review and prepare water availability correspondence for individual customers and commercial/residential developments.
- Determine the Distribution System capacity to provide water to individual customers and residential/commercial developments.
- Review, approve and issue all new water service connections (domestic, fire & irrigation) to the BWWB's distribution mains.
- Prepare contractual agreements for the installation of water mains and related appurtenances, 4" & larger domestic and fire service connections and fire hydrants.
- Prioritize water main replacement projects in the Distribution System based upon criteria consisting of excessive maintenance, water quality and/or fire protection due to aging infrastructure.
- Design water main relocation projects in the Distribution System based upon conflicts with State and local governing bodies performing roadway improvements.
- Review and approve construction drawings and develop specifications for new main installations (residential and commercial developments).
- Develop construction drawings and specifications for water main replacement, reinforcement and relocation projects.
- Prepare bid packages, hold pre-bid conference, evaluate bids and recommend bid award to the lowest responsive and responsible bidder.
- Approve and coordinate the installation of all new fire hydrants in the Distribution System.
- Maintain records on all public fire hydrants in the Distribution System.
- Maintain records on all fire service connections in the Distribution System.
- Complete estimates of cost for installations and adjust contractual agreement upon completion of installations.
- Provide water main replacement and/or relocation projects to the BWWB's Distribution Construction Department.
- Coordinate all water main installations with other departments and obtain approval from governing bodies.
- Administer Backflow Prevention and Cross Connection Control Policy requirements within the Distribution System by performing field inspections on commercial and residential connections and maintaining compliance records and reports relative thereto.



## FY 2020 APPROVED BUDGET DOCUMENT

### SYSTEM DEVELOPMENT DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 636,602.23	\$ 655,829.60	\$ 19,227.37	2.93%
Mileage Reimbursement	258.36	172.24	(86.12)	-50.00%
Transportation Expense	9,450.00	8,100.00	(1,350.00)	-16.67%
Inventory Expense	485.00	485.00	0.00	0.00%
Uniforms	1,050.00	1,050.00	0.00	0.00%
General Inventory Consumption	600.00	600.00	0.00	0.00%
Supervision Materials Maintenance	250.00	250.00	0.00	0.00%
Facilities Other	2,800.00	1,950.00	(850.00)	-43.59%
Other Office Materials	622.82	396.34	(226.48)	-57.14%
Maps and Records Materials	207.87	207.87	0.00	0.00%
Supervision Materials Operations	75.51	75.51	0.00	0.00%
Uniforms - Non-Stock	1,600.00	1,600.00	0.00	0.00%
Utilities-Telephone	1,300.00	1,300.00	0.00	0.00%
Supplies & Expenses	14,172.47	13,352.12	(820.35)	-6.14%
Fuel	8,200.00	8,000.00	(200.00)	-2.50%
Miscellaneous Property Material	166.90	83.45	(83.45)	-100.00%
Misc Gen Exp Membership Dues	2,239.12	2,906.55	667.43	22.96%
Travel Misc Other	4,769.55	9,287.99	4,518.44	48.65%
<b>TOTAL O&amp;M</b>	<b>\$ 684,849.83</b>	<b>\$ 705,646.67</b>	<b>\$ 20,796.84</b>	<b>2.95%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$20,797 or 2.95% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Travel is projected to increase based on current year spending trends resulting from training needs.



## FY 2020 APPROVED BUDGET DOCUMENT

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - SYSTEM DEVELOPMENT	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - BLACKFLOW ENFORCEMENT	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - PROJECT COORDINATORS	1.00	1.00	1.00	1.00	1.00
ENGINEER II	0.00	1.00	1.00	0.00	0.00
SENIOR ENGINEER	0.00	0.00	0.00	1.00	1.00
SENIOR PROJECT COORDINATOR	4.00	2.00	1.00	1.00	1.00
PROJECT COORDINATOR	0.00	2.00	3.00	3.00	3.00
FIELD INVESTIGATOR	2.00	2.00	2.00	2.00	2.00
BACKFLOW INSPECTOR	4.00	3.00	2.00	2.00	2.00
BACKFLOW SPECIALIST	0.00	0.00	1.00	1.00	1.00
ADMINISTRATIVE ASSISTANT II	1.00	1.00	1.00	1.00	1.00
SYSTEM DEVELOPMENT SPECIALIST III	1.00	1.00	1.00	1.00	1.00
SYSTEM DEVELOPMENT SPECIALIST II	0.00	0.00	1.00	1.00	1.00
	<b>15.00</b>	<b>15.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>

### KEY PERFORMANCE MEASURES

1. Collaborate with Distribution to successfully complete no less than 64% of the yearly main, service line and valve replacements capital projects on budget and within the designated project timeline.
2. Prepare and distribute 100% of the Backflow Program Notification letters annually to BWWB customers to maintain certified backflow testing documentation for 100% compliance with state laws and regulations.
3. Disseminate information to formalize acceptance of the assessment/project/service/order and perform project closure within 60 business days of actual completion of the work.
4. Receive and respond to customer complaints within 3 business days with no more than 10% of complaints escalated to management.
5. Implement no less than 80% of System Development projects in accordance with the capital budget requested and authorized by Board of Directors.
6. Provide no less than 90% of the worksheets completed within 30 business days to Mapping & Records of any updates or changes to the distribution system.





## FY 2020 APPROVED BUDGET DOCUMENT

### Distribution

#### OVERVIEW

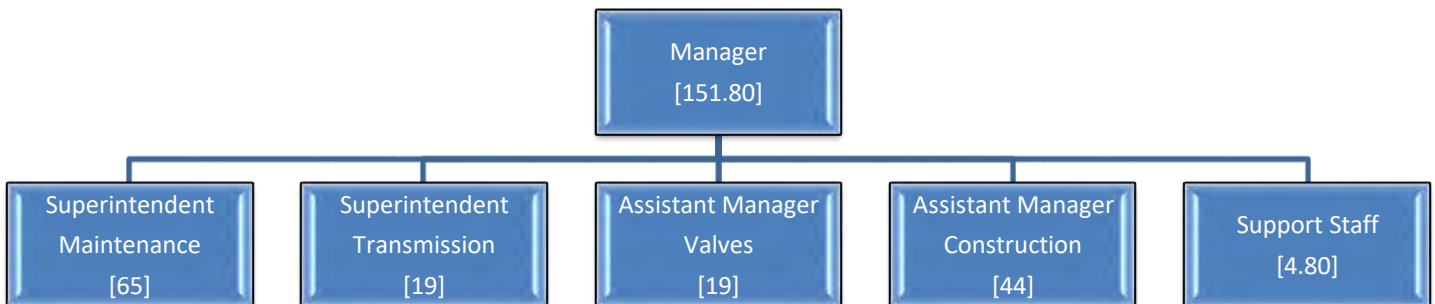
The Distribution Department is responsible for overseeing maintenance and construction of the BWWB infrastructure.

Distribution has the responsibility for scheduling the repair and replacement of pipelines, fire hydrants, valves, and other BWWB distribution assets. Distribution ensures that regulatory requirements and standards are consistent with operational improvements.

Distribution assists with and oversees construction for implementation of the Capital Improvement Plan (CIP).

The scope of responsibilities for the Distribution department includes maintaining:

- 4,000 Miles of Water and Transmission Mains
- 2,000 Miles of Service Lines
- 49,000 Valves
- 14,000 Fire Hydrants





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To ensure our customers receive the highest quality water possible by effectively and efficiently replacing, installing and repairing the system pipes, valves and hydrants while minimizing downtime.

### SUMMARY OF ACTIVITIES

- Installation of new water lines and the replacement of older infrastructure.
- Haul stone and asphalt from one jobsite to another.
- Make large taps 4" up to 36".
- Install Fire, Domestic, and Irrigation vaults with meter settings.
- Install reinforcement projects that include water mains, services lines, meter settings, fire hydrants and valves.
- Collect water samples for EnviroLab testing as a prerequisite for turning on the new water main.
- Complete drawings of the new installation of reinforcement jobs.
- Repair fire hydrants that can be repaired. Replace fire hydrants that cannot be repaired.
- Install loops in our water mains when there is a conflict with other utilities.
- Inspect the installation of new water mains, valves and fire hydrants on bid reinforcement projects and new development installation projects.
- Ongoing maintenance of transmission lines.
- Cutting ROA.
- Building and maintenance of roads and access points.
- Hauling spoils.
- Leak repairs on 60" mains.



# FY 2020 APPROVED BUDGET DOCUMENT

## DISTRIBUTION DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 7,045,272.37	\$ 7,225,891.38	\$ 180,619.01	2.50%
Cafeteria Expense	14,479.20	14,579.20	100.00	0.69%
Service Line	225,200.00	255,350.00	30,150.00	11.81%
Transportation Expense	1,134,560.00	1,213,400.00	78,840.00	6.50%
Uniforms	33,750.00	33,920.00	170.00	0.50%
Transmissions Mains	14,900.00	14,300.00	(600.00)	-4.20%
Meters	61,500.00	103,500.00	42,000.00	40.58%
Valves	33,500.00	29,100.00	(4,400.00)	-15.12%
General Inventory Consumption	1,016,100.00	910,700.00	(105,400.00)	-11.57%
Material Distribution Mains	290,000.00	285,000.00	(5,000.00)	-1.75%
Material Transmission Mains	114,300.00	133,600.00	19,300.00	14.45%
Transmission Right of Ways	11,000.00	11,000.00	0.00	0.00%
Contractor Charges Distribution Mains	926,187.22	1,097,900.00	171,712.78	15.64%
Contractor Charges Transmission Mains	50,645.00	47,800.00	(2,845.00)	-5.95%
Contractor Charges Services	1,099,110.73	1,220,200.00	121,089.27	9.92%
Paving Meter Installation	10,000.00	10,000.00	0.00	0.00%
Paving Distribution Mains	2,008,400.00	2,004,200.00	(4,200.00)	-0.21%
Paving Transmission Mains	28,635.00	29,150.00	515.00	1.77%
Paving Services	355,300.00	454,050.00	98,750.00	21.75%
Contractor Charges Meter Installation	16,000.00	18,000.00	2,000.00	11.11%
Facilities Other	260,100.00	233,600.00	(26,500.00)	-11.34%
Distributions Mains	67,900.00	66,100.00	(1,800.00)	-2.72%
Supplies	19,200.00	20,200.00	1,000.00	4.95%
Utilities - Electric	64,200.00	70,000.00	5,800.00	8.29%
Uniforms - Non-Stock	35,100.00	66,200.00	31,100.00	46.98%
Utilities - Gas/Water	49,450.00	46,700.00	(2,750.00)	-5.89%
Fuel	495,362.00	493,000.00	(2,362.00)	-0.48%
Miscellaneous Property Material	105,313.90	108,818.80	3,504.90	3.22%
Travel Misc Other	12,485.78	19,032.52	6,546.74	34.40%
Other O&M Expenses	74,764.68	65,458.34	(9,306.34)	-14.22%
<b>TOTAL O&amp;M</b>	<b>\$ 15,672,715.88</b>	<b>\$ 16,300,750.24</b>	<b>\$ 628,034.36</b>	<b>3.85%</b>



## FY 2020 APPROVED BUDGET DOCUMENT

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$628,034 or 3.85% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- Contracting and paving expenses are projected to increase based on current year spending trends resulting from discontinued use of on-call contractors
- Transportation expenses are projected to increase based on current year spending trends to maintain heavy equipment.



# FY 2020 APPROVED BUDGET DOCUMENT

## PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER - DISTRIBUTION	1.00	1.00	1.00	1.00	1.00
ASSISTANT MANAGER	0.00	0.00	1.00	1.00	1.00
SUPERINTENDENT OF CONSTRUCTION	1.00	1.00	0.00	0.00	0.00
SUPERINTENDENT OF MAINTENANCE	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT OF TRANSMISSION	1.00	1.00	1.00	1.00	1.00
ASSISTANT SUPERINTENDENT MAINTENANCE	1.00	1.00	1.00	1.00	1.00
ASSISTANT SUPERINTENDENT CONSTRUCTION	1.00	1.00	1.00	0.00	0.00
ASSISTANT SUPERINTENDENT RAW WATER	0.00	1.00	0.00	0.00	0.00
DISTRICT SUPERVISOR	12.00	13.00	13.00	14.00	14.00
FIELD SUPERVISOR	8.00	6.00	8.00	7.00	7.00
INSPECTOR - CONSTRUCTION	6.00	6.00	6.00	6.00	6.00
LEAK UTILITY WORKER I	23.00	23.00	23.00	22.00	22.00
LEAK UTILITY WORKER II	21.60	20.60	17.00	18.00	18.00
RAW WATER MECHANIC	1.00	1.00	1.00	1.00	1.00
RAW WATER TECHNICIAN	4.00	4.00	4.00	4.00	4.00
SENIOR UTILITY WORKER II	1.00	1.00	1.00	1.00	1.00
UTILITY WORKER I	18.00	18.00	22.00	21.00	21.00
UTILITY WORKER II	7.00	7.00	9.00	9.00	9.00
DUMP TRUCK UTILITY WORKER I	5.00	5.00	6.00	6.00	6.00
DISTRIBUTION MAINTENANCE WORKER II	11.00	12.00	11.00	10.00	10.00
DISTRIBUTION MAINTENANCE WORKER	18.00	15.00	16.00	17.00	17.00
DISTRIBUTION MAINTENANCE WORKER TRAINEE	0.00	4.00	6.00	5.00	5.00
ADMINISTRATIVE ASSISTANT III	1.00	1.00	1.00	1.00	1.00
DISTRIBUTION AIDE III	1.00	1.00	1.00	1.00	1.00
DISTRIBUTION SPECIALIST I	2.80	3.80	3.80	3.80	3.80
DISTRIBUTION SPECIALIST II	1.00	0.00	0.00	0.00	0.00
	<b>147.40</b>	<b>148.40</b>	<b>154.80</b>	<b>151.80</b>	<b>151.80</b>

## KEY PERFORMANCE MEASURES

1. Inspect 15% of the 15,000 fire hydrants annually through maintenance, repair and replacement.
2. Restore service to 100% of reported fire hydrants for maintenance within three days after notification.
3. Evaluate and exercise 100 valves monthly to confirm consistent operations.



## FY 2020 APPROVED BUDGET DOCUMENT

4. Repair no less than 95% of the reported water main breaks within 30 days.
5. Assign and dispatch personnel within 48 hours to no less than 90% of leak notifications and reported main breaks to evaluate and schedule repairs.
6. Resolve 100% of Level 1 (main break or no water) leak orders within five business days.
7. Resolve no less than 80% of Level 2 leak orders within 14 business days and 100% within 30 business days from the initial complaint/report.
8. Collaborate with System Development Project Coordinators to successfully complete no less than 64% of the yearly capital projects on budget and within designated project timeline.
9. Provide no less than 90% of the worksheets completed monthly to Mapping & Records for any updates or changes to the distribution system.
10. Maintain raw water transmission lines, pipelines, right of ways and underground facilities for leaks, irregularities or encroachments within 30 business days from initial complaint/report.
11. Confirm and verify completion of all Distribution construction materials utilized for capital projects within 90 business days.



## FY 2020 APPROVED BUDGET DOCUMENT

### Engineering

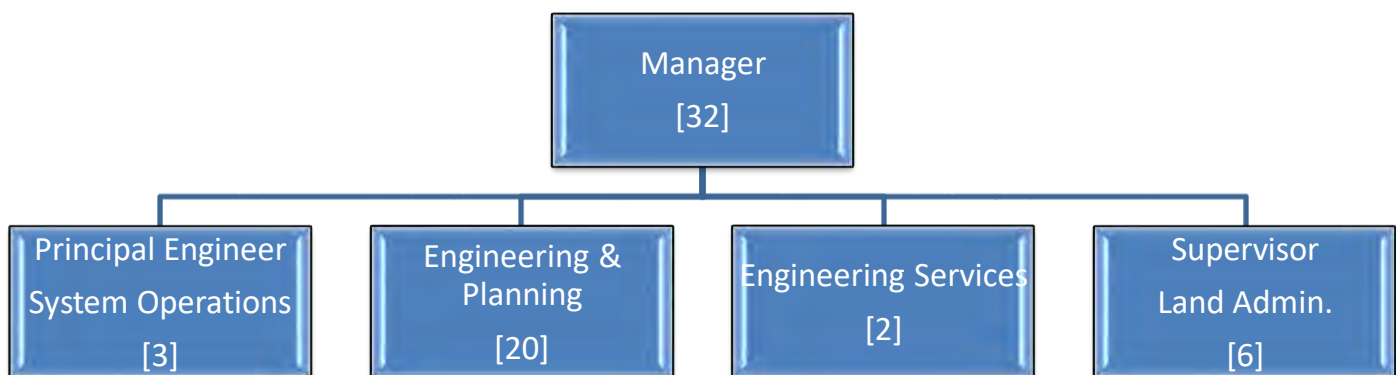
#### OVERVIEW

The Engineering Department designs and oversees new CIP infrastructure projects, manages and approves designs from external consultants and oversees the design and construction of our Capital Maintenance Repair and Replacement projects.

Engineering has the responsibility of addressing drinking water regulatory issues in our projects to attain reliable, high quality and great tasting water for our customers. Engineering water quality research activities include the operation of a Mobile Pilot Plant that navigates between Filter Plants. In addition, the Mobile Pilot Plant is a test process treatment alternative, which evaluates differing raw water sources and distribution systems at each plant.

Engineering has the responsibility of Land Administration and Land Surveying services in monitoring all activities on BWWB property, assists in developing, coordinating and surveying property maintenance projects, and acts as liaison to the Board in handling all property issues.

Engineering has the responsibility of Environmental Services and Watershed Protection through source water monitoring, watershed construction activities, plant residuals disposal and excavated spoil management.







## FY 2020 APPROVED BUDGET DOCUMENT

### **MISSION**

To provide professional engineering and management services in the planning, design, construction and maintenance of the BWWB infrastructure, water quality initiatives, environmental services and land administration necessary to provide safe, reliable, high quality and great tasting water to our customers.

### **SUMMARY OF ACTIVITIES**

- Design, bid, and manage construction for maintenance, repair and replacement projects for BWWB capital assets
- Manage CIP
- Manage engineering consultants and contractors
- Investigate and resolve engineering pressure complaints
- Provide water quality treatment research and planning
- Oversee asset management and reliability planning
- Manage the BWWB Watershed Protection Policy
- Provide land administration surveying and management services of BWWB property
- Management of environmental services necessary for residuals and spoil handling



## FY 2020 APPROVED BUDGET DOCUMENT

### ENGINEERING DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 957,103.40	\$ 1,023,131.08	\$ 66,027.68	6.45%
Transportation Expense	38,000.00	37,400.00	(600.00)	-1.60%
Facilities Other	18,250.00	14,450.00	(3,800.00)	-26.30%
Supplies	5,000.00	50,000.00	45,000.00	90.00%
Material Equipment	25,000.00	60,000.00	35,000.00	58.33%
Landfill - Midfield	30,000.00	35,000.00	5,000.00	14.29%
Landfill - Sicard Hollow Road	45,000.00	52,500.00	7,500.00	14.29%
Fuel	28,950.00	27,850.00	(1,100.00)	-3.95%
Supplies Expense Source of Supply	102,000.00	76,250.00	(25,750.00)	-33.77%
Travel Misc Other	28,653.78	25,632.04	(3,021.74)	-11.79%
Consultants	50,000.00	46,800.00	(3,200.00)	-6.84%
Other O&M Expenses	46,292.48	39,694.60	(6,597.88)	-16.62%
<b>TOTAL O&amp;M</b>	<b>\$ 1,374,249.66</b>	<b>\$ 1,488,707.72</b>	<b>\$ 114,458.06</b>	<b>7.69%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$114,4589 or 7.69% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- A portion of labor previously allocated to capital has been allocated to O&M based on current year performance trends.

### KEY PERFORMANCE MEASURES

1. Collaborate with other departments to successfully complete no less than 64% of the yearly capital projects on budget and within the designated project timeline.
2. Finalize all the engineering planning and design for assigned projects within 60 – 90 business days, according to applicable industry specifications and standards.
3. Contract, certify and manage 100% of all Engineering Department projects by consulting engineers.
4. Evaluate and implement specific analysis to efficiently upgrade our equipment and/or facilities throughout the organization related to their areas of expertise (i.e. electrical, chemical, civil and mechanical).



## FY 2020 APPROVED BUDGET DOCUMENT

5. Conduct yearly water quality research and development throughout the utility system to ensure compliance with all national and state requirements.
6. Identify and analyze all water pressure issues and complaints reported within two business days.
7. Resolve no less than 80% of water pressure issues and complaints within 5 – 7 business days.
8. Survey and manage 100% of BWVB facilities, properties and contractual assets yearly to ensure 100% compliance with all local, state and federal requirements.
9. Provide no less than 90% of the worksheets completed within 30 business days to Mapping & Records of any updates or changes to the distribution system.

### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
CHIEF ENGINEER	1.00	1.00	1.00	1.00	1.00
ENGINEER - SENIOR RELIABILITY	1.00	1.00	0.00	0.00	0.00
ENGINEER - PRINCIPAL	4.00	4.00	5.00	5.00	5.00
ENGINEER - SENIOR	4.00	6.00	5.00	5.00	5.00
ENGINEER II	4.00	2.00	1.00	1.00	1.00
ENGINEER	2.00	2.00	4.00	4.00	4.00
ENGINEERING TECHNICIAN	1.00	1.00	1.00	1.00	1.00
LAND SURVEYOR	1.00	1.00	1.00	1.00	1.00
LAND SURVEYOR TECHNICIAN	2.00	2.00	2.00	2.00	2.00
MAINTENANCE PLANNER	2.00	2.00	2.00	2.00	2.00
NACE PAINT % COATING INSPECTOR	1.00	1.00	1.00	1.00	1.00
COORDINATOR - PROJECT - SENIOR	2.00	2.00	2.00	1.00	1.00
PROJECT COORDINATOR	1.00	2.00	2.00	2.00	2.00
PROPERTY MAINTENANCE WORKER I	1.00	1.00	1.00	1.00	1.00
PROPERTY MAINTENANCE WORKER II	1.00	1.00	1.00	1.00	1.00
SUPERVISOR - LAND ADMINISTRATION	1.00	1.00	1.00	1.00	1.00
WATERSHED PROTECTION SPECIALIST	1.00	1.00	1.00	1.00	1.00
ADMINISTRATIVE ASSISTANT I	1.00	1.00	1.00	1.00	1.00
ADMINISTRATIVE ASSISTANT II	1.00	1.00	1.00	1.00	1.00
	<b>32.00</b>	<b>33.00</b>	<b>33.00</b>	<b>32.00</b>	<b>32.00</b>



## FY 2020 APPROVED BUDGET DOCUMENT

### Mapping and Records

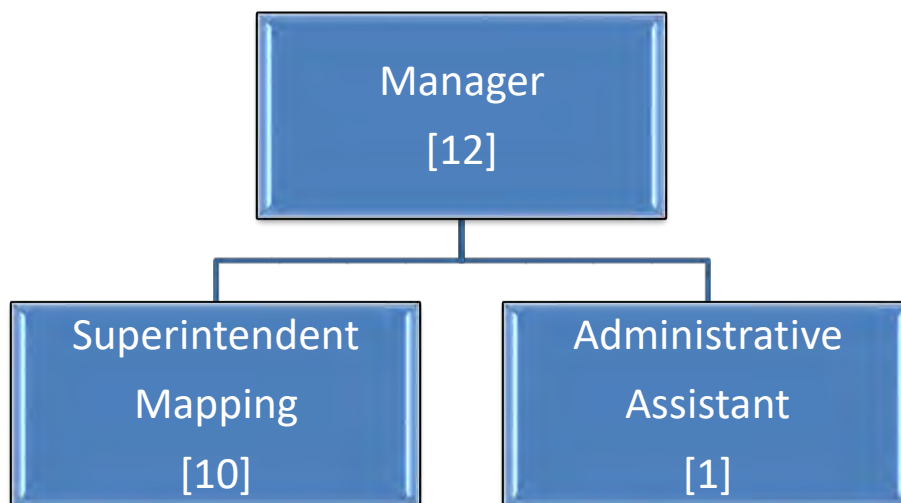
#### OVERVIEW

The Mapping and Records department works with many other departments such as System Development, Distribution, Information Technology, Customer Service, Engineering, Water Quality, and E&M Shop to maintain information on approximately 3,173 detail pages, 53,969 valves, 14,024 fire hydrants, 4 filter plants, 87 tanks (raw and potable), 76 booster pumping stations and approximately 4,084 miles of pipe.

The department is comprised of several divisions: Drafting, Geographic Information System Mapping (GIS), and Records Retention. Drafting's role is to maintain and update all BWBB's detail pages, valve maps, line maps, valve cards, worksheets, construction drawings, design drawings, graphic renderings, maintain "as-built" drawings and other special projects.

The GIS team is responsible for updating and maintaining the company's GIS database and producing various types of special project maps for the Board and other departments throughout the company. The team currently works with the SAP team and other departments with the SAP/GIS web interface for the purpose of tracking water leak notifications and work orders.

The Records Retention team assists each department with requests to purge files and send them to our location for record disposal and complying with the State of Alabama Department of Archives and History (ADAH) rules and regulations.





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### **MISSION**

To provide accurate visuals (maps and others) that depict the components of the BWWB system and meet internal and external customer needs.

### **SUMMARY OF ACTIVITIES**

- Maintain and update worksheets, construction drawings, electrical and contract drawings.
- Update and maintain GIS database
- Track water leak notifications and work orders
- Produce special project maps
- Assist departments with retention questions and provide recommendations for purging
- Fulfill printing needs for the company
- Update map corrections
- Maintain leak data
- Create and maintain permanent records storage



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### MAPPING & RECORDS DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment Item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 236,102.25	\$ 224,974.59	\$ (11,127.66)	-4.95%
Cafeteria Expense	516.72	516.72	0.00	0.00%
Mileage Reimbursement	258.36	258.36	0.00	0.00%
Uniforms	500.00	500.00	0.00	0.00%
Maps and Records Material	15,297.95	6,602.27	(8,695.68)	-131.71%
Uniforms - Non-Stock	1,000.00	1,000.00	0.00	0.00%
Utilities-Telephone	1,200.00	1,200.00	0.00	0.00%
Supplies & Expenses	33,291.72	27,743.10	(5,548.62)	-20.00%
Misc Gen Exp Membership Dues	1,722.40	1,722.40	0.00	0.00%
Travel Misc Other	749.15	1,722.40	973.25	56.51%
<b>TOTAL O&amp;M</b>	<b>\$ 290,638.55</b>	<b>\$ 266,239.84</b>	<b>\$ (24,398.71)</b>	<b>-9.16%</b>

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget decreased by \$24,399 or 9.16% from the 2019 Approved Budget. The major reasons for the variance are:

- Overtime decreased due to vacant positions in 2019 being filled.
- Maintenance expenses are projected to decrease due to the decision not to purchase a new high capacity copier.



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### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
MANAGER OF MAPPING RECORDS	1.00	1.00	1.00	1.00	1.00
MAPPING AND RECORDS - SUPERVISOR	1.00	1.00	0.00	0.00	0.00
MAPPING AND RECORDS - SUPERINTENDENT	0.00	0.00	1.00	1.00	1.00
DRAFTER - SENIOR	6.00	6.00	3.00	3.00	3.00
DRAFTER	0.00	0.00	3.00	3.00	3.00
GIS TECH II	1.00	1.00	1.00	1.00	1.00
GIS TECH I	2.00	2.00	2.00	2.00	2.00
ADMINISTRATIVE ASSISTANT II	1.00	1.00	1.00	1.00	1.00
	<b>12.00</b>	<b>12.00</b>	<b>12.00</b>	<b>12.00</b>	<b>12.00</b>

### KEY PERFORMANCE MEASURES

1. Process 85% of certified worksheets and other work requests from various BWWB departments to draft, design and modify maps for internal and external customer needs within 90 business days of receipt.
2. Collect, organize and maintain 100% of all permanent records received from BWWB departments in accordance with the State of Alabama Department of Archives and History rules and regulations.





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### Water Accountability (Revenue Water)

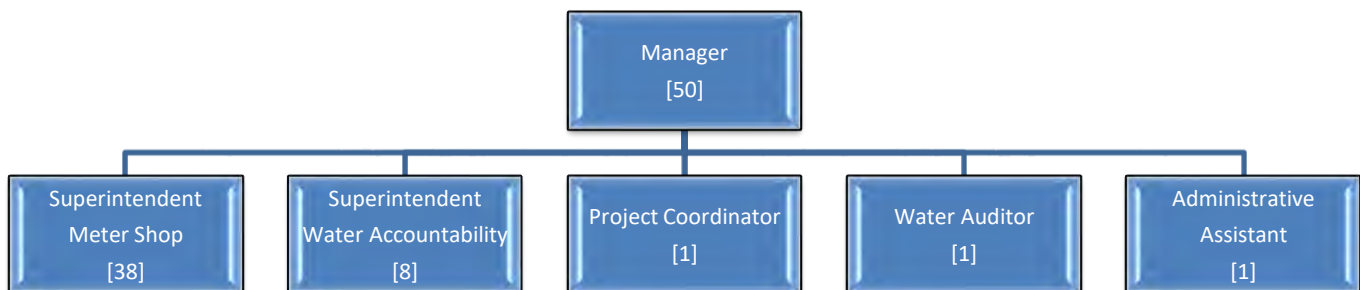
#### OVERVIEW

The Revenue Water Department is comprised of three divisions: Meter Shop, Leak Survey and Revenue Water Administration.

Meter Shop is responsible for making all new taps 2" and smaller, construction of all meter vaults 4" and larger, meter testing, meter set and box maintenance and the annual meter changeout program.

Leak Survey is responsible for surveying and leak detection for all 4,000 miles of water mains and 2,500 miles of service lines and assisting the Distribution Leak Department as needed.

Revenue Water Administration sets strategy and tactics to be used by Meter Shop and Leak Survey to help manage non-revenue water. Revenue Water Administration also produces the BWWB Annual Water Audit.





## FY 2020 APPROVED BUDGET DOCUMENT

### MISSION

To help provide the highest quality drinking water in the most effective and efficient way possible in a professional manner, while upholding the tradition of giving the best customer service to the residential and commercial customers of BWWB. To provide water service to our customers by responding in a timely manner to their needs, addressing potential problems in the system before they fail, and improving areas of operation that will benefit customers and help prepare BWWB for future growth.

### SUMMARY OF ACTIVITIES

- Maintenance, testing and repair of residential and commercial metering equipment and enclosures.
- Perform annual leak survey of BWWB distribution system that includes handheld leak detection equipment, leak noise correlators and leak noise logging systems.
- Define areas of concern, regarding Non-Revenue Water, for potential upgrades and replacement.
- Make all new service taps and connections.
- Maintain meter box/vault enclosures for protection of BWWB assets and customer safety.
- Bench and field test new and used customer meters for accuracy.
- Repair/replace meter loops, meters, meter valves and other meter related piping as needed.
- Assist Distribution Leak Repair Crews by locating leaks that are difficult to pinpoint.
- Provide monthly reports of leaks found, leak volumes and leak locations.
- Provide overall guidance and strategy for the monitoring and reporting of NRW (Non-Revenue Water).
- Perform all necessary testing and data gathering to provide the BWWB with an AWWA approved methodology for its annual water audit.
- Provide reports and data on NRW as needed or requested by executive staff.



## FY 2020 APPROVED BUDGET DOCUMENT

### REVENUE WATER DEPARTMENT'S O&M EXPENDITURES BUDGET SUMMARY

Commitment item	2019 NET BUDGET	2020 NET BUDGET	\$ Variance	% Variance
Labor	\$ 2,006,815.09	\$ 2,162,615.74	\$ 155,800.65	7.20%
Service Line	19,000.00	28,000.00	9,000.00	32.14%
Transportation Expense	107,274.73	85,200.00	(22,074.73)	-25.91%
General Inventory Consumption	112,100.00	126,900.00	14,800.00	11.66%
Facilities Other	220,000.00	177,000.00	(43,000.00)	-24.29%
Other Office Materials	12,529.60	11,689.88	(839.72)	-7.18%
Utilities - Electric	13,050.00	13,900.00	850.00	6.12%
Uniforms - Non-Stock	20,000.00	21,700.00	1,700.00	7.83%
Fuel	175,950.00	156,000.00	(19,950.00)	-12.79%
Miscellaneous Property Material	7,700.00	10,000.00	2,300.00	23.00%
Travel Misc Other	17,745.69	39,000.00	21,254.31	54.50%
Other O&M Expenses	48,183.44	33,918.14	(14,265.30)	-42.06%
TOTAL O&M	\$ 2,760,348.55	\$ 2,865,923.76	\$ 105,575.21	3.68%

### HIGHLIGHTS OF BUDGET CHANGES

The 2020 Approved Budget increased by \$105,575 or 3.68% from the 2019 Approved Budget. The major reasons for the variance are:

- Merit and Cost of Living Allowance increases.
- A portion of labor previously allocated to capital has been allocated to O&M based on current year performance trends.



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### PERSONNEL SUMMARY

Job Title	2016	2017	2018	2019	2020
REVENUE WATER MANAGER	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT - METER SHOP	1.00	1.00	1.00	1.00	1.00
SUPERINTENDENT, WATER ACCOUNTABILITY	1.00	1.00	1.00	1.00	1.00
SUPERVISOR - METER SHOP	1.00	1.00	1.00	1.00	1.00
WATER AUDITOR	1.00	1.00	1.00	1.00	1.00
COMMERCIAL METER MAINTENANCE TECH	2.00	2.00	2.00	2.00	2.00
METER REPAIR TECHNICIAN	2.00	2.00	2.00	2.00	2.00
METER SETTER - HELPER	12.00	12.00	12.00	12.00	12.00
METER SETTER I	6.00	6.00	6.73	5.00	5.00
METER SETTER II	10.00	10.00	10.00	10.00	10.00
PROJECT COORDINATOR	1.00	1.00	1.00	1.00	1.00
REPRESENTATIVE III - CUSTOMER ACCOUNT	2.00	2.00	3.00	3.00	3.00
REVENUE METER INSPECTOR	2.00	2.00	2.00	2.00	2.00
WATER ACCOUNTABILITY TECHNICIAN I	1.00	1.00	1.00	1.00	1.00
WATER ACCOUNTABILITY TECHNICIAN II	6.00	6.00	6.00	6.00	6.00
ADMINISTRATIVE ASSISTANT III	1.00	1.00	1.00	1.00	1.00
	<b>50.00</b>	<b>50.00</b>	<b>51.73</b>	<b>50.00</b>	<b>50.00</b>

### KEY PERFORMANCE MEASURES

1. Collaborate with other departments to successfully complete no less than 64% of the yearly capital projects on budget and within the designated project timelines.
2. Evaluate and resolve all service orders within three business days of receipt.
3. Retain the new meter accuracy number within 10% yearly as established by the AWWA standards.
4. Finalize all leak surveys for the distribution system biennial.
5. Conduct and distribute a water audit on all water usage within BWWB's service area yearly by September 30.
6. Provide 90% of the worksheets completed within 30 business days to Mapping & Records of any updates or changes to the distribution system.



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### SECTION

# 8 STATISTICAL INFORMATION

### Description of the System

The BWWB System now serves an area of approximately 700 square miles and approximately 600,000 residents in Jefferson, Blount, St. Clair, Walker and Shelby Counties.

### SOURCES OF SUPPLY

The System presently has four separate sources of raw water as described below:

(a) The Lake Purdy-Cahaba River System is a part of the Board's original purchase from The Birmingham Water Works Company. The Cahaba River watershed in Jefferson, St. Clair and Shelby Counties east of Birmingham, drained by the Cahaba and Little Cahaba Rivers, has a drainage area of approximately 196 square miles. This watershed includes an impoundment in Lake Purdy, formed by a dam across the Little Cahaba River. The storage capacity of Lake Purdy is 5.7 billion gallons. The safe yield from the Lake Purdy-Cahaba River System is approximately 52 million gallons per day. The Lake Purdy-Cahaba River System is the primary source of supply to the Board's Shades Mountain Filtration Plant.

(b) The Inland Lake System consists of an impounding reservoir, a booster pumping station, chemical treatment facilities, a balancing reservoir and a transmission pipeline. The impounding dam of earth and rock fill construction is 200 feet high and 1,060 feet long and creates a reservoir with a capacity of 21 billion gallons. The watershed above the dam is about 72 square miles in area. The dam is located approximately 27 miles northeast of the City on the Blackburn Fork of the Black Warrior River in Blount County. The pipeline consists of approximately 44 miles of steel and cast-iron supply lines ranging in size from 16 inches to 60 inches in diameter. The Inland Lake reservoir has a safe yield of about 49 million gallons per day. The booster pumping station has a capacity of 88 million gallons per day. Water from Inland Lake is delivered to the Board's H.Y. Carson Filtration Plant and is also available to the Board's Putnam Filtration Plant.

(c) The Sipsey System, which is operated under a permit from the U.S. Army Corps of Engineers, consists of an intake pumping station immediately below the Alabama Power Company's L. M. Smith dam on the Sipsey Fork of the Black Warrior River in Cullman County 35 miles northwest of the City, a booster pumping station, a transmission pipeline, and terminal control reservoirs. The



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pipeline consists of approximately 44 miles of 60 inch, 48 inch and 42 inch steel and cast iron supply lines. The Sipsey System has a firm yield of about 74 million gallons per day. At present, the intake pumping station is capable of delivering this maximum quantity of water to the system's booster pumping station. The booster pumping station has a capacity of 90 million gallons per day. Water can be pumped from this station to the Western, Putnam and H.Y. Carson Filtration Plants.

(d) The Mulberry System has as its source the Mulberry Fork of the Black Warrior River in Walker County, Alabama. The intake pumping station is operated under a permit from the U.S. Army Corps of Engineers. Water is withdrawn at a maximum rate not to exceed 85 million gallons per day for a two-hour duration, with a maximum of 65 million gallons per day during a twenty-four hour period. Work was completed in 1995 to increase the pump station capacity to the full permitted withdrawal rate. This work included the installation of pumps, motors and other general improvements. Water from this supply is delivered through approximately 20 miles of welded steel pipe 72 inches in diameter. Surge tanks are installed at various points along the pipeline and four 5- million-gallon control reservoirs are located at the terminus at the Board's Western Filtration Plant. The Mulberry System includes a booster pumping station with a 25 million gallon per day capacity located in the vicinity of the control reservoirs. Water can be pumped via this station to the Board's Western and Putnam Filtration Plants.

Water from the above sources is delivered through long transmission lines to the four filtration plants which are a part of the System. The diverse locations of the sources of supply aid in maintaining water service in the event of a partial failure at any plant.

### **ADDITIONAL SOURCES**

The Board believes it currently has sufficient supply and will be able to meet its needs through the year 2032.

In 2007, the Board prepared a Water Supply Needs Assessment which examined future needs for water supply through 2075. In 2009, the Board prepared a "Report on Plans for Improving Water Supply Reliability and Evaluation of Alternatives to Meet Future Water Demands" which examined alternatives for additional water supply and improving connectivity among its sources and filtration plants.

By adding additional supply from existing water resources in the Warrior River Basin at Holt Lake and making other improvements to its raw water delivery system, the Board can meet the expected demands of the Birmingham area through 2075. While obtaining additional water supply from existing water resources will require additional capital improvements to transport water from Holt Lake to the filtration plants, this cost is lower than developing a new source of supply.



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Between now and 2032, the Board will work toward acquiring necessary property, permitting a new intake at Holt Lake, and other project development activities. The Board believes, upon completion of the Holt Lake improvements, it will have sufficient supply to meet its needs through the year 2075.

### ANNUAL RAINFALL

The average annual rainfall since 1900, established by records of the United States Weather Bureau, has been approximately 55 inches. The lowest annual rainfall on record, recorded in 2007, was 28.86 inches. The absence of any great seasonal variations in rainfall in the Birmingham area usually provides a dependable surface supply of water.

### FILTRATION PLANTS

Four water filtration plants process and treat the raw water from the above sources of supply. The rated capacity and sources of supply of the filtration plants are as follows:

<u>Filtration Plant</u>	<u>Rated Capacity</u>	<u>Source of Supply</u>
Shades Mountain	80 MGD	Cahaba River – Lake Purdy
Putnam	24 MGD	Mulberry Fork, Smith Lake or Inland Lake
Western	60 MGD	Mulberry Fork or Smith Lake
H. Y. Carson	25 MGD	Inland Lake, Smith Lake or Mulberry Fork

The present maximum capacity of the four filtration plants is 189 MGD. The four filtration plants of the Board feed into an integrated distribution system increasing the overall reliability of supply. (See "DESCRIPTION OF THE SYSTEM - Sources of Supply".)

### PUMPING FACILITIES

Pumping facilities at each of the four filtration plants deliver water into the thirteen major and seven minor service areas of the distribution system. In addition to these pumping facilities, the System has sixteen major pumping stations, ranging in size from 1,000,000 gallons to 28,000,000 gallons per day. These pumps deliver water from lower service areas to higher service areas. In addition to the above, there are a number of small booster pumping stations delivering water to isolated areas at higher elevations. These stations range in pumping capacity from 20 to 400 gallons per minute.





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### **TANKS AND STANDPIPES**

Storage is provided in the distribution system by 51 elevated tanks or standpipes having a total capacity of 75.7 million gallons. The tanks, ranging in size from 100,000 gallons to 6,300,000 gallons capacity, improve the flow and pressure throughout the distribution system. All but two of the tanks have been built or acquired by the Board since it purchased the System in 1951. In addition to the above distribution storage, the Board has a total of 9,000,000 gallons of filtered water storage capacity in clear wells at its various filtration plants. The Board also has a raw water storage of 36,000,000 gallons at its Shades Mountain Filtration Plant.

### **TRANSMISSION AND DISTRIBUTION LINES**

The general topography of the Birmingham area, ranging in elevation from 300 to 1,200 feet above sea level, requires that the distribution system be separated into thirteen major and seven minor areas, and this requires long transmission and supply mains. These mains are interconnected with loops to form a completed arterial system which supplies a grid system of small secondary mains, particularly in congested areas. This distribution system is supplied with water pumped from the four filtration plants in such a way that maximum reliability of service is afforded to all areas.

In the past several years, the Board's distribution system has been extended into outlying rural areas, particularly in the north and northeast in Blount and Walker Counties, to the south in Shelby County, and to the east in St. Clair County. As a result, the service area has more than quadrupled in size since 1951.

### **ENVIRONMENTAL MATTERS**

The Board is subject to various governmental laws and regulations relating to water treatment, pollution control and other environmental matters. The Board cannot predict whether or not additional legislation or regulations may be adopted and what the impact, if any, of any such legislation or regulations might be. The Board has in service residual removal systems at its Shades Mountain, Western and Putnam Filtration Plants. Dewatered residuals from these plants are transported to either of two landfills, operated by the Board, with remaining useful lives ranging from 15 to 60 years.

The Board is not under any EPA consent decree but recently entered a consent agreement with ADEM regarding development of improved lead and copper service line inventory for the system and increased frequency of lead and copper sampling. ADEM contends that the Board had not previously maintained an adequate inventory of lead service lines and tier 1 sites for sampling purposes and that, in 2016, the Board did not test at least 50% of samples from lead service lines. This is a monitoring issue and not an indication of any water quality problems in the system. The results from lead and copper samples taken in 2016 and a similar resampling event conducted in 2019 indicate no samples were found above the EPA action levels.



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### WATER RATES

Water rates are fixed by resolution of the Board in compliance with the rate covenants in the Senior Indenture and the Subordinate Indenture. From the time the Board acquired the System in 1951 until the System was acquired by the City in 1998, the Board imposed rate increases from time to time. The annual rate increases since 2003 are as follows:

<u>Year</u>	<u>Percent Increase</u>
2004	8.8%
2005	7.3%
(January )	
2005	6.5%
(June)	
2006	8.75%
2007	7.75%
2008	7.7%
2009	13.2%
2010	6.9%
2011	6.9%
2012	3.9%
2013	4.9%
2014	3.9%
2015	3.9%
2016	4.9%
2017	3.9%
2018	2.9%
2019	3.9%

The Board adopted the use of a Rate Stabilization and Equalization Model ("RSE") to determine necessary rate adjustments beginning in 2006. The RSE will calculate and automatically adjust the rates which, when implemented, will provide the appropriate levels of debt service coverage for the Board's obligations.



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Current water rates are as follows

(Effective January 1, 2019): Typical Rates for

Each 100 Cubic Feet of Water Delivered\*

### Residential and Irrigation Rates

### Rate

For the first 300 cubic feet per month

\$2.52

For 400 to 1,500 cubic feet per month

\$2.98

Over 1,500 cubic feet per month

\$4.46

### All Other Water Users Rates

Per cubic feet per month

\$ 3.91

Monthly base charge – per month for 5/8" meter

(in addition to the above)

\$26.94

Varied monthly base charges for other meter sizes

\$35.72 – 2,091.36

Fire Service Rental Rates (per year) (based on size)

\$309.12 – 7,741.92

Fire Hydrants (per year)

\$217.80

\* These rates apply for approximately 90% of all revenues generated from water supply service.



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### Comparison of Water Rates with Other Systems

A comparison of the Board's residential water charges based on average customer usage of 10 ccf (7,480 gallons) of water per month, 5/8-inch meter, with that of other regional surface water systems as of September 25, 2019 follows:

City	Charge
New Orleans, Louisiana	\$63.90
Chapel Hill, North Carolina	\$62.71
Montgomery, Alabama	\$60.49
<b>Birmingham, Alabama</b>	<b>\$55.36</b>
Charlottesville, Virginia*	\$55.24
Atlanta, Georgia	\$54.96
Norfolk, Virginia	\$52.90
Asheville, North Carolina	\$52.70
San Antonio, Texas	\$49.85
Knoxville, Tennessee	\$41.20
Chattanooga, Tennessee	\$40.41
Louisville, Kentucky	\$35.13
Jackson, Mississippi	\$32.10
Nashville, Tennessee	\$31.30
Mobile, Alabama	\$26.83
<b>Average (w/o Birmingham)</b>	<b>\$47.12</b>
<b>Median (w/o Birmingham)</b>	<b>\$51.28</b>

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\* Based on  
Winter Rate.



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### Results of Operations

#### OPERATIONS STATISTICS

The following table sets forth certain operational statistics for the System:

Operation	Year ended December 31				
	2015	2016	2017	2018	2019
Number of customers	194,932	190,758	192,636	192,429	193,530
Miles of Mains in Service	3,997	4,012	4,025	4,052	4,060
Number of Fire Hydrants	13,679	13,681	13,688	12,805	13,894
Capacity of storage (in thousand gallons)	75,172	75,172	75,172	75,172	75,172
Water delivered to the distribution system (in billion gallons)	37.8	38.9	37.1	38.8	40.5
Single day, peak day demand (in million gallons)	122.3	131.2	115.6	125.3	138.5



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### Major Industrial/Governmental Customers

The following table contains the ten largest customers of the System during the periods indicated and the gross revenues derived from each of such customers. Total operating revenues for the year ending December 31, 2019 were \$184,880,257.

Customer	Revenue	% Total of Operating Revenue
UAB	\$ 4,546,332.79	2.46%
US STEEL	2,155,034.64	1.17%
ERP COMPLIANT COKE	1,413,340.22	0.76%
BIRMINGHAM HOUSING AUTHORITY	1,322,757.03	0.72%
GRAYSVILLE WATER CO	1,145,392.60	0.62%
BUFFALO ROCK CO	839,532.54	0.45%
ACIPCO	741,841.86	0.40%
TOWN OF MULGA	685,657.02	0.37%
SAMFORD UNIVERSITY	657,887.92	0.36%
TOWN OF WEST JEFFERSON	655,144.61	0.35%
TOTAL	\$ 14,162,921.23	7.66%