



**BIRMINGHAM WATER WORL** 



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THE WATER WORKS BOARD OF THE CITY OF BIRMINGHAM IS COMMITTED TO PROVIDING RELIABLE, EQUITABLE, COST-EFFECTIVE DELIVERY OF HIGH-QUALITY WATER AND SERVICES, WHILE PROTECTING PUBLIC HEALTH AND ENVIRONMENTAL RESOURCES FOR CURRENT AND FUTURE GENERATIONS.





#### GOVERNMENT FINANCE OFFICERS ASSOCIATION

## Distinguished Budget Presentation Award

PRESENTED TO

## Birmingham Water Works Board Alabama

For the Fiscal Year Beginning

January 01, 2021

**Executive Director** 

Christopher P. Morrill

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to Birmingham Water Works Board, Alabama, for its Annual Budget for the fiscal year beginning January 1, 2021.

In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as a financial plan, as an operations guide, and as a communications device.

This award is valid for a period of one year only. We believe that our current budget document continues to conform to program requirements, and we are submitting it to the GFOA to determine its eligibility for another award.





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**SECTION 1: INTRODUCTION** 

## INTRODUCTION

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

#### **MISSION**

To be nationally recognized for local excellence in water quality and service delivery.

#### **VISION**

BWW is committed to providing reliable, equitable, cost-effective delivery of high-quality water and services, while protecting public health and environmental resources for current and future generations.

The BWW 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 BWW 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 BWW. The Approved Fiscal Year (FY) 2022 Operation & Maintenance and Capital Budgets have been prepared using the EUM framework.





GOOD SOURCE WATER IS THE RESULT OF THE BIRMINGHAM WATER WORKS' AGGRESSIVE ENVIRONMENTAL PROTECTION POLICY.



# 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 FY2022 Budgets:

- Continue to prepare budgets in accordance with GFOA Certificate Program
- Implement Cost of Service Study Recommendation
- Increase rates to fund O&M and Capital Budgets, and meet budget requirements
- Continue to focus on increasing Pay As You Go (PAYGO) as a percentage of the Capital Budget
- Impact of COVID-19 on consumption trends & expenses
- Includes resources to implement BWW's Strategic Plan
- Includes employees receiving a 5.4% cost of living adjustment
- Includes employees receiving a merit increase
- Includes longevity pay
- Implement strategies to consistently produce and deliver high-quality water that exceeds regulatory standards and customer expectations
- Need to enhance customer centered quality service
- Initiate an Automatic Meter Reading/Advanced Metering Infrastructure (AMR/AMI) study
- Continue to develop performance measures and dashboard reporting
- Expand customer service hours to 24/7
- Review and improve processes, workflows, quality of work, and customer service levels to meet the
  operational and strategic goals of the organization
- Ensure proper alignment of functions and activities within the company to ensure maximum efficiency and effectiveness
- Maintain market competitiveness to enhance employee retention and recruiting
- Increase employee engagement and morale through a formal employee recognition program
- Establish a framework to build a recruitment pipeline by introducing the water industry to students through educational and interactive programs
- Need to source and recruit talent in a very competitive labor market
- Increase usage of Historically Underutilized Business (HUB) Program
- Continue to maintain and replace aging infrastructure
- Need to strengthen accounting procedures, processes, and policies
- Utilize governmental affairs to augment pursuit of non-utility funding sources
- Attend conferences, workshops, and training seminars to maintain awareness of industry changes
- Add Diesel Mechanic and Facilities Technician
- Add Senior HRIS Analyst, Talent Management Administrator



- Add Comptroller
- Add Assistant SCADA Manager, Regulatory Compliance Specialist, Chemist, Lab Technician,
- Add Industrial Control Master Electrician, Industrial Control Journeyman, Maintenance Mechanics (2)
- Add Distribution Maintenance Workers (3), Utility Workers (8), and Team Lead
- Add Project Coordinators (2) and Backflow Inspector
- Add Project Coordinator, Senior Land Surveyor, and Watershed Quality Control Inspector
- Replace property and casualty insurance carriers based on current carriers exiting the utility market
- Increase health insurance budget based on an increase in employee health insurance claims, enhance plan design, and adding an HSA Plan
- Increase chemical budget based on increase in vendors' prices
- Increase in outsourced security budget based on increase in new security vendor's contract cost

## COMPLIANCE WITH FINANCIAL POLICIES

The BWW is rated Aa2 by Moody's Investors Service and rated AA 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 BWW's current policies and related trends.

#### **RESERVE FUND**

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	4.4% of O&M + Debt
Reserves of approximately 240 days of operating expenses on hand	393 days – projected days operating expenses on hand on December 31, 2022  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 Current: S&P AA / Moody's Aa2



#### **SECTION 1: INTRODUCTION**

### FINANCIAL GOALS AND POLICIES

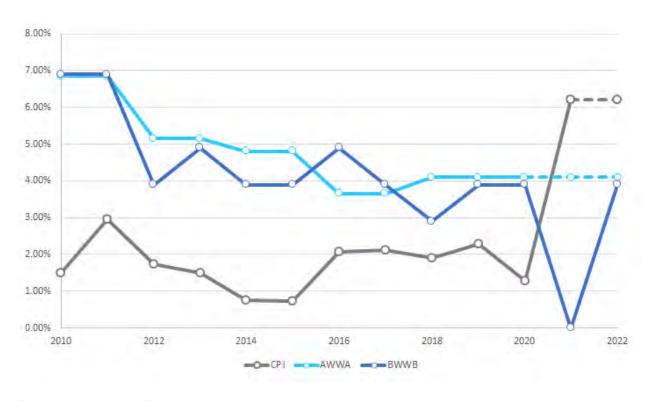
Policy	Trend
Rate increases below industry average (4.61%, 1998 - 2020)	3.9% - 2015, 2017, 2019, 2020
	2.9% - 2018, 4.9% - 2016
	0.0% - 2021
	3.9% - 2022
	0.99% annual growth rate, 2015-2020
O&M increases	3.31% for 2021
	7.14% increase in 2022
	34.7% in 2021
Goal of 70% of Capital Budget funded from	45.1% proposed in 2022
PAYGO by 2028-2029	Projected to reach 73.2% in 2028
	Prior projection: reach 70% in 2028

### **RSE TARGETS**

Senior Debt Service Coverage	Current	
-Target	1.75	
-Max	2.00	
-Min	1.50	
Senior Debt Service Coverage	Current	
-Target	1.20	
-Max	1.30	
11167	1.50	

## 

#### RATE TRENDS: 2010 – 2022



**CPI:** Consumer Price Index

AWWA: American Water Works Association BWW: Birmingham Water Works Board



**SECTION 1: INTRODUCTION** 

## STRATEGIC GOALS

The BWW adheres to a set of strategic goals that focus on the framework of the Effective Utility Management (EUM) program. These goals are grouped into 5 strategic target categories along with 10 attributes of an EUM as can be seen in the diagram below.

The EUM focuses on 10 attributes that includes 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.





#### O&M BUDGET HIGHLIGHTS GROUPED BY EUM ATTRIBUTE

#### **O&M BUDGET HIGHLIGHTS**

#### **EUM ATTRIBUTE**

CONTINUE TO PREPARE BUDGETS IN ACCORDANCE WITH GFOA CERTIFICATE PROGRAM  Pinancial Viability Stakeholder Understanding & Support  Financial Viability  CONTINUE TO FOCUS ON INCREASING PAY AS YOU GO (PAYGO) AS A PERCENTAGE OF THE CAPITAL BUDGET  IMPACT OF COVID-19 CONSUMPTION TRENDS & EXPENSES  Financial Viability  Customer Satisfaction Operational Optimization Financial Viability  Customer Satisfaction Operational Optimization Financial Viability  Enterprise Resiliency Stakeholder Understanding & Support  Customer Satisfaction Employee & Leadership Development Financial Viability  Enterprise Resiliency  Customer Satisfaction Employee & Leadership Development Financial Viability  Enterprise Resiliency  Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency  Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency  Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency  Customer Satisfaction Financial Viability Enterprise Resiliency  Customer Satisfaction Financial Viability Enterprise Resiliency  Customer Satisfaction Product Quality Customer Satisfaction Operational Optimization  Financial Viability Customer Satisfaction Operational Optimization  Customer Satisfaction Operational Optimization  Customer Satisfaction Operational Optimization  Customer Satisfaction Stakeholder Understanding & Support		
INCREASE RATES TO FUND O&M AND CAPITAL BUDGETS, AND MEET BUDGET REQUIREMENTS  - Financial Viability - Enterprise Resiliency - Operational Optimization - Infrastructure Strategy & Performance - Community Sustainability - Operational Optimization - Infrastructure Strategy & Performance - Community Sustainability - Operational Optimization - Financial Viability - Customer Satisfaction - Operational Optimization - Financial Viability - Enterprise Resiliency - Stakeholder Understanding & Support  - INCLUDES EMPLOYEES RECEIVING A 5.4% COST OF LIVING - ADJUSTMENT  - INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  - INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  - INCLUDES LONGEVITY PAY - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Employee & Leadership Development - Financial Viability - Enterprise Resiliency - Customer Satisfaction - Product Quality - Customer Satisfaction - Operational Optimization - Operational Optimization - Operational Optimization - Operational Optimization		
### Pinancial Viability  CONTINUE TO FOCUS ON INCREASING PAY AS YOU GO (PAYGO) AS A PERCENTAGE OF THE CAPITAL BUDGET  IMPACT OF COVID-19 CONSUMPTION TRENDS & EXPENSES  IMPACT OF COVID-19 CONSUMPTION TRENDS & EXPENSES  INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  INCLUDES EMPLOYEES RECEIVING A 5.4% COST OF LIVING ADJUSTMENT  INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  IMPLEMENT STRATEGIES TO CONSISTENTLY PRODUCE AND DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER CENTERED QUALITY SERVICE  INCENTIFY TO STATEGIES TO CONSISTENT PRODUCE AND Operational Optimization  Customer Satisfaction  Financial Viability  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Financial Viability  Customer Satisfaction  Financial Viability  Customer Satisfaction  Financial Viability  Customer Satisfaction  Financial Viability  Customer Satisfaction  Product Quality  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction  Financial Viability  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction	IMPLEMENT COST OF SERVICE STUDY RECOMMENDATION	Financial Viability
CONTINUE TO FOCUS ON INCREASING PAY AS YOU GO (PAYGO) AS A PERCENTAGE OF THE CAPITAL BUDGET  IMPACT OF COVID-19 CONSUMPTION TRENDS & EXPENSES  INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  INCLUDES EMPLOYEES RECEIVING A 5.4% COST OF LIVING ADJUSTMENT  ADJUSTMENT  INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY WAYER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  INCLUDES CUSTOMER Satisfaction  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Product Quality  Customer Satisfaction  Operational Optimization		Financial Viability
INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  INCLUDES EMPLOYEES RECEIVING A 5.4% COST OF LIVING ADJUSTMENT  INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  IMPLEMENT STRATEGIES TO CONSISTENTLY PRODUCE AND DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER SENTERED QUALITY SERVICE  Financial Viability  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Employee & Leadership Development  Financial Viability  Enterprise Resiliency  Customer Satisfaction  Product Quality  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction  Customer Satisfaction		<ul><li>Enterprise Resiliency</li><li>Operational Optimization</li><li>Infrastructure Strategy &amp; Performance</li></ul>
INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN  Operational Optimization Financial Viability Enterprise Resiliency Stakeholder Understanding & Support  Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency  Customer Satisfaction Employee & Leadership Development Financial Viability Enterprise Resiliency  IMPLEMENT STRATEGIES TO CONSISTENTLY PRODUCE AND DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  NEED TO ENHANCE CUSTOMER CENTERED QUALITY SERVICE  Customer Satisfaction Customer Satisfaction Customer Satisfaction Customer Satisfaction	IMPACT OF COVID-19 CONSUMPTION TRENDS & EXPENSES	· · · · · · · · · · · · · · · · · · ·
INCLUDES EMPLOYEES RECEIVING A 5.4% COST OF LIVING ADJUSTMENT  • Employee & Leadership Development • Financial Viability • Enterprise Resiliency • Customer Satisfaction • Employee & Leadership Development • Financial Viability • Enterprise Resiliency  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  INCLUDES LONGEVITY PAY  IMPLEMENT STRATEGIES TO CONSISTENTLY PRODUCE AND DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  INCLUDES LONGEVITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  • Customer Satisfaction • Customer Satisfaction • Customer Satisfaction • Customer Satisfaction	INCLUDES RESOURCES TO IMPLEMENT BWW'S STRATEGIC PLAN	<ul><li>Operational Optimization</li><li>Financial Viability</li><li>Enterprise Resiliency</li></ul>
INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE  • Employee & Leadership Development • Financial Viability • Enterprise Resiliency  • Customer Satisfaction • Employee & Leadership Development • Financial Viability • Enterprise Resiliency  IMPLEMENT STRATEGIES TO CONSISTENTLY PRODUCE AND DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  • Customer Satisfaction • Operational Optimization  • Customer Satisfaction • Customer Satisfaction		<ul><li>Employee &amp; Leadership Development</li><li>Financial Viability</li></ul>
Employee & Leadership Development     Financial Viability     Enterprise Resiliency  IMPLEMENT STRATEGIES TO CONSISTENTLY PRODUCE AND DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  Product Quality Customer Satisfaction Operational Optimization  Customer Satisfaction  Customer Satisfaction	INCLUDES EMPLOYEES RECEIVING A MERIT INCREASE	<ul><li>Employee &amp; Leadership Development</li><li>Financial Viability</li></ul>
DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY STANDARDS AND CUSTOMER EXPECTATIONS  • Customer Satisfaction  • Operational Optimization  NEED TO ENHANCE CUSTOMER CENTERED QUALITY SERVICE	INCLUDES LONGEVITY PAY	<ul><li>Employee &amp; Leadership Development</li><li>Financial Viability</li></ul>
NEED TO ENHANCE CUSTOMER CENTERED QUALITY SERVICE	DELIVER HIGH-QUALITY WATER THAT EXCEEDS REGULATORY	Customer Satisfaction
	NEED TO ENHANCE CUSTOMER CENTERED QUALITY SERVICE	



#### **O&M BUDGET HIGHLIGHTS**

#### **EUM ATTRIBUTE**

INITIATE AN AUTOMATIC METER READING / ADVANCED METERING INFRASTRUCTURE (AMR/AMI) STUDY	<ul><li>Customer Satisfaction</li><li>Operational Optimization</li><li>Financial Viability</li></ul>
CONTINUE TO DEVELOP PERFORMANCE MEASURES AND DASHBOARD REPORTING	<ul> <li>Customer Satisfaction</li> <li>Employee &amp; Leadership Development</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> </ul>
EXPAND CUSTOMER SERVICE HOURS TO 24/7	<ul> <li>Customer Satisfaction</li> <li>Operational Optimization</li> <li>Stakeholder Understanding &amp; Support</li> </ul>
REVIEW AND IMPROVE PROCESSES, WORKFLOWS, QUALITY OF WORK, AND CUSTOMER SERVICE LEVELS TO MEET THE OPERATIONAL AND STRATEGIC GOALS OF THE ORGANIZATION	<ul> <li>Customer Satisfaction</li> <li>Employee &amp; Leadership Development</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> </ul>
ENSURE PROPER ALIGNMENT OF FUNCTIONS AND ACTIVITIES WITHIN THE COMPANY TO ENSURE MAXIMUM EFFICIENCY AND EFFECTIVENESS	<ul> <li>Customer Satisfaction</li> <li>Operational Optimization</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Stakeholder Understanding &amp; Support</li> </ul>
MAINTAIN MARKET COMPETITIVENESS TO ENHANCE EMPLOYEE RETENTION AND RECRUITING	<ul> <li>Customer Satisfaction</li> <li>Employee &amp; Leadership Development</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> </ul>
INCREASE EMPLOYEE ENGAGEMENT AND MORALE THROUGH A FORMAL EMPLOYEE RECOGNITION PROGRAM	<ul> <li>Customer Satisfaction</li> <li>Employee &amp; Leadership Development</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> </ul>
ESTABLISH A FRAMEWORK TO BUILD A RECRUITMENT PIPELINE BY INTRODUCING THE WATER INDUSTRY TO STUDENTS THROUGH EDUCATIONAL AND INTERACTIVE PROGRAMS	<ul> <li>Operational Optimization</li> <li>Enterprise Resiliency</li> <li>Stakeholder Understanding &amp; Support</li> </ul>
NEED TO SOURCE AND RECRUIT TALENT IN A VERY COMPETITIVE LABOR MARKET	<ul> <li>Customer Satisfaction</li> <li>Employee &amp; Leadership Development</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> </ul>



#### **O&M BUDGET HIGHLIGHTS**

#### **EUM ATTRIBUTE**

INCREASE USAGE OF HISTORICALLY UNDERUTILIZED BUSINESS (HUB) PROGRAM	<ul> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> </ul>
CONTINUE TO MAINTAIN AND REPLACE AGING INFRASTRUCTURE	<ul> <li>Product Quality</li> <li>Customer Satisfaction</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> <li>Community Sustainability</li> <li>Water Resource Sustainability</li> </ul>
NEED TO STRENGTHEN ACCOUNTING PROCEDURES, PROCESSES, AND POLICIES	<ul><li>Financial Viability</li><li>Operational Optimization</li><li>Customer Satisfaction</li></ul>
UTILIZE GOVERNMENTAL AFFAIRS TO AUGMENT PURSUIT OF NON- UTILITY FUNDING SOURCES	<ul><li>Financial Viability</li><li>Enterprise Resiliency</li></ul>
ATTEND CONFERENCES, WORKSHOPS, AND TRAINING SEMINARS TO MAINTAIN AWARENESS OF INDUSTRY CHANGES	Stakeholder Understanding & Support
INCREASE HEALTH INSURANCE BUDGET BASED ON AN INCREASE IN EMPLOYEE HEALTH INSURANCE CLAIMS, ENHANCE PLAN DESIGN, AND ADDING AN HSA PLAN	<ul><li>Customer Satisfaction</li><li>Financial Viability</li><li>Enterprise Resiliency</li></ul>
INCREASE CHEMICAL BUDGET BASED ON INCREASE IN VENDORS' PRICES	<ul><li>Financial Viability</li><li>Product Quality</li><li>Operational Optimization</li></ul>
INCREASE IN OUTSOURCED SECURITY BUDGET BASED ON INCREASE IN NEW SECURITY VENDOR'S CONTRACT COST	<ul><li>Enterprise Resiliency</li><li>Operational Optimization</li></ul>
ADD DIESEL MECHANIC & FACILITIES TECHNICIAN	<ul> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> </ul>
ADD SENIOR HRIS ANALYST, TALENT MANAGEMENT ADMINISTRATOR	<ul> <li>Employee &amp; Leadership Development</li> <li>Financial Viability</li> <li>Operational Optimization</li> <li>Customer Satisfaction</li> </ul>



#### **O&M BUDGET HIGHLIGHTS**

#### **EUM ATTRIBUTE**

ADD COMPTROLLER	<ul><li>Financial Viability</li><li>Operational Optimization</li></ul>
ADD ASSISTANT SCADA MANAGER, REGULATORY COMPLIANCE SPECIALIST, CHEMIST, LAB TECH	<ul> <li>Product Quality</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Water Resource Sustainability</li> <li>Customer Satisfaction</li> </ul>
ADD INDUSTRIAL CONTROL MASTER ELECTRICIAN, INDUSTRIAL CONTROL JOURNEYMAN, MAINTENANCE MECHANICS (2)	<ul> <li>Operational Optimization</li> <li>Enterprise Resiliency</li> <li>Infrastructure Strategy &amp; Performance</li> </ul>
ADD DISTRIBUTION MAINTENANCE WORKERS (3), UTILITY WORKERS (8), AND TEAM LEAD	<ul> <li>Operational Optimization</li> <li>Enterprise Resiliency</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Customer Satisfaction</li> </ul>
ADD PROJECT COORDINATORS (2) AND BACKFLOW INSPECTOR	<ul> <li>Product Quality</li> <li>Customer Satisfaction</li> <li>Financial Viability</li> <li>Enterprise Resiliency</li> <li>Operational Optimization</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> <li>Community Sustainability</li> <li>Water Resource Sustainability</li> </ul>
ADD PROJECT COORDINATOR, SENIOR LAND SURVEYOR, AND WATERSHED QUALITY CONTROL INSPECTOR	<ul> <li>Customer Satisfaction</li> <li>Infrastructure Strategy &amp; Performance</li> <li>Stakeholder Understanding &amp; Support</li> </ul>

# Budget Development

#### IN THIS SECTION

Budget Development 18 Budget Process 20 Budget Calendar 22





**SECTION 2: BUDGET DEVELOPMENT** 

## **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:

- BWW 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 BWW.
- Multi-year Budget Management Plan Where it is a principal objective of the BWW to achieve multi-year stability in the system's 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 BWW 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 FY2022 budget, and as with most years, total revenues are projected to exceed total expenses. As such, the BWW's definition of a balanced budget is when projected annual revenues and existing fund balances are sufficient to meet budgeted expenses.





**SECTION 2: BUDGET DEVELOPMENT** 

## **BUDGET PROCESS**

Annually, the BWW 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 BWW's Rate Stabilization and 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 BWW's Bond Indenture.

The development of the Operation & 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's management team and Executive Management to review and discuss the preliminary budget requests. During the budget hearings, department managers justify the need for budget changes, if applicable. The Budget Office or Executive Management may recommend adjusting budget line items based on current year spending, historical spending, or anticipated spending.

After the budget hearing, the department's management team enters the data that was approved in their respective budget hearings into the budget module.

The Budget Office confirms the data entered by each department, enters any additional data and reviews the results with the Executive Management Team. Executive Management may recommend additional adjustments prior to presenting the preliminary budget to the Board of Directors.



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

- Top 10 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 Preliminary Budget

The Preliminary Budgets are 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 Preliminary Budgets as requested.

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

After the Operation & Maintenance and Capital Budgets have been approved by the Board, any amendments to the budgets would have to be authorized through the following procedures:

- The Board approves items added to the Operation & Maintenance Budget that exceed the General Manager's \$50,000 expenditure authority for regular purchases and \$25,000 for consulting
- Amendments to the Capital Improvement Budget require discussion and approval by the Board





#### **SECTION 2: BUDGET DEVELOPMENT**

## **BUDGET CALENDAR**

DATE	DESCRIPTION OF ACTION
JUNE 15, 2021	Distribute Additional Staff Request Forms to Department Managers and Supervisors
JUNE 15, 2021	Distribute budget packet information to Departments
JUNE 25, 2021	Additional Staff Requests due to the Budget Officer
JULY 1, 2021	Budget packet due to the Budget Officer
JULY 9 – JULY 13 2021	Budget Office schedules meetings and prepare for Budget Hearings
JULY 13 – JULY 27, 2021	Departmental Budget Hearings
JULY 22 – JULY 27, 2021	Budget Input Meetings
AUGUST 19, 2021	Complete Budget Information for discussion with Executive Management
SEPTEMBER 30, 2021	Executive Committee Meeting – Submittal of Draft Budget
OCTOBER 7, 2021	Budget Workshop
OCTOBER 27, 2021	Budget Workshop
NOVEMBER 10, 2021	Public Hearing
NOVEMBER 17, 2021	Board Adoption of the 2022 Budgets





**SECTION 3: FUND BALANCES** 

## **FUND STRUCTURE & BALANCES**

The BWW uses funds to report on its financial position and the results of its operations determined in conformity with accounting principles generally accepted in the United States.

A fund is a separate accounting entity with a self-balancing set of accounts. The two funds used by the BWW are the enterprise fund, which reports information about the general operations of the utility, and fiduciary funds, which report information about the Pension Trust Fund and the Other Post- Employment Benefits (OPEB) Trust Fund. All department expenses are accounted for in the enterprise fund.

FUND	DIVISION	DEPARTMENT
ENTERPRISE Executive		Executive Board Company Wide Business System & Operations Internal Auditor Public Relations
	Finance & Administration	Customer Support Services Call Center Human Resources Wellness & Health Management Water Watchers Brigade Information Technology Accounting Purchasing
Operations & Technical Services  Water Treatment Security Water Resource SCADA		Water Resources
	Engineering & Maintenance	E&M Shop System Development Distribution Engineering Mapping & Records Water Accountability
FIDUCIARY	Pension Trust Fund	N/A
	OPEB Trust Fund	N/A





**SECTION 3: FUND BALANCES** 

#### **ENTERPRISE FUND - PROPRIETARY FUND**

The fund is used to account for operations that are financed and operated in a manner similar to private business enterprises. A fund of this type is entitled Enterprise Fund in accordance with terminology set forth in accounting principles generally accepted in the United States.

The BWW's Enterprise Fund maintains five reserve funds for unexpected capital and operating needs for the purpose of providing adequate cash flow and reserves.

#### **RESERVES**

Reserve Fund	2020	2021	2022	
Capital Reserve	\$20,371,107	\$20,371,107	\$19,272,299	
Revenue	30,566,348	30,514,050	31,276,048	
Demand Shortfall	10,188,783	10,171,350	10,425,349	
Rate Stabilization	10,188,783	10,171,350	10,425,349	
Economic Development	8,988,783	8,971,350	9,225,349	
Total Reserve Funds	\$80,303,804	\$80,199,207	\$80,624,395	



# OPERATION & MAINTENANCE BUDGET SUMMARY

The Approved FY2022 Operation & Maintenance (O&M) Budget is \$115,324,044.93. This is an increase of 6.45% over FY2021. A summary is provided below.

#### **OPERATION & MAINTENANCE BUDGET SUMMARY**

CATEGORY	FY2022	FY2021	INCREASE DECREASE)	PERCENT CHANGE
Labor	\$ 41,987,124.37	\$ 39,133,025.23	\$ 2,854,099.14	7.29%
Employee Related Expenses	16,365,868.79	15,092,071.05	1,273,797.74	8.44%
Power	9,887,219.52	9,566,404.91	320,814.61	3.35%
Transmission & Distribution Maintenance Materials	9,332,015.19	9,303,393.91	28,621.28	0.31%
License Fees	4,600,000.00	4,380,000.00	220,000.00	5.02%
Chemicals	6,802,538.37	6,099,999.98	702,538.39	11.52%
Legal	1,063,982.40	1,063,982.40	- 14	
Lab Support, Purification Maintenance	1,827,686.00	1,896,339.00	(68,653.00)	(3.62%)
Outsourced Security	1,629,336.94	1,375,000.00	254,336.94	18.50%
Insurance	2,788,021.47	2,383,295.37	404,726.10	16.98%
Electrical / Pump Maintenance	466,510.96	475,832.54	(9,321.58)	(1.96%)
Billing Expense	1,115,000.00	1,100,000.00	15,000.00	1.36%
Other Operation & Maintenance Expenses	14,135,256.66	13,278,745.58	856,511.08	6.45%
Consultants	3,323,484.26	3,187,288.28	136,195.98	4.27%
Total Operation & Maintenance	\$ 115,324,044.93	\$ 108,335,378.25	\$ 6,988,666.68	6.45%



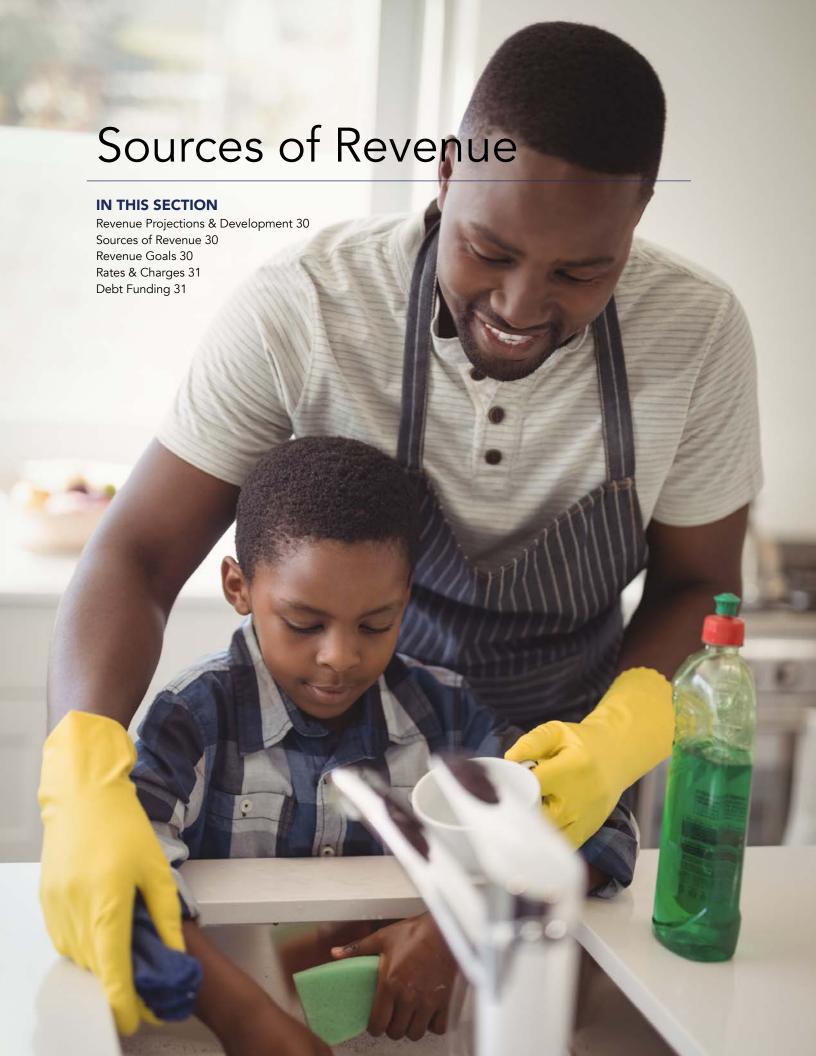
**SECTION 3: FUND BALANCES** 

## CAPITAL BUDGET SUMMARY

The Approved FY2022 Capital Budget is \$77,089,198. This is a decrease of 5.39% from 2021. A schedule of the Capital Budget is provided below.

#### 2022 APPROVED CAPITAL BUDGET

Description	Drivers	2022
Filter Plants		
CFP Sodium Hypochlorite	Risk	\$ 500,000
PFP Sodium Hypochlorite	Risk	\$ 1,500,000
PFP Liquid Lime	Perform	\$ 400,000
SMFP Filter Improvements	Reg	\$ 4,000,000
WFP Sodium Hypochlorite	Risk	\$ 3,000,000
WFP Liquid Lime	Perform	\$ 450,000
Raw Water & Distribution		
Lake Purdy Dam Stability Rehabilitation	Risk	\$ 2,000,000
Inland Lake PS and Transmission Line Improvements	Risk	\$ 800,000
Highway 79/Kiowa Road Distribution Update	Perform	\$ 800,000
Carson Loop Phase 6D	Risk	\$ 2,000,000
Main Campus IT/Security		
EnviroLab Building	Reg	\$ 3,000,000
SAP Implementation (Phase 3 - HR)	Perform	\$ 300,000
Maintenance and Repairs		
1A - New Distribution Mains and Hydrants (Associated w/ New Developments)	M & R	\$ 2,000,000
1B - Replace Existing Services - Revenue Water Only	M & R	
1C - Meters and Metering Technologies	M & R	\$ 2,500,000
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	
1H - Tank Maintenance and Repairs	M & R	\$ 2,750,000
11 - Repair/Replace Pumps, Motors, Generators	M & R	\$ 2,800,000
1K - Service Line Replacement - Distribution Department Only	M & R	\$ 2,000,000
1L - Repair/Replace Distribution Hydrants and Valves	M & R	\$ 600,000
1N - Developer Installed	M & R	
2 - Office Furniture & Equipment	M & R	\$ 40,000
3 - Transportation Equipment	M & R	\$ 2,000,000
4 - General Equipment	M & R	\$ 500,000
5 - Maintenance & Repairs to Existing Facilities	M & R	\$ 5,000,000
6 - Information Technology/GIS	M & R	\$ 2,500,000
7 - Economic Development	Perform	
99 - Distribution Mains, Hydrants & New Customer Tap Fees	M & R	\$ (4,120,900
Capitalized Operation & Maintenance		\$ 9,770,098
Total		\$ 77,089,198





**SECTION 4: SOURCES OF REVENUE** 

## REVENUE PROJECTIONS & DEVELOPMENT

Annual revenue estimates are developed using projected changes in consumer consumption patterns. For FY2022, it is projected that water demand will increase by approximately 0.22% over the FY2021 estimated actuals. Revenues are reviewed monthly during the budget development process until the budget is adopted by the Board of Directors.

## SOURCES OF REVENUE

Revenue sources available to meet anticipated operation and capital expenses are:

- Rates and Charges comprised of monthly charges for residential and non-residential raw water services
  based on usage, basic facility charges, connection and maintenance fees, miscellaneous charges for
  ancillary services, and penalty charges related to service interruption
- Sewer Collection Fees BWW bills and collects sewer fees for several entities for which it is paid a fee
- Impact Fees charges assessed against new developments 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

## **REVENUE GOALS**

As part of the rates, charges and impact fee analysis, the BWW'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 revenue goals is essential to long-term financial viability.



## RATES & CHARGES

Each year rates are established based on ensuring that sufficient revenues will be 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 2021, the Birmingham Water Works Board (the BWW) issued the Series 2021 Senior Taxable Water Revenue Refunding Bonds in the amount of \$480,995,000. The Series 2021 Bonds were issued in order to advance refund various outstanding Senior and Subordinate Securities of the BWW achieving present value savings of \$23.3 million (5.71% of the par refunded), or \$35.5 million in gross cash flow savings. The 2021 refunding also eliminated all of the BWW's subordinate debt with the exception of approximately \$6.3 million in State Revolving Fund loans.

Dating back to 1998, the BWW had settled into a two-year cadence of issuing new revenue bonds to fund capital projects and take the opportunity to refund prior issues at the same time, whenever financial market conditions have been favorable for refunding prior bond issues. However, the BWW has not required any issuance of new revenue bonds since 2018. Refundings conducted in 2019 and 2021 have not only reduced annual debt obligations but have also resulted in the release of previously required reserves. The released reserves were used to fund the BWW's capital program, further delaying the need for any new revenue bond issuance. While new bond issues increase the BWW's overall outstanding debt, refunding saves money by taking advantage of favorable interest rates.

In 2021, the BWW was invited to apply for a federal loan ("WIFIA") to help pay for capital improvement projects. Aside from offering lower interest rate costs, WIFIA allows recipients to take draws to avoid any carrying cost. The BWW will also be able to extend the repayment period and structure the associated debt around its existing debt portfolio to avoid spikes in annual debt obligations. The completion of the WIFIA loan should further delay the BWW's need to issue new revenue bonds.

Even though the BWW 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 BWW. Prior to 2018, the BWW developed an internal financial policy to fund 25% of its annual capital program with PAYGO. In 2018, when the BWW entered into a new billing contract with Jefferson County for providing sewer billing services, the new contract provided the BWW with additional revenues of approximately \$9 million 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 BWW 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 70% by 2028.



#### **SECTION 4: SOURCES OF REVENUE**

The BWW has demonstrated a willingness to engage in practices that will reduce total outstanding debt over the long run. Standard and Poor's and Moody's Investor Service each maintain their respective bond ratings for the BWW of AA and Aa2, both with a stable outlook. While the ratings agencies commended the BWW's strong leadership and commitment to financial management, one of the main downsides to the BWW'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 BWW in 2019 worked with a team that includes its financial advisor and rate consultant to develop recommendations. The results of those efforts projected an estimated decrease in principal of \$209 million by 2030, compared to previous projections.

Total current outstanding debt is \$1,010,455,000.

## CURRENT OUTSTANDING DEBT SUMMARY SENIOR LIEN SUMMARY

Series	Amount Outstanding	Final Maturity 1/1/2029	
2015-A	21,390,000		
2015-B	15,310,000	1/1/2040	
2016-A	108,090,000	1/1/2041	
2018	45,830,000	1/1/2031	
2019	332,515,000	1/1/2045	
2021	480,995,000	1/1/2043	
TOTAL SENIOR	\$1,004,130,000		

## CURRENT OUTSTANDING DEBT SUMMARY SUBORDINATE LIEN SUMMARY

Series	Amount Outstanding	Final Maturity
DWSRF Loans	\$6,325,000	2031-2035
TOTAL SUBORDINATE	\$6,325,000	
AGGREGATE TOTAL	\$1,010,455,000	



# CURRENT OUTSTANDING DEBT ANNUAL DEBT SERVICE

AGGREGATE DEBT SERVICE					
PERIOD ENDING	SENIOR LIEN DS	SUBORDINATE LIEN DS	AGGREGATE		
12/31/2022	59,065,731	641,649	59,707,380		
12/31/2023	63,234,254	643,148	63,877,401		
12/31/2024	63,234,228	644,213	63,878,441		
12/31/2025	63,236,949	639,926	63,876,875		
12/31/2026	63,234,297	640,281	63,874,578		
12/31/2027	63,861,511	640,204	64,501,715		
12/31/2028	63,846,134	644,624	64,490,758		
12/31/2029	63,846,805	638,688	64,485,493		
12/31/2030	64,496,577	642,274	65,138,850		
12/31/2031	64,504,997	640,355	65,145,352		
12/31/2032	64,632,549	505,105	65,137,655		
12/31/2033	64,725,115	412,905	65,138,020		
12/31/2034	65,094,689	41,960	65,136,649		
12/31/2035	65,166,726	40,980	65,207,706		
12/31/2036	65,368,171		65,368,171		
12/31/2037	65,375,016	-	65,375,016		
12/31/2038	65,373,331	19	65,373,331		
12/31/2039	61,486,336		61,486,336		
12/31/2040	53,905,421		53,905,421		
12/31/2041	53,906,139	720	53,906,139		
12/31/2042	46,988,912		46,988,912		
12/31/2043	47,622,255	:	47,622,255		
12/31/2044	6,920,337		6,920,337		
12/31/2045	6,926,571	-	6,926,571		
TOTAL	\$1,366,053,053	\$7,416,310	\$1,373,469,363		







# INTRODUCTION

On July 9, 1951, The Water Works Board of the City of Birmingham (BWW) acquired all properties and ownership from The Birmingham Water Works Company. The BWW supplies raw and potable water to approximately 770,000 customers in a five-county region (Jefferson, St. Clair, Blount, Shelby, Walker).

The BWW operates 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 BWW owns and operates 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 BWW maintains a system with over 200,000 major pieces of equipment.

In support of these assets, the BWW has a 2022 Capital Improvement Plan (CIP) of \$77,089,198 and a 10-Year Capital Improvement Plan of \$829,158,625. 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 BWW'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 and identifies where upgrade improvements can be made and where opportunities for new projects may exist. For this reason, the BWW has the following goals from its CIP process:

- Ensure that BWW'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 the Operation and Maintenance Budgets
- Avoid the need to impose emergency repairs
- Serve as an educational tool for the community and the BWW



## DESCRIPTION OF PROJECT DRIVERS

The following categories, listed by priority, were developed to indicate the driver for each element of the BWW'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 driver for the project.

#### REGULATORY COMPLIANCE

Projects associated with compliance with existing, pending, and future regulations. One regulation has a direct impact on the BWW'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 BWW: 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.

#### **RISK MANAGEMENT**

Projects associated with increasing service reliability, system redundancy, and safety of BWW 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.

#### **CAPACITY**

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

#### PERFORMANCE/COST EFFICIENCY

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

#### MAINTENANCE AND REPLACEMENT

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

#### **CAPITALIZED OPERATION AND MAINTENANCE**

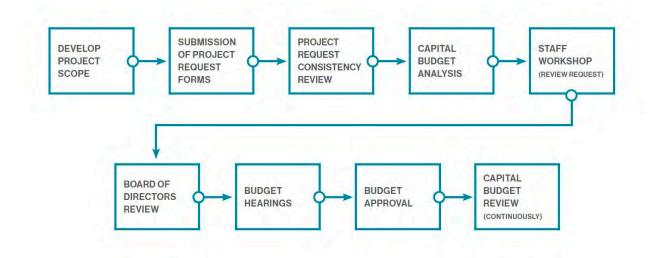
These are indirect project costs clearly related to the construction, development, or improvement of capital assets as a group, but not to the construction, development, or improvement of a specific capital asset.



### CAPITAL PLANNING PROCESS

The Capital Planning Process is created to be a vehicle to meet specific BWW goals and/or drivers and to be consistent with BWW'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 the 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 the resulting benefit. The procedures for the development of the Capital Improvement Plan budget will generally follow the schedule below:





#### 5-YEAR BUDGET TIMELINE

FY2021 FY2022 FY2023 FY2024 FY2025

BASE (\$51.5M)+
PIPELINE PROGRAM (\$30M)

1 YEAR TOTAL \$81.5M

BASE (\$47.1M)+ PIPELINE PROGRAM (\$30M)

1 YEAR TOTAL \$77.1M

BASE (\$48.6M)+ PIPELINE PROGRAM (\$30M)

1 YEAR TOTAL \$78.6 M

BASE (\$50.2M)+ PIPELINE PROGRAM (\$30M)

1 YEAR TOTAL \$80.2M

BASE (\$51.8M)+
PIPELINE PROGRAM (\$30M)

1 YEAR TOTAL \$81.8M



# CAPITAL PROJECT DESCRIPTIONS

#### **BUDGET ITEMS**

#### 1A. NEW DISTRIBUTION MAINS & 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 BWW by the customer or developer

#### 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

#### 1B. NEW CUSTOMER SERVICE CONNECTIONS – SYSTEM DEVELOPMENT ONLY

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

#### 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

#### 1D. REPLACE DISTRIBUTION MAINS - SYSTEM DEVELOPMENT 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

#### 1E. REPLACE DISTRIBUTION SERVICES – SYSTEM DEVELOPMENT 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

#### 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

#### 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

#### 1H. TANK MAINTENANCE & REPAIR

In order to maintain the integrity of the BWW'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



#### 11. 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

#### 1J. REIMBURSABLE PIPELINE PROJECTS OUT

This item covers installation of new distribution mains at the cost of the BWW

#### 1K. SERVICE LINE REPLACEMENT – DISTRIBUTION DEPARTMENT ONLY

This item covers installation of main and service line replacements at the cost of the BWW

#### 1L. REPAIR/REPLACE DISTRIBUTION HYDRANTS AND VALVES

Repair/Replace Distribution Hydrants and Valves

#### 1M. CUT AND CAP PROGRAM

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

#### 1N. DEVELOPER INSTALLED

This item includes new development associated installation cost

#### 2. OFFICE FURNITURE & EQUIPMENT

This item includes replacement of office furniture and equipment

#### 3. TRANSPORTATION EQUIPMENT

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

#### 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

#### 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

#### 6. INFORMATION TECHNOLOGY/GIS

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

#### 7. ECONOMIC DEVELOPMENT

This item includes the development of programs and processes to increase economic development for BWW



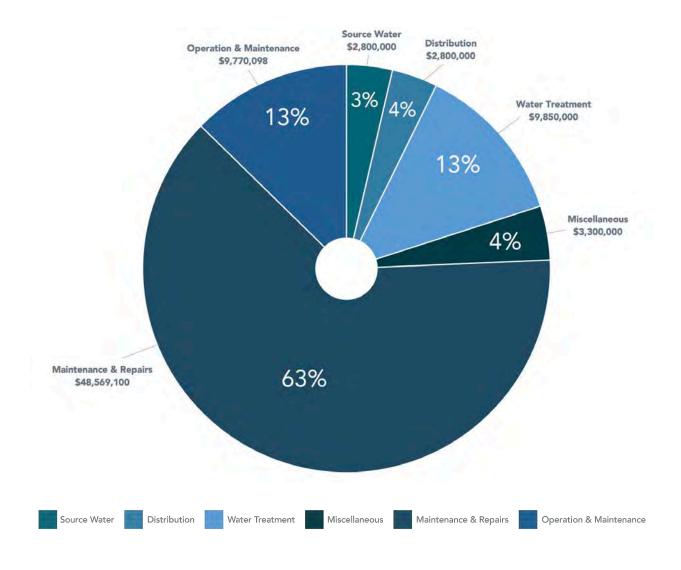
# APPROVED 2022 CAPITAL BUDGET

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Raw Water & Distribution		
Lake Purdy Dam Stability Rehabilitation	Risk	\$ 2,000,000
Inland Lake PS and Transmission Line Improvements	Risk	\$ 800,000
Highway 79/Kiowa Road Distribution Update	Perform	\$ 800,000
Carson Loop Phase 6D	Risk	\$ 2,000,000
Main Campus IT/Security		
EnviroLab Building	Reg	\$ 3,000,000
SAP Implementation (Phase 3 - HR)	Perform	\$ 300,000
Maintenance and Repairs		
1A - New Distribution Mains and Hydrants (Associated w/ New Developments)	M & R	\$ 2,000,000
1B - Replace Existing Services - Revenue Water Only	M & R	
1C - Meters and Metering Technologies	M & R	\$ 2,500,000
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	
1H - Tank Maintenance and Repairs	M & R	\$ 2,750,000
11 - Repair/Replace Pumps, Motors, Generators	M & R	\$ 2,800,000
1K - Service Line Replacement - Distribution Department Only	M & R	\$ 2,000,000
1L - Repair/Replace Distribution Hydrants and Valves	M & R	\$ 600,000
1N - Developer Installed	M & R	
2 - Office Furniture & Equipment	M & R	\$ 40,000
3 - Transportation Equipment	M & R	\$ 2,000,000
4 - General Equipment	M & R	\$ 500,000
5 - Maintenance & Repairs to Existing Facilities	M & R	\$ 5,000,000
6 - Information Technology/GIS	M & R	\$ 2,500,000
7 - Economic Development	Perform	
99 - Distribution Mains, Hydrants & New Customer Tap Fees	M & R	\$ (4,120,900
Capitalized Operation & Maintenance		\$ 9,770,098
Total	_ = = =	\$ 77,089,198



The chart below is an allocation of the FY2022 Approved Capital Budget.

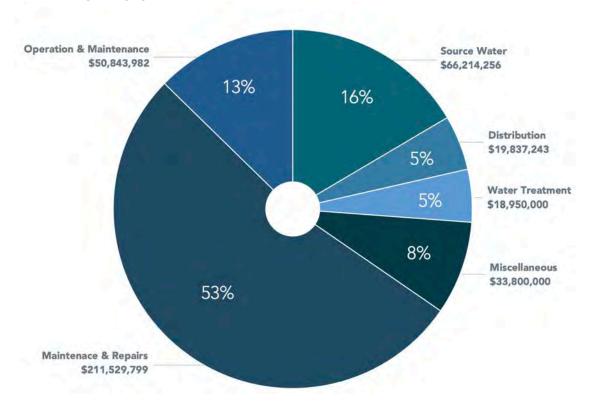
### APPROVED 2022 CAPITAL BUDGET



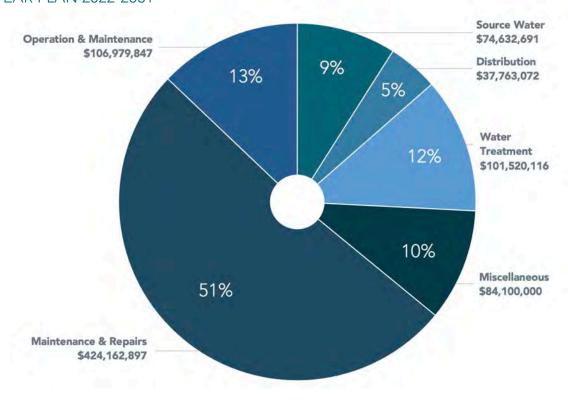
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#### **SECTION 5: CAPITAL IMPROVEMENT PLAN**

### 5-YEAR PLAN 2022-2026



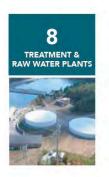
### 10-YEAR PLAN 2022-2031

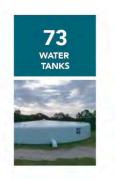


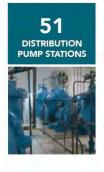


# **CURRENT SYSTEM ASSETS**

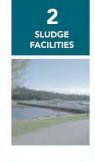
Our goal is to maintain existing assets in order to produce the nation's highest quality water.













































# RAW WATER DISTRIBUTION

The Birmingham Water Works Board (BWW) ensures the availability of water to every home, school, business and park within its service area. BWW system provides retail service to an area of approximately 700 square miles and approximately 196,000 customer accounts in Jefferson, Blount, St. Clair, Walker and Shelby Counties. The system consists of 4 raw water intake systems, 3 raw water boosters, 6 dams, and 53 raw water storage tanks. Water must be pumped long distances from the source of supply to storage/use.

#### **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 BWW. 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 Improvement Plan includes renewal and replacement projects needed to maintain adequate water supplies and storage to meet current water demands.





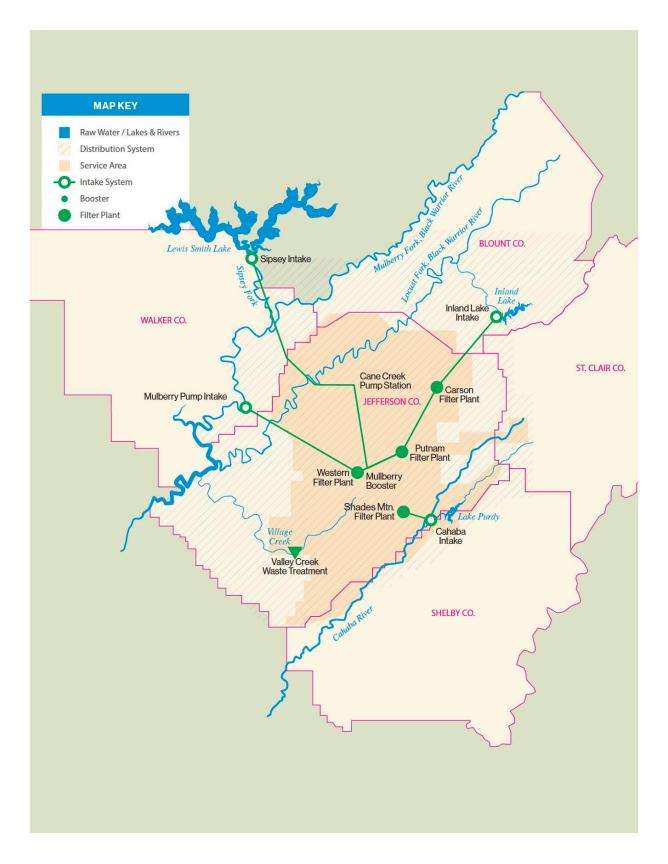


### 4,105 MILES

TOTAL PIPE IN SYSTEM











### **WORK COMPLETED OR SCHEDULED IN FY2020 - 2023**

#### LAKE PURDY DAM STABILIZATION PROJECT GOALS

- Improve the stability of the existing dam
- Mitigate seepage
- Increase the spillway capacity

#### SIPSEY PUMP STATION PUMP REPAIR GOALS

- Maintain the operational efficiency of the Sipsey Pump Station
- Repair and refurbish existing vertical turbine pumps
- Provide treatable water to our water treatment plants

### MULBERRY RAW WATER SURGE TANKS GOALS

- Maintain and repair existing 750,000-unit raw water tank
- Increase structural integrity by preventing rust and deterioration
- Increase life span by 20 25 years



### DISTRIBUTION

The Distribution System consists of 4,105 miles of piping, 1,000 miles of service lines, 48 distribution pump stations, 51 distribution storage tanks, 41 pressure-reducing valve stations, 52,000 valves, 15,000 hydrants, and 20 pressure gradients.

#### **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 Improvement Plan includes renewal and replacement projects needed to maintain adequate water supplies and storage to meet current water demands.

#### **WORK COMPLETED OR SCHEDULED IN FY2020–2023**

#### 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-inch 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

The Birmingham Water Works Board (BWW) consists of 4 water treatment plants and is the State of Alabama's largest water utility.



**SHADES MOUNTAIN 80 MGD** 



WESTERN 60 MGD



**PUTNAM 24 MGD** 



**CARSON 25 MGD** 



#### **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 Improvement 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 FY2020 – 2023**

#### SHADES MOUNTAIN FILTER PLANT (SMFP) FILTER IMPROVEMENTS

As part of BWW's overall filter rehabilitation program, BWW 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 BWW 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.

#### PFP & WFP SODIUM HYPOCHLORITE

The project includes the construction of a sodium hypochlorite facility at the Putnam & Western Filter Plant and when completed will replace the existing hazardous chlorine gas process.

#### PFP & WFP LIQUID LIME

Design and construct liquid lime facility to eliminate existing dry lime system. The goal of the project is to address the following objectives:

- Reduce clogging which limits operation downtime.
- Reduce operation and maintenance time to mix powder.



# OPERATIONAL IMPACT OF FY2022 CAPITAL PROJECTS

# OPERATIONAL IMPACT ASSOCIATED WITH THE PFP & WFP SODIUM HYPOCHLORITE PROJECTS

As part of the America's Water Infrastructure Act of 2018 (AWIA), plants that house gas chlorine systems were identified as key risk mitigation projects. The project design will convert the gas chlorine systems to bulk liquid sodium hypochlorite at the Putnam Filter Plant (PFP) and the Western Filter Plant (WFP). The motivation to switch to bulk liquid sodium hypochlorite is based on reducing the health risk to plant staff and the surrounding community associated with a potential chlorine gas leak. The estimated annual maintenance cost for each facility is expected to increase as follows:

#### ESTIMATED ANNUAL MAINTENANCE COST

O&M ITEM DESCRIPTION	COST (\$)
Annual Chemical Cost	285,640.00
Power Cost	16,973.00
Equipment/Maintenance Cost	32,300.00
Labor Cost	9,690.00
Total O&M	344,603.00





# **OVERVIEW**

The Approved FY2022 Operation & Maintenance Budget is \$115,324,044.93 which is 6.45% or \$6,988,666.68 higher than the FY2021 Approved Budget. The following pages will provide details by Division and Department as well as budget information as it relates to the Approved FY2022 O&M budget.



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.



SECTION 6: APPROVED OPERATION & MAINTENANCE BUDGET

# O&M SUMMARY BY DIVISION AND DEPARTMENT

### O&M SUMMARY BY DIVISION & DEPARTMENT

DIVISION	FUNDS CENTER	2018 NET ACTUAL	2019 NET ACTUAL	2020 NET ACTUAL	2021 NET BUDGET	2022 NET BUDGET
	Executive	\$ 1,341,913,02	\$ 884,050.16	\$ 1,246,489.42	\$ 1,031,299.80	\$ 1,140,678.47
	Board	175,428.82	203,442.41	139,624.74	191,804.27	241,092.95
	Company Wide	23,684,480.06	26,617,904.57	27,557,603.12	28,021,822.98	30,460,203,87
Executive	Business System & Operations	657,171.81	636,047.48	663,934.77	809,537.86	816,341.67
	Internal Auditor	238,862.81	244,186.21	261,793.98	254,649.24	270,931.23
	Public Relations	469,460.99	514,374.75	586,191.80	754,286.63	847,471.81
- 6.7	Customer Support Services	5,278,357.03	6,412,480.26	6,432,923.59	6,654,578.49	6,877,846.59
	Call Center	1,376,930.54	1,617,059.18	1,671,014.55	1,810,577.04	1,856,772.07
	Human Resources	2,545,984.01	2,527,396.94	1,665,018.23	2,752,203.12	3,002,699.60
Finance &	Wellness and Health Management	180,039.17	219,777.88	399,703.04	294,530.40	337,407.83
Administration	Water Watchers Brigade	280,078.14	254,201.16		368,649.49	377,506.49
	Information Technology	4,217,075.31	4,775,431.12	5,065,707.90	5,411,789.51	5,688,644.99
	Accounting	1,676,984.24	1,729,101.29	1,677,843.50	1,855,977.45	2,066,233.25
	Purchasing	2,093,276.37	2,260,112.98	2,578,198.33	2,402,007.87	2,884,298.79
	EnviroLab & Water Quality	2,794,697.03	2,858,165.91	3,145,346.68	3,051,716.00	3,404,643.06
	Water Treatment	13,654,135.10	14,944,831.20	15,281,311,19	15,593,448.07	16,710,566.77
Operations &	Security	2,193,430.31	2,176,569.24	2,095,377.63	2,388,311.31	2,666,745.54
Technical Services	Water Resources	6,944,547.55	7,190,893.68	6,957,558.04	7,655,038.46	7,837,541.48
Services	SCADA	770,704.70	741,636.08	791,188.50	921,362.09	982,042.57
	Industrial & Commercial Accounts	198,796.71	261,355.36	284,842.73	379,226.22	425,673.26
	E&M Shop	4,812,641.65	5,120,331.70	5,034,593.59	4,917,508.28	5,324,817.62
	System Development	730,073.41	718,290.42	823,976.64	851,908.51	816,162.80
Engineering &	Distribution	15,840,674.19	16,000,168.37	16,130,384.80	15,836,927.81	16,139,572.53
Maintenance	Engineering	1,804,024.71	1,703,707.34	1,624,513.68	1,451,960.28	1,487,130.25
	Mapping & Records	257,857.86	228,154.18	291,943.19	276,306.93	260,947.87
	Water Accountability	2,514,135.04	3,361,307.17	3,273,992.89	2,397,950.14	2,400,071.57
	All Departments	\$96,731,760.58	\$104,200,977.04	\$ 105,681,076.53	\$108,335,378.25	\$115,324,044.93





SECTION 6: APPROVED OPERATION & MAINTENANCE BUDGET

# **O&M SUMMARY BY EXPENSE CATEGORY**

### O&M SUMMARY BY EXPENSE CATEGORY

CATEGORY		FY2022	FY2021	(	INCREASE DECREASE)	PERCENT CHANGE
Labor	\$	41,987,124.37	\$ 39,133,025.23	\$	2,854,099.14	7.29%
Employee Related Expenses		16,365,868.79	15,092,071.05		1,273,797.74	8.44%
Power		9,887,219.52	9,566,404.91		320,814.61	3.35%
Transmission & Distribution Maintenance Materials		9,332,015.19	9,303,393.91		28,621.28	0.31%
License Fees		4,600,000.00	4,380,000.00		220,000.00	5.02%
Chemicals		6,802,538.37	6,099,999.98		702,538.39	11.52%
Legal		1,063,982.40	1,063,982.40			
Lab Support, Purification Maintenance		1,827,686.00	1,896,339.00		(68,653.00)	(3.62%)
Outsourced Security		1,629,336.94	1,375,000.00		254,336.94	18.50%
Insurance		2,788,021.47	2,383,295.37		404,726.10	16.98%
Electrical / Pump Maintenance	1	466,510.96	475,832.54		(9,321.58)	(1.96%)
Billing Expense		1,115,000.00	1,100,000.00		15,000.00	1.36%
Other Operation & Maintenance Expenses		14,135,256.66	13,278,745.58		856,511.08	6.45%
Consultants		3,323,484.26	3,187,288.28		136,195.98	4.27%
Total Operation & Maintenance	\$	115,324,044.93	\$ 108,335,378.25	\$	6,988,666.68	6.45%



## **COMPENSATION & BENEFITS**

The Compensation and Benefits budget for FY2022 is \$53,113,949, which is an increase of \$3,440,757 or 6.93% more than the FY2021 Approved Budget.

The FY2022 Approved Budget includes the addition of thirty-one new positions (24 full-time and 7 part-time).

The FY2022 budgeted merit adjustment is \$876,164. No merit increase was approved in FY2021.

The 2022 budgeted longevity is \$1,382,680 which is a decrease of 4.22% from the approved 2021 amount.

The cost-of-living adjustment (COLA) for employees is estimated at \$2,414,082 which is an increase of 319.51 % from the FY2021 Approved Budget. The FY2022 Approved Budget includes funding for 829.97 full-time equivalent positions.

Overtime increased by \$42,831 (1.58 %) from prior year, although the overtime hours reduced by 623.47 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.

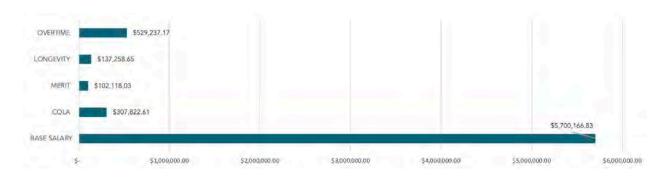
#### **COMPENSATION & BENEFITS**

CATEGORY	FY 2022	FY 2021	INCREASE (DECREASE)	PERCENT CHANGE
Regular Salary	\$45,685,888.80	\$44,941,871.66	\$744,017.14	1.66%
COLA Amount	\$2,414,081.47	\$575,450.33	\$1,838,631.14	319.51%
Overtime Amount	\$2,755,134.67	\$2,712,303.25	\$42,831.42	1.58%
Merit Amount	\$876,163.92	\$0.00	\$876,163.92	100.00%
Longevity Amount	\$1,382,680.12	\$1,443,567.08	(\$60,886.96)	(4.22%)
Total Budget	\$53,113,948.98	\$49,673,192.32	\$3,440,756.66	6.93%
Total FTE	829.97	800.66	29.31	3.66%
Overtime Hours	66,292.44	66,915.91	(623.47)	(0.93%)

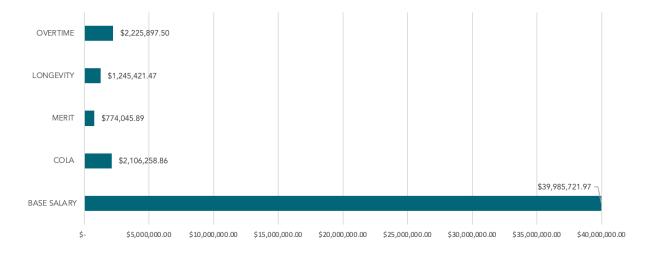


#### SECTION 6: APPROVED OPERATION & MAINTENANCE BUDGET

### **CAPITAL LABOR**



#### **O&M LABOR**





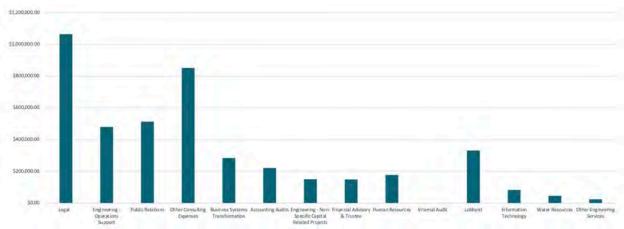
# **CONSULTANT SERVICES**

The Approved Consultant Services Budget for FY2022 is \$4,387,467, which is an increase of \$136,196 or 3.20% from the FY2021 Approved Budget.

### **CONSULTANT SERVICES**

EXPENSE CATEGORY	2022 NET CONSULTING DOLLARS
Legal	\$1,063,982.00
Engineering - Operations Support	480,600.00
Public Relations	514,210.00
Other Consulting Expenses	851,377.00
Business Systems Transformation	284,934.00
Accounting Audits	222,786.00
Engineering - Non-Specific Capital Related Projects	150,667.00
Financial Advisory & Trustee	150,485.00
Human Resources	178,264.00
Internal Audit	1,005.00
Lobbyist	332,917.00
Information Technology	84,070.00
Water Resources	47,000.00
Other Engineering Services	25,170.00
Total	\$4,387,467.00
2021 Consultant Services	4,251,271.00
Increase from 2021	136,196.00
2022 Percentage increase from 2021	3.20%

### 2022 NET CONSULTING DOLLARS





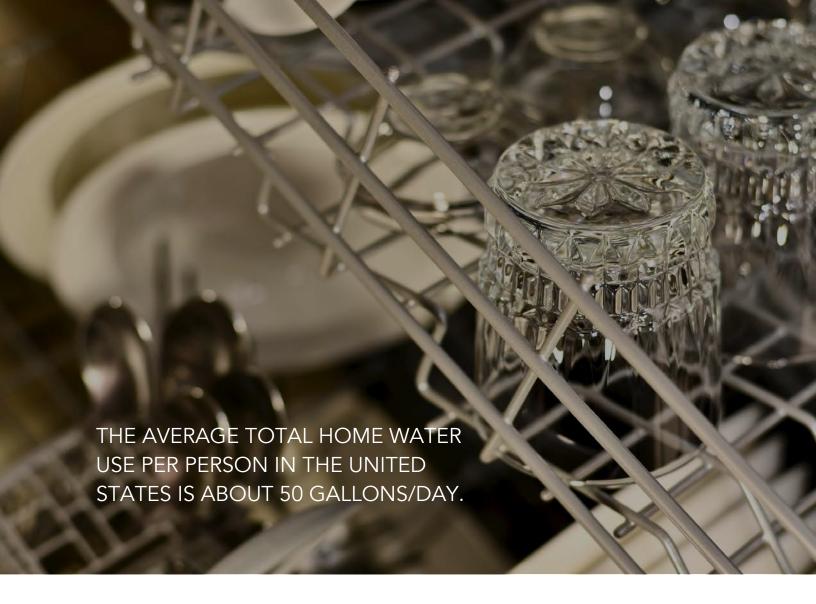
#### SECTION 6: APPROVED OPERATION & MAINTENANCE BUDGET

# **DEBT SERVICE**

Debt Service for FY2022 is \$59,707,380, which is a decrease of \$6,342,977 from FY2021.

### **DEBT SERVICE COVERAGE**

		Est. Actual 2021	Recommended - 3.9% 2022
Total Revenues	\$	204,261,000	\$ 212,136,000
Less: Impact/System Development Fees	\$	(1,527,000)	\$ (1,527,000)
Less: Interest on Construction Funds		(1,255,038)	(1,255,038)
Plus: Loss on the Sale/Disposition of Assets		1,676,578	1,676,578
Total Revenues per Official Statement Definition	5	203,155,540	\$ 211,030,540
Revenue Requirements			
O&M Expenses	\$	(108,335,378)	\$ (115,324,045)
Total Revenues Available for Debt Service and PAYGO	\$	94,820,162	\$ 95,706,495
Debt Service			
Senior Debt Service	\$	(46,257,423)	\$ (59,065,731)
Subordinate Debt Service		(19,792,934)	(641,649)
Total Debt Service	\$	(66,050,356)	\$ (59,707,380)
Base Charge Revenue as a Percent of Annual Debt Service		114.3%	125.5%
PAYGO Spending	\$	(28,300,000)	\$ (35,940,000)
PAYGO as Percent of Capital Budget	- 10	34.8%	46.6%
Total Revenue Requirements	\$	(202,685,734)	\$ (210,971,425)
Surplus/(Deficit)	\$	469,806	\$ 59,115
Debt Service Coverage Ratios			
Senior Debt Service Coverage (Minimum = 1.50)		2.05	1.62
Total Debt Service Coverage (Minimum = 1.10)	- 4 4	1.44	1.60
Total Debt - Par Outstanding/Principal Remaining	\$	1,184,500,000	\$ 1,156,990,000
Net Debt to Total Assets	14	96.97%	92.25%



Based on the BWW's RSE Model, customer water rates should increase by 3.9% each year, beginning in 2022 through 2026. The goal is to maintain rate increases below industry standards, which was 4.61% from 1998 through 2020. A 3.9% rate increase equates to \$1.49 per month for the average customer using 6CCF of water.

- Residential consumption is projected to increase at a rate of .81%, and non-residential consumption is projected to decline at a rate of .03%. The 3.9% rate increase should result in increased revenue in 2022.
- Operation & Maintenance (O&M) expenses are projected to increase by 2% annually, with the exception of 2022. The BWW's goal is to keep annual O&M increases below 5%.
- The total debt service will increase at an average rate of 3.9% over the next five years.
- The PAYGO is projected to reach 70% by the year 2028-2029.
- The BWW is projected to exceed the Total Debt Service Coverage Targets over the next five years.



#### SECTION 6: APPROVED OPERATION & MAINTENANCE BUDGET

### **DEBT SERVICE COVERAGE - 5 YEAR PROJECTION**

		-50	_		F	RECOMMENDED	•	100		
		2022		2023		2024		2025		2026
Rate Increase		3.9%		3,9%		3.9%		3.9%		3,99
Typical Water Bill - 6 CCF Customer	5	46.12	5	47,67	\$	49,55	5	51.47	5	53.49
Total Revenues	5	212,136,000	\$	219,768,000	5	227,575,000	5	235,650,000	5	243,980,000
Less: Impact/System Development Fees	\$	(1,527,000)	5	(1,527,000)	5	(1,527,000)	5	(1,527,000)	\$	(1,527,000
Less: Interest on Construction Funds		(1,255,038)		(1,255,038)		(1,255,038)		(1,255,038)		(1,255,038
Plus: Loss on the Sale/Disposition of Assets		1,676,578		1,676,578		1,676,578	-	1,676,578	-	1,676,578
Total Revenues per Official Statement Definition	\$	217,030,540	\$	218,662,540	\$	226,469,540	5	234,544,540	\$	242,874,540
Revenue Requirements										
O&M Expenses	5	(115,324,045)	5	(117,630,526)	5	(119,983,136)	5	(122,382,799)	\$	(124,830,455
Total Revenues Available for Debt Service and PAYGO	5	95.706,495	5	101,032,014	5	106,486,404	5	112,161,741	5	118,044,085
Debt Service										
Senior Debt Service	\$	(59,065,731)	5	(64,888,004)	\$	(66,541,728)	5	(67,673,091)	\$	(68,799,082
Subordinate Debt Service		(641,649)		(643,148)	-	(644,213)		(639,925)		(640,281
Total Debt Service	\$	(59,707,380)	5	(65,531,151)	5	(67,185,941)	5	(68,313,016)	\$	(69,439,363
Base Charge Revenue as a Percent of Annual Debt Service		125.5%		113.4%		115.5%	68	118.5%		121.73
PAYGO Spending	5	(35,940,000)	5	(35,425,000)	\$	(39,210,000)	s	(43,769,000)	S	(49,537,000
PAYGO as Percent of Capital Budget		46.6%		46.0%		50.9%		56.8%		61,79
Total Revenue Requirements	\$	(210,971,425)	\$	(218,586,677)	\$	(226,379,077)	\$	(234,464,816)	\$	(242,806,818
Surplus/(Deficit)	\$	59,115	5	75,863	\$	90,463	5	79,724	\$	67,722
Debt Service Coverage Ratios										
Senior Debt Service Coverage (Minimum = 1.50)		1.62		1.56		1.60		1.66		1.72
Total Debt Service Coverage (Minimum = 1.10)		3.60		1.54		1.58		1.64		1.70
Total Debt - Par Outstanding/Principal Remaining	5	1,156,990,000	5	1,125,605,000	\$	1,090,080,000	5	1,053,740,000	\$	1,016.505,000
Net Debt to Total Assets		92.25%		87.48%		82.62%		77.95%		73.349



#### **INITIAL CONSUMPTION PROJECTION**

Consumption is projected to increase by 68,430 Centum Cubic Feet (CCF) or 0.22%. The schedule below provides a summary of consumption projections for FY2022.

2022 INITIAL CONSUMPTION PROJECTION	2021 Budget	2021 Est. Actual	2022 Budget	2021 to 2022 Difference (CCF)
Residential			4 4 6 4	
Block 1 (0-3 Ccf)	5,200,000	5,241,122	5,100,000	(141,122)
Percent Change		0.79%	-2.69%	
Block 2 (3-15 Ccf)	6,200,000	5,984,723	6,100,000	115,277
Percent Change		-3.47%	1.93%	
Block 3 (15+ Ccf)	1,900,000	1,669,168	1,800,000	130,832
Percent Change		-12.15%	7.84%	
Subtotal: Residential	13,300,000	12,895,014	13,000,000	104,986
Percent Change		-3.05%	0.81%	
Non-Residential				
Commercial	11,334,532	11,465,250	11,500,000	34,750
Percent Change		1.15%	0.30%	
Industrial	334,436	379,593	360,000	(19,593)
Percent Change		13.50%	-5.16%	
Municipal	1,089,578	948,924	950,000	1,076
Percent Change		-12.91%	0.11%	
Private Fire	41,454	69,576	50,000	(19,576)
Percent Change		67.84%	-28.14%	
Subtotal: Non-Residential	12,800,000	12,863,343	12,860,000	(3,343)
Percent Change		0.49%	-0.03%	
Wholesale	828,700	781,954	800,000	18,046
Percent Change	YY TY	-5.64%	2.31%	
Raw Water	3,750,000	4,351,259	4,300,000	(51,259)
Percent Change		16.03%	-1.18%	
Total Consumption	30,678,700	30,891,570	30,960,000	68,430
Percent Change		0.69%	0.22%	

Note: Wholesale started as its own customer class on January 1, 2020. Previously, Wholesale was part of the Non-Residential customer class. Budgeting for Non-Residential subclasses began in 2021.



#### SECTION 6: APPROVED OPERATION & MAINTENANCE BUDGET

#### **2022 TOTAL REVENUE PROJECTIONS**

Revenue is projected to increase by \$7,874,533 or 3.86% over the estimated actual amount for FY2021. The schedule below provides a summary of consumption projections for FY2022.

### 2022 TOTAL REVENUE PROJECTIONS

		2021 Budget	20	21 Est. Actual	2022 Projected				
VOLUMETRIC REVENUE									
Residential									
Block 1 (0-3 Ccf)	\$	13,468,000	\$	13,574,507	\$	13,566,000			
Block 2 (3-15 Ccf)		21,204,000		20,467,753		24,156,000			
Block 3 (15+ Ccf)		11,381,000	E	9,998,318		12,474,000			
Subtotal: Residential	\$	46,053,000	\$	44,040,578	\$	50,196,000			
Difference			\$	(2,012,000)	\$	6,155,422			
Non-Residential				9					
Commercial	\$	45,338,128	\$	45,860,998	\$	47,840,000			
Industrial		1,337,744		1,518,373	. 1	1,497,600			
Municipal		4,358,312		3,795,696		3,952,000			
Private Fire		165,816		278,304		208,000			
Subtotal: Non-Residential	\$	51,200,000	\$	51,453,371	\$	53,497,600			
Difference			\$	253,000	\$	2,044,000			
Wholesale	\$	2,991,607	\$	2,822,855	\$	2,736,000			
Difference			\$	(169,000)	\$	(86,855)			
Raw Water	\$	4,428,750	\$	5,138,837	\$	5,078,300			
Difference			\$	710,000	\$	(60,537)			
Total Volumetric Revenue	\$	104,673,357	\$	103,456,000	\$	111,508,000			
Total Fixed Charge Revenue	\$	75,518,760	\$	75,518,760	\$	74,913,664			
OTHER REVENUE				_ 70.7~ -3					
Other Operating Revenues		6,933,722		7,647,068	1.7	7,722,065			
Jefferson County Sewer Billing Revenue		13,908,586		14,081,623		14,363,255			
Total Operating Revenues	\$	201,034,425	\$	200,703,451	\$	208,506,984			
Non-Operating Revenues	\$	3,558,000	\$	3,558,000	\$	3,629,000			
Total Revenues	\$	204,592,425	\$	204,261,451	\$	212,135,984			



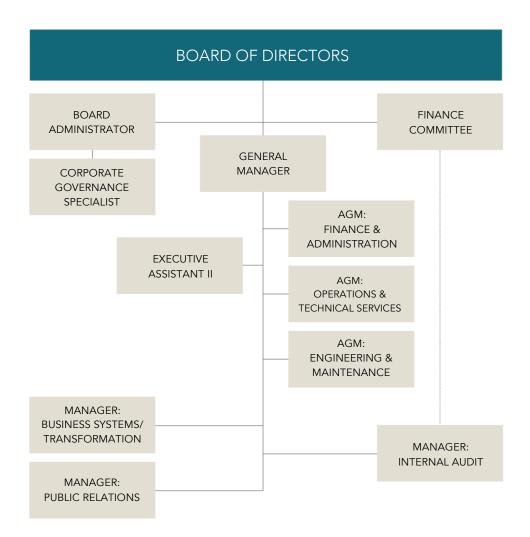


**SECTION 7: OVERVIEW OF DEPARTMENTS** 

### DEPARTMENT SUMMARY

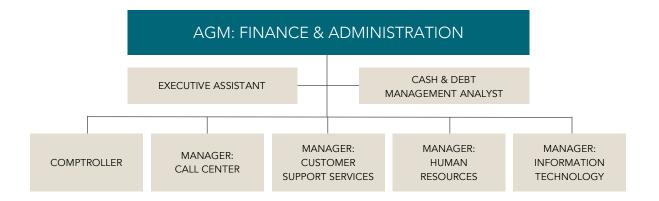
The BWW is organized into 22 functional departments, with each department having its own budget for fiscal control. The departments are organized within divisions as follows: Executive, Finance & Administration, Operations & Technical Services and Engineering & Maintenance. With the exception of the Accounting Manager and the Purchasing Manager who report to the Comptroller, each Department Manager reports to one of three Assistant General Managers (AGMs) who report to the General Manager (GM).

#### **EXECUTIVE MANAGEMENT**

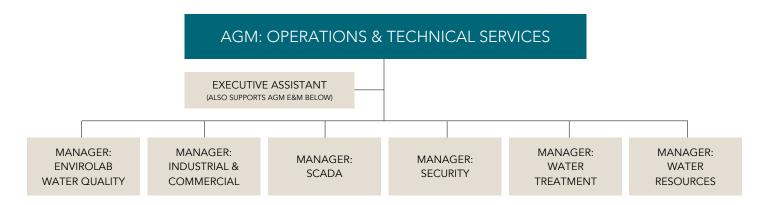




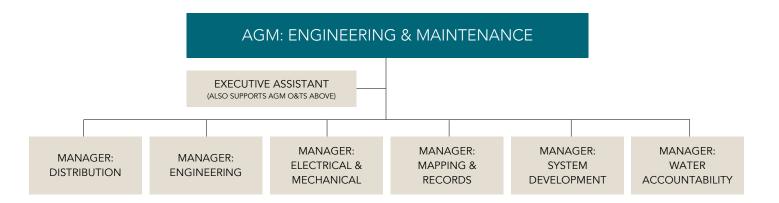
#### FINANCE & ADMINISTRATION DIVISION



#### **OPERATIONS & TECHNICAL SERVICES DIVISION**



#### **ENGINEERING & MAINTENANCE DIVISION**

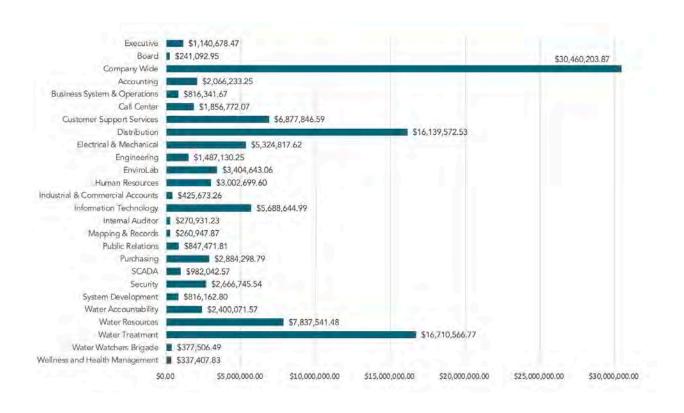




**SECTION 7: OVERVIEW OF DEPARTMENTS** 

# OPERATION & MAINTENANCE BUDGET – DEPARTMENT ALLOCATIONS

The total Operation & Maintenance Budget is \$115,324,044.93 and allocated as shown below.





# PERSONNEL SUMMARY BY DEPARTMENT

The schedule below is a summary of total budgeted personnel for fiscal years 2018 through 2022. The 2022 O&M Budget includes funding for 719.09 FTE, an increase of 27.95 FTE.

Division	Department	2018	2019	2020	2021	2022
EXECUTIVE	Executive	9.00	10.00	10.00	10,00	10.00
	Business Systems & Transformation	7.00	6.00	6.00	6.00	5.00
	Internal Audit	3.00	3.00	3.00	3.00	3.00
	Public Relations	1.00	1.00	3.00	3.00	3.00
	Total	20.00	20.00	22.00	22.00	21.00
	Call Center	36.23	36.23	36.23	36.23	36.53
	Customer Support Services	95.00	95.00	95.00	98.00	98.00
	Human Resources	14.00	14.00	14.00	14.00	15.00
FINANCE &	Information Technology	20.00	19.00	18.00	19.00	20.00
ADMINISTRATION	Accounting	12.00	27.45	27.45	26.73	27.80
	Treasury	16.60	0.00	0.00	0.00	0.00
	Purchasing	18.75	18.75	18.75	18.75	22.00
	Total	212.58	210.43	209.43	212.71	219.33
	EnviroLab	24.00	25.00	25.00	25.00	28.00
	Water Treatment	73.90	72.90	72.90	72.90	76.92
PERATIONS & TECHNICAL	Water Resources	33.00	33.00	33.00	33.00	33.00
SERVICES	SCADA	10.00	9.00	9.00	9.00	10.00
	Security	10.80	10.73	10.73	10.73	10,73
	Industrial & Commercial Accounts	2.00	2.00	2.00	3.00	3.00
	Total	153.70	152.63	152.63	153.63	161.65
	Electrical & Mechanical	40.00	40.00	40.00	40.00	44.00
	System Development	16.00	16.00	23.00	23.00	26.73
ENGINEERING &	Distribution	154.80	151.80	145.80	145.80	154.38
MAINTENANCE	Engineering	33.00	31.00	31.00	31.00	30.00
	Water Accountability	51.73	50.00	50.00	50.00	50.00
	Mapping & Records	12.00	12.00	12.00	13.00	12.00
	Total	307.53	300.80	301.80	302.80	317.11
	Grand Total	693.80	683.86	685.86	691.14	719.09

Numbers above reflect regular Full-Time and Part-Time Employees. Does not include co-ops, summer employees, temp employees, etc.



# **GOALS & OBJECTIVES METHODOLOGY**

Below are established goals and objectives for each department developed based on the Effective Utility Management Framework.

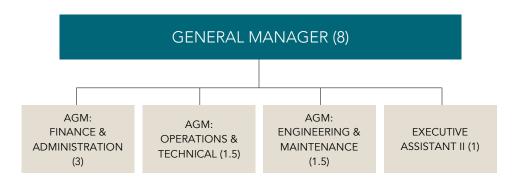




# **EXECUTIVE DEPARTMENT**

The Executive Department includes the General Manager, Assistant General Managers, the Board Administrator, Corporate Governance Specialist, and three Administrative Assistants. The Board of Directors is responsible for setting the Mission and Vision for the Birmingham Water Works Board (BWW) and providing direction and leadership to meet the goals. The Board Administrator and Corporate Governance Specialist report functionally to the Board and administratively to the General Manager.

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 BWW Directors.



#### **EXECUTIVE DEPARTMENT MISSION**

The mission of the Executive Department is to efficiently and effectively manage all aspects of the BWW's business plans, ensure organization goals are met, and provide the leadership that will enable BWW to accomplish its Mission and fulfill its Vision.



### **SUMMARY OF ACTIVITIES**

- Provide the Board with timely information and support
- Ensure that all water facilities and 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 and development of all employees in order to improve BWW's services
- Motivate employees and encourage teamwork throughout the organization
- Promote BWW to the community

# EXECUTIVE DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$976,671.54	\$1,086,050.21	\$109,378.67	11.20%
Mileage Reimbursement	1,291.80	1,291.80	-	
Uniforms - Non-Stock	200.00	200.00		-
Supplies & Expenses	20,176.80	20,176.80		-
Exp Gen Office Employee	2,355.90	2,355.90	1-2-74	-
Exp Office and Executive	78.53	78.53		-
Misc Gen Exp Membership Dues	4,306.00	4,306.00		11 77
Travel Misc Other	26,219.23	26,219.23	-	
Total Operation & Maintenance	\$1,031,299.80	\$1,140,678.47	\$109,378.67	10.61%

## **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$109,379 or 10.61% from the 2021 Approved Budget.

The major reason for the variance is:

• Merit and cost of living adjustment increases



# EXECUTIVE DEPARTMENT PERSONNEL SUMMARY

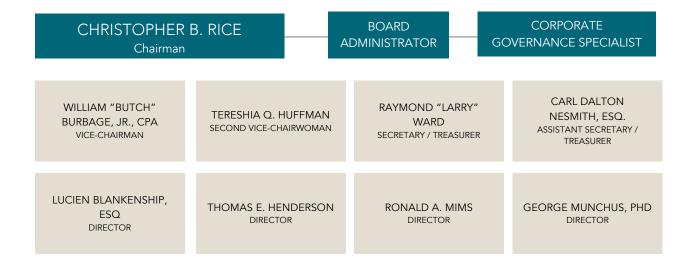
Job Title	2018	2019	2020	2021	2022
Manager - General	1.00	1.00	1.00	1.00	1.00
Manager - Assistant General	3.00	3.00	3.00	3.00	3.00
Executive Assistant To The Board	1.00	1.00	0.00	0.00	0.00
Board Administrator	0.00	0.00	1.00	1.00	1.00
Corporate Governance Specialist	0.00	0.00	1.00	1.00	1.00
Executive Assistant II	1.00	1.00	1.00	1.00	1.00
Executive Assistant	3.00	3.00	2.00	2.00	2.00
Cash & Debt Management Analyst	0.00	1.00	1.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	9.00	10.00	10.00	10.00	10.00

### **KEY PERFORMANCE MEASURES**

- 1. Continue to provide quality water service despite the impact of COVID-19 protocols on available workforce
- 2. Continue to deliver quality customer service as measured by canvassing the environment for positive or negative customer and stakeholder feedback
- 3. Determine the scope of an organizational assessment no later than the 1st quarter of FY2022
- 4. Continue to emphasize performance of the Historically Underutilized Business (HUB) program by reaching a spending target of 30% or higher
- 5. Develop and implement a plan to onboard newly assembled Board of Directors no later than June 30, 2022
- 6. Identify and prioritize projects that should be implemented to achieve goals listed in the Strategic Plan
- 7. Develop a report and provide updates on the status of the strategic plan
- 8. Leverage governmental affairs consultants to monitor and advise BWW on federal, state and local legislation and initiatives
- 9. Take advantage of opportunities to engage with customers and stakeholders through various communication platforms
- 10. Ensure operations of the department are conducted in accordance with all applicable rules and regulations



# **BOARD OF DIRECTORS**



# BOARD DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	202	1 NET BUDGET	2022 NET BUD	GET	\$ VARIANCE	% VARIANCE
Labor		\$99,403.95	\$99,40	03.95	-	
Mileage Reimbursement	- 1 -	1,722.40	8	61.20	(861.20)	(50.00%)
Supplies & Expenses		13,451.20	13,4	51.20		
Board Meeting Expenses		36,816.00	32,2	14.00	(4,602.00)	(12.50%)
Misc Gen Exp Membership Dues			2,1	53.00	2,153.00	100.00%
Travel Misc Other		38,754.00	93,00	09.60	54,255.60	140.00%
Misc. Gen Board Expenses		1,656.72		- "4	(1,656.72)	(100.00%)
Total Operation & Maintenance	\$	191,804.27	\$ 241,09	2.95	\$ 49,288.68	25.70%

### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$49,289 or 25.70% from the 2021 Approved Budget.

The major reason for the variance is:

• Travel expenses increased due to onboarding of new Board Members



# **COMPANY WIDE DEPARTMENT**

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

# COMPANY WIDE EXPENSES O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Employee Expenses Competition Program	\$50,000.00	\$50,000.00	1911	
Salary Survey/New Position Benefits		791,546.11	791,546.11	100.00%
Employee Recognition Program	-	90,000.00	90,000.00	100.00%
State Unemployment Insurance	19,715.00	15,000.00	(4,715.00)	(23.92%)
Federal Insurance Contributions Act Tax	2,461,811.05	2,669,720.00	207,908.95	8.45%
Employee Awards / Incentive Program		100,000.00	100,000.00	100.00%
Other Post Employment Benefits	1,075,062.66	768,126.67	(306,935.99)	(28.55%)
Employer Pension	5,099,761.94	5,303,752.42	203,990.48	4.00%
Healthcare Claims Employees	4,837,542.11	5,274,399.59	436,857.48	9.03%
Group Insurance Life and Disability	188,150.67	206,688.00	18,537.33	9.85%
Service Line	13,000.00		(13,000.00)	(100.00%)
Inventory Expense	200.00	-	(200.00)	(100.00%)
General Inventory Consumption	2,000.00	80.00	(1,920.00)	(96.00%)
Meter Madness Competition Supplies	5,000.00		(5,000.00)	(100.00%)
Tapping Team Water Competition Supplies	34,000.00	25,000.00	(9,000.00)	(26.47%)
License fees	4,380,000.00	4,600,000.00	220,000.00	5.02%
Legal	1,063,982.40	1,063,982.40		
Best Tasting Water Competition Supplies	1,050.00		(1,050.00)	(100.00%)
Top Operators Competition Supplies	1,000.00	230.00	(770.00)	(77.00%)
Insurance - Contract	1,983,295.37	2,388,021.47	404,726.10	20.41%
Uniforms - Non-Stock	1,015.00		(1,015.00)	(100.00%)
Bad Debt Expenses	4,436,895.00	4,436,895.00	12.19	
Supplies & Expenses	8,407.00	84,070.00	75,663.00	900.00%
Contributions	100,000.00	300,000.00	200,000.00	200.00%
Misc Gen Expenses Membership Dues	107,650.00	103,860.72	(3,789.28)	(3.52%)
Consultants	2,152,284.78	2,188,831.49	36,546.71	1.70%
Total Operation & Maintenance	\$28,021,822.98	\$30,460,203.87	\$2,438,380.89	8.70%



# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$2,438,381 or 8.70% from the 2021 Approved Budget.

The major reasons for the variance are:

- Healthcare expenses increased due to trends
- Property insurance premium increased due to an increase in rates and carriers exiting the utility market
- Compensation study and fringe benefits
- Enhanced employee recognition program



THE CAPITAL IMPROVEMENT 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.



# 2022 EMPLOYEE RECOGNITION PROGRAM

### **SUMMARY**

After researching documents from Gartner, Fond.co, and conducting Employee Focus Groups, BWW carefully designed its Employee Recognition Program to achieve 5 goals:

#### **GOALS**

- 1. Shape a strong and healthy culture according to BWW values
- 2. Improve engagement as employees feel valued and appreciated
- 3. Motivate high-performance and customer service
- 4. Increase employee retention so competitors do not steal our valued talent
- 5. Make BWW culture the most attractive option for top-in-class job seekers

#### SELECTING AWARD RECIPIENTS TO SHAPE A HEALTHY CULTURE

"What gets **recognized** gets **repeated**." The awards are intended to highlight behaviors we need repeated throughout our company that enable us to achieve our vision—to be "Nationally recognized for local excellence in water quality and service delivery."

When recognizing employees, we deliberately select and tie awards to:

- Behaviors that align with BWW's Core Values (Customer Service, Accountability, Safety ,and Teamwork)
- Performance that hits or surpasses our strategic targets (KPIs on Strategic Plan, metrics, goals, etc.

#### **BOARD INVOLVEMENT**

The Board's participation in the Employee Recognition Program adds value to the impact it creates. The Board has an opportunity to celebrate the important contributions of BWW employees and teams as we tie awards to company values and strategic plans.

#### **PROGRAMS**

- 1. **Individual** Quarterly Award (Formerly "Employee of the Month": for individuals and team members from each division
- 2. **Teams** Award: for set teams within departments, temporary task-forces, or cross-functional teams across multiple departments for promoting team collaborative performance
- 3. Leaders Quarterly Award: for those in leadership roles from each division
- 4. Real Time Recognitions: for celebrating birthdays and work anniversaries
- 5. Create a "Culture Committee": for finding creative and meaningful ways to celebrate awards



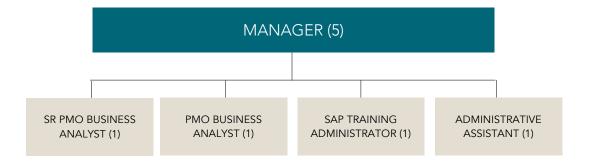
# **BUSINESS SYSTEMS & TRANSFORMATION**

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 differ from 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 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.





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

As a market leader in enterprise application software, SAP helps companies of all types and sizes run better. From the back office to the 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.

## **BUSINESS SYSTEMS & TRANSFORMATION 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
- 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 companywide
- 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



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

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$525,532.22	\$495,006.00	(\$30,526.22)	(5.81%)
Supplies & Expenses	8,827.35	8,827.35		· · · · ·
Misc Gen Exp Membership Dues	2,217.59	2,217.59		4
Travel Misc Other	9,473.20	15,157.12	5,683.92	60.00%
Consultants	263,487.50	295,133.61	31,646.11	12.01%
Total Operation & Maintenance	\$809,537.86	\$816,341.67	\$6,803.81	0.84%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$6,804 or .84% from the 2021 Approved Budget.

The major reason for the variance is:

• Consulting expense projected to increase based on historical trends

# BUSINESS SYSTEMS & TRANSFORMATION DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Business Systems Manager	1.00	1.00	1.00	1.00	1.00
SAP Business Analyst	2.00	1.00	1.00	0.00	1.00
SAP Business Analyst Sr.	2.00	2.00	2.00	3.00	1.00
SAP / Business System Training Administrator	1.00	1.00	1.00	1.00	1.00
Administrative Assistant II	1.00	1.00	1.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	7.00	6.00	6.00	6.00	5.00





THE BIRMINGHAM WATER WORKS EMPLOYS MORE THAN 600 PEOPLE IN THE BIRMINGHAM AREA.

# **KEY PERFORMANCE MEASURES**

- 1. Complete approved projects on time (based on agreed upon schedule) and within budget
- 2. Conduct at least 3 SAP navigation classes for new hires and promoted employees during the year
- 3. Conduct at least 4 SAP content courses for approximately 60 employees during the year
- 4. Distribute exit surveys to stakeholders at the end of each project
- 5. Coordinate and monitor the Dashboard Reporting initiative to ensure its completion no later than end of third quarter



# INTERNAL AUDIT

The internal audit function was established by the Finance Committee (the Committee) of the Board of Directors in the Internal Audit Charter in September 2004. The Committee defines the internal audit responsibilities as part of their oversight role. The Internal Auditing Department reports functionally to the Committee and administratively to the General Manager.

The Internal Auditing Department is the BWW'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:

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



# **INTERNAL AUDIT MISSION**

To enhance and protect organizational value by providing risk-based and objective assurance, recommendations 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 on the improvement of controls
- Evaluate risk management assuring that adequate controls are in place to mitigate risks
- Analyze operations, confirm information, verify the existence of assets and recommend proper safeguards
- 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 are being carried out as planned
- Inspect reported occurrences of anomaly, embezzlement, theft, waste, etc.
- Publish and issue written reports, making recommendations for correcting problems, following the conclusion of each internal audit engagement
- 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 3 calendar years for the Committee review and approval

# INTERNAL AUDITING DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$249,192.72	\$265,397.22	\$16,204.50	6.50%
Mileage Reimbursement	123.80	123.80	- 4.	
Supplies & Expenses	452.30	452.30	Z (4)	
Misc Gen Exp Membership Dues	2,381.22	2,605.13	223.91	9.40%
Travel Misc Other	1,649.20	1,347.78	(301.42)	(18.28%)
Consultants	850.00	1,005.00	155.00	18.24%
Total Operation & Maintenance	\$254,649.24	\$270,931.23	\$16,281.99	6.39%

# HIGHLIGHTS OF INTERNAL AUDITING BUDGET CHANGES

The 2022 Approved Budget increased by \$16,282 or 6.39% from the 2021 Approved Budget.

The major reason for the variance is:

Merit and cost of living adjustment increases



# INTERNAL AUDITING DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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
TOTAL DEPARTMENT PERSONNEL	3.00	3.00	3.00	3.00	3.00

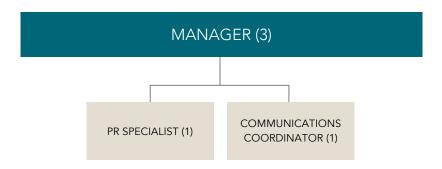
### **KEY PERFORMANCE MEASURES**

- 1. Complete greater than 90% of the total annual audits from Audit Plan
- 2. Complete special request audits at 100%. Audit recommendations are accepted and implemented at 100%
- 3. Track the number of significant audit findings, audit issues and repeat findings at 100%
- 4. Utilize ALESSA continuous monitoring software monthly to minimize financial loss
- 5. Evaluate percentage of employees who receive ethics compliance training and number of calls to fraud/ethics hotline with resolution, semi-annually
- 6. Require 32 hours of training and professional development for employees, including 8 hours of accounting and auditing, 10 hours of fraud and 2 hours of ethics
- Publish an internal audit plan annually, including audits for the next 3 calendar years for the Finance Committee review and approval
- 8. Meet annually with the Finance Committee of the Board of Directors



# **PUBLIC RELATIONS**

The BWW Public Relations (PR) Department is responsible for setting a message calendar to detail primary monthly topics for customer-facing news and information, educational efforts, and PR initiatives throughout the year. Along with being the point of contact for the media, the Public Relations Department also works closely with the BWW's public relations agency.



### **PUBLIC RELATIONS MISSION**

The mission of the Public Relations Department is to consistently enhance and illustrate the image, mission and values of BWW 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 BWW 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 BWW 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 BWW provides
- Prepares and gives speeches on various subjects relating to water supply and conservation, as needed
- Assists and coaches BWW 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 and reach engagement objectives
- Plans and executes campaigns to grow the reach of the BWW social media channels; curates external, third
  party content sources
- Develops and writes public service announcements for media outlets and ensure Public Service
   Announcements (PSAs) are broadcast or published



# PUBLIC RELATIONS DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
\$241,476.63	\$274,561.81	\$33,085.18	13.70%
1,000.00	500.00	(500.00)	(50.00%)
500.00	500.00		-
40,000.00	40,000.00	3.0	
1,500.00	1,500.00		
1,000.00	5,000.00	4,000.00	400.00%
11,200.00	11,200.00	-	
457,610.00	514,210.00	56,600.00	12.37%
\$754,286.63	\$847,471.81	\$93,185.18	12.35%
	\$241,476.63 1,000.00 500.00 40,000.00 1,500.00 1,000.00 11,200.00 457,610.00	\$241,476.63 \$274,561.81 1,000.00 500.00 500.00 500.00 40,000.00 40,000.00 1,500.00 1,500.00 1,000.00 5,000.00 11,200.00 11,200.00 457,610.00 514,210.00	\$241,476.63 \$274,561.81 \$33,085.18 1,000.00 500.00 (500.00) 500.00 500.00 - 40,000.00 40,000.00 - 1,500.00 1,500.00 - 1,000.00 5,000.00 4,000.00 11,200.00 11,200.00 - 457,610.00 514,210.00 56,600.00

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$93,185 or 12.35% from the 2021 Approved Budget.

The major reasons for the variance are:

- Merit and cost of living allowance increases
- Public engagement initiatives and rebranding



# PUBLIC RELATIONS DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Public Communications Specialist	1.00	1.00	0.00	0.00	0.00
Public Relations Manager	0.00	0.00	1.00	1.00	1.00
Public Relations Specialist	0.00	0.00	1.00	1.00	1.00
Communications Coordinator	0.00	0.00	1.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	1.00	1.00	3.00	3.00	3.00

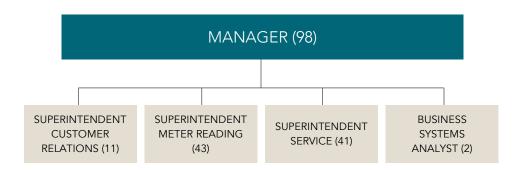
# **KEY PERFORMANCE MEASURES**

- 1. Monitor and manage all public relations and communication initiatives for the utility on a daily basis
- 2. Maintain updated social media platforms daily to ensure a clear two-way communication channel for customers while building our audience reach
- 3. Review local, state, and national media outlets daily for stories that pertain to or may impact the image of BWW
- 4. Sustain and build on internal working relationships with all departments and the executive team in order to effectively communicate to the public on a weekly basis
- 5. Meet with local elected and appointed officials and neighborhood groups monthly to discuss issues that impact them as it relates to BWW



# **CUSTOMER SUPPORT SERVICES**

The Customer Support Services 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.



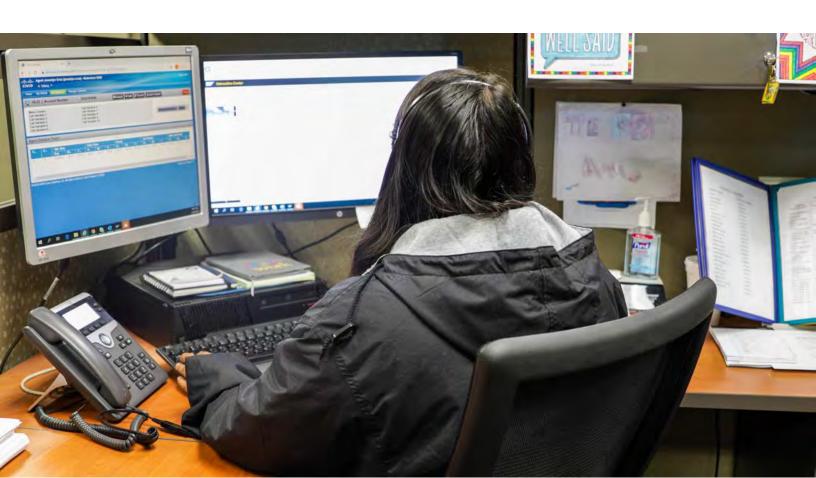
# **CUSTOMER SUPPORT MISSION**

Customer Support Services is committed to providing accurate meter reading, quality professional field services and making timely billing adjustments to resolve customers' concerns in the 5 leading municipalities. Our goal is to improve the public perception of BWW as a leader in the water industry.



### **SUMMARY OF ACTIVITIES**

- Read residential, commercial and small industrial water meters on handheld devices
- Ensure the loading and unloading of handheld devices are performed daily
- Maintain the GeoCode Route Smart system using ArcView, ArcGIS, ArcInfo, 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 for delinquent accounts
- Install new meters at customers' premises 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
- Utilize the BPEM cases to process, investigate and make corrections for billing errors, misread meters and leak adjustments
- Provide customer account information to third party collection agency to support collection efforts on charged off accounts
- Inspect private meters and measure pools for sewer billing adjustments





# CUSTOMER SUPPORT SERVICES DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$ 5,671,442.17	\$ 5,872,361.46	\$ 200,919.29	3.54%
Cafeteria Expense	22,042.00	30,000.00	7,958.00	36.10%
Transportation Expense	220,000.00	215,000.00	(5,000.00)	(2.27%)
Uniforms	8,100.00	6,000.00	(2,100.00)	(25.93%)
Meters	10,000.00	16,000.00	6,000.00	60.00%
General Inventory Consumption	28,000.00	31,500.00	3,500.00	12.50%
Facilities Other	4,500.00	3,500.00	(1,000.00)	(22.22%)
Utilities - Electric	120,000.00	130,000.00	10,000.00	8.00%
Uniforms - Non-Stock	28,950.00	21,750.00	(7,200.00)	(24.87%)
Bad Debt Collection Expenses	180,000.00	180,000.00		
Utilities-Telephone	3,700.00	3,700.00		
Utilities - Gas & Water	45,000.00	55,000.00	10,000.00	22.22%
Supplies & Expenses	36,938.70	37,101.01	162.31	0.44%
Fuel	225,355.00	225,355.00		
Materials Collecting	7,300.00	6,500.00	(800.00)	(10.96%)
Materials Meter Reading	25,944.80	35,500.00	9,555.20	36.83%
Travel Misc Other	3,444.80	*	(3,444.80)	(100.00%)
Other O&M Expenses	13,861.02	8,579.12	(5,281.90)	(38.11%)
Total Operation & Maintenance	\$ 6,654,578.49	\$ 6,877,846.59	\$ 223,268.10	3.36%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$223,268 or 3.36% from the 2021 Approved Budget.

The major reasons for the variance are:

- Merit and cost of living allowance increases
- Utilities increased based on projections



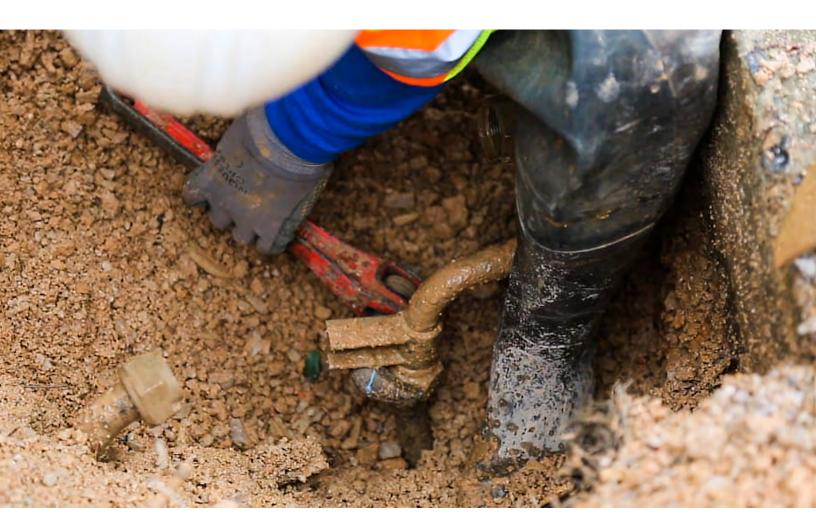
# CUSTOMER SUPPORT SERVICES DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - Customer Support Services	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00	2.00	2.00	2.00
Collections Specialist - Senior	1.00	0.00	0.00	0.00	0.00
Customer Relations - Team Leader	0.00	0.00	1.00	1.00	1.00
Collections Specialist II	6.00	7.00	8.00	8.00	8.00
Customer Support Specialist - Team Leader	2.00	2.00	2.00	2.00	2.00
Customer Support Specialist III	12.00	12.00	10.00	10.00	7.00
Customer Support Specialist II	0.00	0.00	0.00	0.00	4.00
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	6.00	7.00	6.00	6.00	6.00
Meter Reader II	8.00	8.00	7.00	7.00	5.00
Meter Reader Trainee	15.00	14.00	16.00	19.00	21.00
GIS Technician	1.00	1.00	1.00	1.00	0.00
TOTAL DEPARTMENT PERSONNEL	95.00	95.00	95.00	98.00	98.00



# **KEY PERFORMANCE MEASURES**

- 1. Maintain meter reading performance of 95% to ensure accurate customer billing and consumption information
- 2. Collect on delinquent accounts in-house within 45 days of shutoff and prior to the accounts being written off and turned over to a collection agency
- 3. Manage all debt collection to ensure 95% compliance with BWW 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 repairs within 72 hours of receipt
- 5. Perform preventive and predictive maintenance on essential equipment to maintain equipment readiness of 100%



WATER LINE REPLACEMENT PROJECT: BWW WILL CONTINUE REPLACEMENT OF THE SYSTEM'S OLDER DISTRIBUTION MAINS, PARTICULARLY GALVANIZED STEEL, DUE TO EXCESSIVE REPAIRS, WATER QUALITY, LOW FIRE FLOW, ETC.



# **CALL CENTER**

The 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, disconnections, transfer service requests, refunds, account adjustments and invoicerelated issues.



# **CALL CENTER 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 BWW. 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 services, discontinue service and update customer's records
- Provide detailed information and/or instructions to requesting parties concerning BWW 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's 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 customer complaints
- Research, investigate and resolve Better Business Bureau (BBB) complaints from residential and commercial customers

# CALL CENTER DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,789,387.21	\$1,835,797.24	\$46,410.03	2.59%
Uniforms	120.00		(120.00)	(100,00%)
Uniforms - Non-Stock	400.00	600.00	200.00	50.00%
Utilities-Telephone	420.35	840.70	420,35	100.00%
Supplies & Expenses	10,929.10	8,499.96	(2,429,14)	(22,23%)
Misc Gen Exp Membership Dues	1,136.78	1,085.11	(51.67)	(4.55%)
Materials Customer Accounting	5,600.00	5,600.00	-	
Travel Misc Other	2,583.60	4,349.06	1,765.46	68.33%
Total Operation & Maintenance	\$1,810,577.04	\$1,856,772.07	\$46,195.03	2.55%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$46,195 or 2.55% from the 2021 Approved Budget.

The major reason for the variance is:

• Merit and cost of living adjustment increases



# CALL CENTER DEPARTMENT PERSONNEL SUMMARY

2018	2019	2020	2021	2022
1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00
2.00	2.00	2.00	2.00	2.00
8.00	8.00	8.00	8.00	7.00
4.00	7.00	7.00	7.00	5.00
18.00	15.00	15.00	15.00	18.00
2.23	2.23	2.23	2.23	2.53
36.23	36.23	36.23	36.23	36.53
	1.00 1.00 2.00 8.00 4.00 18.00 2.23	1.00 1.00 1.00 1.00 2.00 2.00 8.00 8.00 4.00 7.00 18.00 15.00 2.23 2.23	1.00     1.00     1.00       1.00     1.00     1.00       2.00     2.00     2.00       8.00     8.00     8.00       4.00     7.00     7.00       18.00     15.00     15.00       2.23     2.23     2.23	1.00     1.00     1.00     1.00       1.00     1.00     1.00     1.00       2.00     2.00     2.00     2.00       8.00     8.00     8.00     8.00       4.00     7.00     7.00     7.00       18.00     15.00     15.00     15.00       2.23     2.23     2.23     2.23

# **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 6 random customer calls
- 6. Initiate 100% of field service work orders from customers



# **HUMAN RESOURCES**

The Human Resources Department oversees the development and implementation of human resources policies, programs and services including talent acquisition, onboarding, retention, employee benefits and compensation administration, employee relations, career development and succession planning, employment practices and procedures, performance management, legal compliance, employee engagement, and safety and risk management areas and programs.



## **HUMAN RESOURCES MISSION**

Recruit, develop, reward, and retain a committed and high performing workforce.

## **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 Executive Staff, Management and all levels of employees throughout the organization
- Provide leadership in the critical area of talent acquisition by developing the most creative and costeffective ways of generating high-quality candidates in the marketplace for BWW
- 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, worker's compensation, etc.
- Ensure Organizational Learning & Development 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 and administer personnel record keeping, employee performance 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 & business needs

## **AWARDS**

BWW's Human Resource Training and Organizational Development received the Training Magazine's Top 125 Award in each of the last eight years. This award is given by a worldwide leader in the learning industry to organizations that have demonstrated success in conducting organizational development programs.

# THE BWW PLACED:

2021	8
2020	6
2019	7
2018	19
2017	21
2016	10
2015	24
2014	75
2013	95



BWW RECEIVED THE 2020 TRAINING MAGAZINE'S TOP 125 AWARD ON FEBRUARY 24, 2020. BWW WAS ALSO RECOGNIZED ON FEBRUARY 8, 2021 IN THE 2021 VIRTUAL EVENT. (L TO R: GENERAL MANAGER MICHAEL JOHNSON, TRAINING COORDINATOR MEREDITH HOLLINS, TRAINING ORGANIZATIONAL DEVELOPMENT & SAFETY/RISK MANAGEMENT OFFICER RHONDA LEWIS, HUMAN RESOURCES MANAGER PAUL LLOYD, PUBLIC RELATIONS MANAGER RICK JACKSON)

# HUMAN RESOURCES DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,143,043.62	\$1,279,511.22	\$136,467.60	11.94%
Training - HR	156,000.00	156,000.00		1 and 1 and
Emp Retirement/Anniversary	39,000.00	45,000.00	6,000.00	15.38%
Special Screening	9,473.20	9,473.20		
Flexible Benefit	28,200.00	74,786.00	46,586.00	1.65
Health Screening	8,612.00	10,334.40	1,722.40	20.00%
Health Club	73,202.00	73,202.00		= 3
Emp Asst Program	44,000.00	44,000.00		
Emp Recruiting	38,754.00	77,508.00	38,754.00	100.00%
Tuition Reimbursement	67,173.60	77,508.00	10,334.40	15.38%
Workers Comp Expense	516,720.00	569,567.66	52,847.66	10.23%
Facilities Other	8,407.00	12,610.50	4,203.50	50.00%
Insurance	400,000.00	400,000.00	100	
Supplies & Expenses	48,760.60	47,034.97	(1,725.63)	(3.54%)
Structural Expenses	29,424.50	29,424.50		
Misc Gen Exp Membership Dues	5,167.20	6,372.88	1,205.68	23.33%
Travel Misc Other	33,586.80	33,586.80		·
Consultants	89,000.00	45,000.00	(44,000.00)	(49.44%)
Other O&M Expenses	13,678.60	11,779.47	(1,899.13)	(13.88%)
Total Operation & Maintenance	\$2,752,203.12	\$3,002,699.60	\$250,496.48	9.10%



# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$250,496 or 9.1% from the 2021 Approved Budget.

The major reasons for the variance are:

- 1 position was added
- Employee recruiting expenses Increased due to a tight labor market

# HUMAN RESOURCES DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - Human Resources	1.00	1.00	1.00	1.00	1.00
Assistant Human Resources Manager	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	1.00	1.00	1.00	1.00	1.00
Human Resources Business Partner	1.00	1.00	1.00	1.00	1.00
Compensation / Benefits / HRIS Administrator	1.00	1.00	1.00	1.00	1.00
Talent Management Officer	1.00	1.00	1.00	1.00	1.00
Talent Management Administrator	0.00	0.00	0.00	0.00	1.00
Human Resources Assistant	1.00	1.00	1.00	1.00	0.00
Human Resources Coordinator	0.00	0.00	0.00	0.00	1.00
Training & OD Specialist	1.00	1.00	1.00	1.00	2.00
Training Specialist	1.00	1.00	1.00	1.00	0.00
Training Coordinator	1.00	1.00	1.00	1.00	1.00
Safety / Risk Management Supervisor	1.00	1.00	1.00	1.00	0.00
Risk Management Supervisor	0.00	0.00	0.00	0.00	1.00
Safety / Risk Management Specialist	1.00	1.00	1.00	1.00	0.00
Safety Representative	0.00	0.00	0.00	0.00	1.00
Safety / Risk Management Coordinator	1.00	1.00	1.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	14.00	14.00	14.00	14.00	15.00



#### **APPROVED NEW POSITION**

### TALENT MANAGEMENT ADMINISTRATOR

- Develop a pipeline recruitment program
- Design creative sourcing strategies as appropriate
- Work with hiring managers and staff to ensure compliance with all laws and regulations
- Train Human Resources team and hiring managers for consistent and efficient hiring practices

### **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 BWW employee relations goals
- 4. Maintain an average time-to-fill metric in line with Gartner's benchmark time-to-fill average
- 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. Develop and administer annual organizational programs and training solutions which impact behavioral change (Kirkpatrick Model Level 3) and business results (Kirkpatrick Model Level 4)
- 9. Implement annual preventive safety plans aimed at reducing vehicle accidents and personal injury costs



# WELLNESS & HEALTH MANAGEMENT

The Wellness & Health Management programs are provided to employees and spouses covered under the BWW health insurance plan to increase employee productivity and wellbeing.

### **WELLNESS & HEALTH MANAGEMENT MISSION**

To help control and decrease future health insurance costs by preventing or better managing certain medical conditions.

## **SUMMARY OF ACTIVITIES**

## Humana Go365 Rewards Program:

• Encourage 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

### Freshbenies Program:

Provides advocacy, telehealth, and potential medical savings services. With telehealth services: 24/7 access
to a doctor by phone or video to get a diagnosis, treatment options and a prescription. Employees save
time and money by avoiding crowded waiting rooms in the doctor's office, urgent care clinic or the ER. The
program provides unlimited visits with no per-visit fee.

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

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
BWWB Wellness Ctr Ex	\$294,530.40	\$337,407.83	\$42,877.43	14.56%
Total Operation & Maintenance	\$294,530.40	\$337,407.83	\$42,877.43	14.56%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$42,877 or 14.56% from the 2021 Approved Budget.

The major reason for the variance is:

• Expenses increased based on trend

# **PERSONNEL SUMMARY**

There are no personnel in this cost center.



# WATER WATCHERS

In a continuing effort to educate our community, the BWW extends the Young Water Ambassador Program to high school students within our water service area with the primary objective of effectively assisting students to successfully enter into the workforce while increasing their awareness of water quality, conservation and pollution.

# **WATER WATCHERS MISSION**

To promote understanding, appreciation, enjoyment and stewardship of our water resources while providing the Young Water Ambassadors with basic life skills, knowledge and awareness of potential careers in the water industry.



MEMBERS OF THE WATER WATCHERS AMBASSADORS PROGRAM PARTICIPATE IN A LEARNING SESSION.



### **SUMMARY OF ACTIVITIES**

Young Water Ambassadors 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 the water treatment process
- Observe Distribution Training which includes the simulation of a water main break
- Learn the dynamics of Public Speaking
- Learn skills such as making water taps, operating fire hydrants and assembling and installing water meters
- 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 within our water sources
- Visit the Cahaba River on a guided tour to learn about water resource protection, conservation and restoration
- Participate in team building activities facilitated by the staff of Red Mountain Park to impart students with knowledge regarding various personality types and how best to work together to accomplish common goals
- Attend programs facilitated by Junior Achievement relative to the importance of saving and maintaining finances
- Attend a day program by the Safe Kids Coordinator at Children's of Alabama, to take place at Trussville
   Play Station to learn the importance of not driving while distracted or under the influence
- Tour Junior Colleges (Jefferson State, Lawson State and Shelton State) to gain information about various trades (i.e. welding, plumbing, brick mason, HVAC, etc.)
- Tour 4-year college campuses at UAB, Birmingham Southern and Samford University
- Participate in numerous community service projects, such as participating in functions spearheaded by the Public Relations department, such as Hydrate the City (sharing information with our citizens about the importance of staying hydrated); community clean ups and other
- Assist with our Clean, Paint, and Repair Program (CPR) whereby they perform tasks such as painting, etc.
- Ensure the cleanliness of the grounds as well as inside the MLK Recreation Center, which was our reporting location



# WATER WATCHERS DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$278,799.49	\$278,799.49		
Transportation Expense	71,300.00	79,657.00	8,357.00	11.72%
General Inventory Consumption	550.00	550.00		
Rent / Storage Facil	1,000.00	1,500.00	500.00	50.00%
Uniforms - Non-Stock	3,000.00	3,000.00		- 14
Supplies & Expenses	10,000.00	10,000.00	- 2	
Fuel	4,000.00	4,000.00	12	
Total Operation & Maintenance	\$368,649.49	\$377,506.49	\$8,857.00	2.40%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$8,857 or 2.40% from the 2021 Approved Budget.

The major reason for the variance is:

• Transportation expenses projected to increase based on historical trends

# **PERSONNEL SUMMARY**

The BWW hires 100 Water Watchers, 11 Teachers and 10 Ambassadors In Training (AITs) annually during the summer.





# INFORMATION TECHNOLOGY

The Information Technology (IT) Department focuses on the overall computing needs of BWW. The IT Team is responsible for the fulfilment of data processing performed within BWW, 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 BWW in strategic decision-making and overall service delivery.



# **INFORMATION TECHNOLOGY MISSION**

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

#### **SUMMARY OF ACTIVITIES**

- Support company-wide use of digital telephone systems which includes testing, installation, configuration, monitoring and maintenance
- Support application software utilized by various BWW departments which includes testing, installation, configuration, monitoring and maintenance
- Manage configuration management process which involves identifying, controlling, maintaining and verifying the versions of all configuration items in the BWW technical environment



- Provide Help Desk support to the entire BWW employee base with regard to requests for service, including problems, technical modifications and request for IT services
- Manage the desktop hardware/software, mobile device hardware/software and endpoint-based application software for BWW which includes software maintenance, upgrades and the creation of new images
- · Provide support to BWW 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 BWW'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 BWW IT systems to ensure their maintenance is compliant with defined organizational service levels
- Maintain specific utility-wide services related to electronic mail, internet connectivity, web platforms and network connectivity (data, voice)
- Install, configure and support the local area network (LAN), wide area network (WAN), wireless and related network segments to ensure operability and availability
- Maintain company data backup/restoral systems and processes
- Maintain company business data replication systems and processes
- Maintain infrastructure for company firewall and other security-related systems
- Maintain a persistent focus on detecting and preventing cyber threats to the organization's computing environment
- Identify risks and deficiencies within the organization's computing infrastructure (software, hardware, networks) and determines steps for remediation
- Plan, implement, and maintain security measures for the protection of computer networks and information
- Provide internal technical leadership for responding to computer security breaches/viruses
- Perform vulnerability testing, risk analyses and cyber security-related assessments
- Collaborate with appropriate BWW areas to train employees on cyber security awareness and operational procedures
- Enhance the current cyber security and IT security tools to provide continuous protection of organization technology infrastructure and data
- Evaluate end-user business needs to recommend, develop, implement and support solutions to meet those needs
- Analyze user requirements, procedures and problems to automate or improve existing systems/applications, and design and develop new solutions
- Plan project stages and assess operational implications throughout the project management life cycle
- Handle programming and/or configuration for vendor-developed software
- Provide custom programming solutions and applications
- Provide support for cloud-based applications supported by the IT Team



- Responsible for the BWW's intranet and internet websites which includes content management and administration
- Perform exploratory analysis of internal and external data sets in order to draw conclusions about the information
- Focus on streamlining the life cycle of information with electronic document management and automated workflows (capture, manage, store, preserve, deliver)
- Lead and manage major technology projects to achieve business strategy and vision
- Oversee process improvement projects/initiatives which are integrated with the technical processing environment
- Develop, publish and enforce policies and processes governing corporate data, including but not limited to data collection, warehousing, data validation, integrity, timeliness, protection, relationships and ownership
- Champion and oversee the key business process for change control, incident (outages) management and problem (post-incident review) management
- Handle risk management within the information technology segment associated with the ownership, involvement, operation, influence, adoption and use of technology across BWW
- Perform analytical, process management and administrative duties in support of IT key processes and operational business goals
- Partner with the HR Team, Accounting /Payroll, IT, PMO, internal clients and external vendors to analyze system process design and flow, improve processes, and leverage the return on HR technology capabilities



# INFORMATION TECHNOLOGY DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,565,699.50	\$1,521,087.00	(\$44,612.50)	(2.85%)
Mileage Reimbursement	887.04	637.29	(249.75)	(28.16%)
Permits	1,100,000.00	1,115,000.00	15,000.00	1.36%
Uniforms - Non-Stock	500.00	500.00		
Utilities-Telephone	310,000.00	300,000.00	(10,000.00)	(3.23%)
Supplies & Expenses	5,858.38	4,858.38	(1,000.00)	(17.07%)
Software Maintenance Support	1,190,000.00	1,285,000.00	95,000.00	7.98%
NonCapital Software Replacement	930,000.00	892,000.00	(38,000.00)	(4.09%)
Equipment Maintenance/Support	125,000.00	357,000.00	232,000.00	185.60%
NonCapital Equipment Replacement	80,500.00	65,000.00	(15,500.00)	(19.25%)
Misc Gen Exp Membership Dues	2,153.00	2,966.83	813.83	37.80%
Travel Misc Other	33,935.59	37,380.39	3,444.80	10.15%
Consultants	67,256.00	107,215.10	39,959.10	59.41%
Total Operation & Maintenance	\$5,411,789.51	\$5,688,644.99	\$276,855.48	5.12%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$276,855 or 5.12% from the 2021 Approved Budget. The major reasons for the variance are:

- Maintenance expenses are projected to increase for infrastructure and systems software based upon software added in 2021
- Support for cloud-related computing services are projected to increase based on current year spending trends and expanded usage in 2022
- 1 position was added
- Salary for staff replacements are less than incumbent salaries



# INFORMATION TECHNOLOGY DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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	3.00
Business Analyst / Project Manager I	0.00	0.00	0.00	0.00	1.00
Sr Technical Analyst - Infrastructure Supervisor	1.00	1.00	1.00	1.00	1.00
IT Systems Support Supervisor	1.00	1.00	1.00	1.00	1.00
Senior HRIS Analyst	0.00	0.00	0.00	0.00	1.00
Business Systems Analyst	2.00	2.00	2.00	2.00	2.00
IT Web Information Security Analyst	1.00	1.00	1.00	1.00	2.00
Cyber Security Analyst	0.00	0.00	0.00	1.00	0.00
Routing / Switching Analyst	1.00	1.00	0.00	0.00	0.00
SAP Technical Analyst	1.00	1.00	0.00	0.00	0.00
Technical Analyst III	1.00	1.00	2.00	2.00	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 II	2.00	1.00	0.00	0.00	0.00
Help Desk Coordinator / Technician	1.00	1.00	2.00	2.00	2.00
TOTAL DEPARTMENT PERSONNEL	20.00	19.00	18.00	19.00	20.00

# **APPROVED NEW POSITION**

### **SENIOR HRIS ANALYST**

- Partner with the HR Team, Accounting /Payroll, IT, PMO, internal clients and external vendors to analyze system process design and flow, improve processes, and leverage the return on HR technology capabilities
- Identify trends, design, implementation, maintenance, testing, troubleshooting and other enhancements to ensure successful utilization of systems
- Configure and administer security roles for SuccessFactors, Kronos, and other HR technology platforms



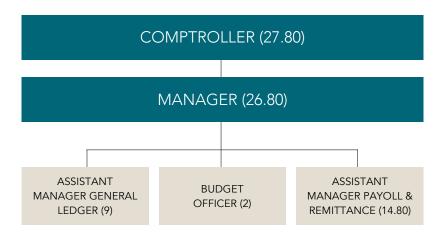
# **KEY PERFORMANCE MEASURES**

- 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 service disruptions within 60 minutes and determine the root cause within three business days



# **ACCOUNTING**

The Accounting Department administers the organization's accounting principles, procedures, initiatives and internal controls through 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. The department provides accounting support for cost of service studies, actuarial reviews, audits and system implementations.



#### **ACCOUNTING MISSION**

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

### **SUMMARY OF ACTIVITIES**

- Provide the 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
- Analyze Operation & Maintenance budget variances
- Process accurate and timely biweekly, monthly 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

# ACCOUNTING DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,697,551.98	\$1,871,334.26	\$173,782.28	10.24%
Cafeteria Expense	1,722.40	1,722.40	- A	-
Mileage Reimbursement	701.88	637.29	(64.59)	(9.20%)
Misc NonOperating Expenses	55,000.00	62,000.00	7,000.00	12.73%
Supplies & Expenses	44,947.27	64,150.07	19,202.80	42.72%
Misc Gen Exp Membership Dues	7,680.19	7,679.76	(0.43)	(0.01%)
Materials Collecting	15,000.00	15,100.00	100.00	0.67%
Travel Misc Other	27,717.73	29,539.05	1,821.32	6.57%
Consultants		8,614.42	8,614.42	100.00%
Other O&M Expenses	5,656.00	5,456.00	(200.00)	(3.54%)
Total Operation & Maintenance	\$1,855,977.45	\$2,066,233.25	\$210,255.80	11.33%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$210,256 or 11.33% from the 2021 Approved Budget.

The major reason for the variance is:

• 1 position was added



# ACCOUNTING DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Comptroller	0.00	0.00	0.00	0.00	1.00
Manager - Accounting	1.00	1.00	1.00	1.00	1.00
Assistant Accounting Manager	1.00	2.00	2.00	2.00	3.00
General Ledger Supervisor	0.00	0.00	1.00	1.00	0.00
Accountant III	4.00	3.00	2.00	2.00	2.00
Accountant II	2.00	3.00	3.00	3.00	3.00
Accountant I	0.00	1.00	2.00	2.00	2.00
Accounts Payable Clerk II	2.00	2.00	1.00	1.00	1.00
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	0.00	1.00	1.00	1.00	1.00
Supervisor-Cashiers	0.00	1.00	1.00	1.00	1.00
Cashier Team Leader	0.00	2.00	2.00	2.00	2.00
Cashier III	0.00	1.00	0.00	0.00	1.00
Cashier II	0.00	2.00	2.00	2.00	2.00
Cashier I	0.00	4.45	5.45	4.73	3.80
Remittance Processing Specialist II	0.00	2.00	2.00	2.00	2.00
TOTAL DEPARTMENT PERSONNEL	12.00	27.45	27.45	26.73	27.80

# **APPROVED NEW POSITION**

# COMPTROLLER

- Manage and lead all financial services
- Review and analyze financial reports, incorporates best practices
- Document policies, streamline processes and enhance internal controls and procedures



# **KEY PERFORMANCE MEASURES**

- 1. Administer the accounting principles, procedures and programs to certify 100% compliance with the utility industry and generally accepted accounting principles 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 annually to ensure corporate governance and financial security
- 5. Review and pay all requisitions to ensure 100% compliance with BWW accounting policies and procedures
- 6. Monitor all trusteed accounts activity to maintain 100% compliance with bond agreements
- 7. Reconcile all general ledger balance sheet accounts monthly
- 8. Review and pay all sewer authorities through Automated Clearing House (ACH) according to each schedule and contractual agreements
- 9. Process customer payments daily from the post office, night deposit, electronic payments and collection agencies with 100% accuracy and balance the totals to SAP
- 10. Collect and process walk-in, drive-up and online payments from internal and external customers, with a goal of 100% accuracy and efficiency
- 11. Conduct daily, weekly and monthly cash audits within Payment Center to ensure proper cash handling and efficiency
- 12. Perform daily reconcilement of checks and currency received before processing deposits to the bank





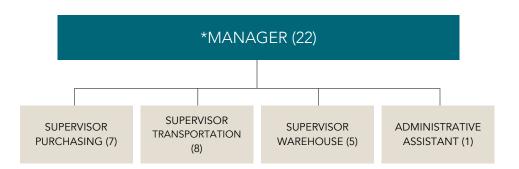
# **PURCHASING**

The Purchasing Department is responsible for purchasing all materials utilized by the BWW. 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 BWW's current fleet of vehicles (approximately 347 vehicles). The BWW spends approximately \$2 million annually for vehicle purchases and maintenance. Transportation staff runs 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 BWW's Historically Underutilized Businesses (HUB) program, which is designed to encourage the participation of historically underutilized businesses. Its goal is to exercise positive financial control over purchases and to meet the needs of internal customers and all BWW departments by acquiring the most appropriate products and services at the lowest possible prices.



<sup>\*</sup>This position will report to the Comptroller which is included in Accounting.

### **PURCHASING MISSION**

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

## **SUMMARY OF ACTIVITIES**

- Responsible for the purchase of supplies, materials, equipment and services necessary for the operation of BWW's system in compliance with the Alabama State 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, which involves attending conferences and seminars, meeting with vendors, preparing reports
  and monitoring the budget
- Review purchase orders and contracts for compliance with 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
- Responsible for the proper maintenance of the entire fleet of vehicles
- Inspect and perform minor repairs and maintenance on material handling equipment
- · Review, evaluate and approve specifications for issuing and awarding supplier bids through the bid process
- Responsible for the building maintenance & repair of all BWW-owned facilities

# PURCHASING DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,195,520.61	\$1,372,344.76	\$176,824.15	14.79%
Cafeteria Expense	21,530.00	23,252.40	1,722.40	8.00%
Transportation Expense	158,200.00	156,300.00	(1,900.00)	(1.20%)
General Inventory Consumption	17,850.00	17,750.00	(100.00)	(0.56%)
Facilities Other	22,000.00	24,000.00	2,000.00	9.09%
Distributions Mains	15,000.00	35,000.00	20,000.00	133.33%
Janitorial Services	208,625.00	437,611.80	228,986.80	109.76%
HVAC	58,415.00	60,918.50	2,503.50	4.29%
Utilities - Electric	306,706.00	316,500.00	9,794.00	3.19%
Utilities - Gas & Water	93,065.00	104,500.00	11,435.00	12.29%
Supplies & Expenses	41,444.35	34,840.44	(6,603.91)	(15.93%)
Fuel	28,900.00	27,975.00	(925.00)	(3.20%)
Miscellaneous Prop	12,517.50	25,000.12	12,482.62	99.72%
Structural Expenses	130,182.00	146,037.50	15,855.50	12.18%
Misc Gen Exp Membership Dues	9,718.64	9,688.50	(30.14)	(0.31%)
Matl Collecting	60,000.00	70,000.00	10,000.00	16.67%
Travel Misc Other	9,344.02	11,066.42	1,722.40	18.43%
Other O&M Expenses	12,989.75	11,513.35	(1,476.40)	(11.37%)
Total Operation & Maintenance	\$2,402,007.87	\$2,884,298.79	\$482,290.92	20.08%



# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$482,291 or 20.08% from the 2021 Approved Budget.

The major reasons for the variance are:

- 2 positions were added
- Janitorial services increased due to the impact of COVID-19

# PURCHASING DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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
Facilities Technician	0.00	0.00	0.00	0.00	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	2.00
Supervisor - Warehouse	1.00	1.00	1.00	1.00	1.00
Senior Materials Handler - Team Leader	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
Jr Automotive Technician	0.00	1.00	1.00	1.00	1.00
Diesel Mechanic	0.00	0.00	0.00	0.00	1.00
Automotive Technician II	1.00	0.00	0.00	0.00	0.00
Automotive Technician	3.00	3.00	3.00	3.00	3.00
Clerical Assistant	1.00	1.00	1.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	18.75	18.75	18.75	18.75	22.00



### **APPROVED NEW POSITIONS**

#### **DIESEL MECHANIC**

- · Perform all major and advanced adjustments, repairs and component replacements on vehicles
- Perform advanced diagnostic operations in order to successfully diagnose vehicle system failures and suggest accurate system repairs
- Troubleshoot and repair electrical systems, exhaust systems, steering systems, air conditioning, and custom exhaust systems

### **FACILITIES TECHNICIAN**

- Develop, implement & oversee the building maintenance & repair of all BWW-owned facilities
- Prepare plan & review quality of workmanship on all buildings & building equipment repairs
- Oversee remodeling of BWW-owned facilities

## **KEY PERFORMANCE MEASURES**

- Monitor and evaluate price and cost control for the organization by reducing cost for all supplies, materials and contracts
- Regulate all BWW bids to ensure 100% compliance with Alabama Competitive Bid Laws and BWW Purchasing Requirements and Guidelines
- 3. Review and approve all purchase orders and requisitions to ensure 100% compliance with BWW company policies and procedures
- Manage performance and preventive maintenance on vehicles and equipment to ensure 100% compliance with BWW and manufacturer's specifications
- 5. Maintain the BWW'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 at least 90% annually
- 7. Track and manage warehouse inventory to maintain no more than 10% lost or damaged materials and supplies annually



# **ENVIROLAB**

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 the Water Quality Operations and the Regulatory Compliance groups. The BWW EnviroLab 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 water 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 and Herbicides
- Synthetic Organic Compounds
- Trihalomethanes (THMs)
- Haloacetic Acids (HAAs)
- Total Organic Carbon, Nutrients Chlorite, Bromide
- Total Coliform & E. coli Bacteriological

The Water Quality Operations group is the first line of defense and is committed to maintaining quality control in the distribution system; from the outer gates of the water treatment (filter) plants to the customer's tap. This part of our operations monitors and performs corrosion control, particulate removal, sediment removal, taste-and-odor control and discolored water control. Water Quality also makes residual improvements for low chlorine, controls bacteriological growths, responds to customer complaints and system emergencies, collects customer-requested samples, makes water mains rehabilitation recommendations, and installs water quality control devices.



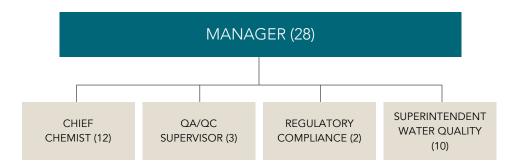
To facilitate these operations along with conventional and unidirectional flushing, we utilize the following:

- 38 %-inch Meter Box Sample Stations
- 60 5 ¼-inch Fire Hydrants Flush points, utilized because of its strategic location
- 113 Mueller HG2 Hydro-Guard Automatic Programmable Flushing Devices
- 4 2-inch Safety Guard Sample Stations at the request of the Shades Mountain Treatment Plant
- 112 2-inch Safety Guard Sample Stations around the Distribution System
- 8 Maxi-Me Flush Hydrants, 6-inch pipe and above with dual (2) 2 1/2 NST thread connections
- 98 Mini-Me Flush Hydrants (1) 2-inch NST connection
- 16 Mueller Pressure Monitoring Systems
- 20 2-inch Air Release Valves
- 2 Mueller's S.M.A.R.T. Intelligent Automatic Programmable Flushing Systems Devices
- Kupferle's Intelligent Turbine Controlled Automatic Programmable Flushing Systems Device



MAINTENANCE AND IMPROVEMENTS TO OUR EXCEPTIONAL TREATMENT FACILITIES ENSURES WE ARE ABLE TO PRODUCE QUALITY WATER THAT EXCEEDS DRINKING WATER STANDARDS.





### **ENVIROLAB MISSION**

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

### **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 control equipment throughout the distribution system
- Perform compliance testing for consecutive systems
- Schedule inside residence plumbing verifications to support the lead and copper project
- Perform lead and copper testing
- Prepare the annual Consumer Confidence Report
- Install quality control flushing devices, sample stations, flush hydrants and intelligent automatic programmable flushing system devices
- Maintain flushing operations throughout all pumping gradients in the BWW distribution system while responding 24/7 as needed during system emergencies
- Collect customer requested samples, investigate complaints and address customer concerns after a main break or a customer technical service complaint



# ENVIROLAB DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,941,226.32	\$2,218,851.71	\$277,625.39	14.30%
Cafeteria Expense	7,361.20	7,361.20		
Transportation Expense	22,500.00	37,500.00	15,000.00	66.67%
Contractor Charges	50,000.00	50,000.00	· - 10	4
Facilities Other	100,000.00	100,000.00		1
CCR/Lead Copper Expenses	135,639.00	109,306.00	(26,333.00)	(19.41%)
Supplies Purification	310,000.00	341,250.00	31,250.00	10.08%
Material Equipment Purification	150,000.00	165,000.00	15,000.00	10.00%
Sampling	40,000.00	45,000.00	5,000.00	12.50%
Utilities - Electric	127,200.00	134,131.90	6,931.90	5.45%
Uniforms - Non-Stock	7,000.00	4,500.00	(2,500.00)	(35.71%)
Utilities - Gas & Water	55,000.00	60,000.00	5,000.00	9.09%
Fuel	47,000.00	47,350.00	350.00	0.74%
Miscellaneous Property	15,500.00	13,500.00	(2,000.00)	(12.90%)
Misc Gen Exp Membership Dues	6,459.00	7,153.00	694.00	10.74%
Travel Misc Other	25,836.00	43,882.61	18,046.61	69.85%
Consultants		10,512.16	10,512.16	100.00%
Other O&M Expenses	10,994.48	9,344.48	(1,650.00)	(15.01%)
Total Operation & Maintenance	\$3,051,716.00	\$3,404,643.06	\$352,927.06	11.56%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$352,927 or 11.56% from the 2021 Approved Budget.

The major reasons for the variance are:

- 3 positions were added
- Lab supplies expenses increased due to new regulatory compliance rules



# ENVIROLAB DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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	1.00	1.00	1.00	1.00	1.00
Chemist I	2.00	2.00	3.00	3.00	4.00
Lab Technician III	2.00	2.00	1.00	1.00	1.00
Lab Technician II	2.00	2.00	2.00	2.00	2.00
Lab Technician I	1.00	1.00	1.00	1.00	2.00
Regulatory Compliance Specialist	1.00	1.00	1.00	1.00	2.00
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 Technician - Team Leader	1.00	1.00	1.00	1.00	1.00
Water Quality Technician II	4.00	4.00	7.00	7.00	7.00
Water Quality Technician I	2.00	2.00	0.00	0.00	0.00
Utility Worker I (Light Duty)	0.00	1.00	0.00	0.00	0.00
TOTAL DEPARTMENT PERSONNEL	24.00	25.00	25.00	25.00	28.00



### **APPROVED NEW POSITIONS**

#### **CHEMIST I**

- Operate the Inductively Coupled Plasma/Mass Spectrophotometer and/or Atomic Absorption Spectrophotometer
- · Receive samples and performs turbidity testing, reports any levels that are above requirements
- Ensure that the services contracts are properly maintained
- Maintain quality control procedures

#### LAB TECH I

- Perform technical functions associated with collecting, testing and analyzing samples throughout the water treatment process
- Schedule lab projects as setup by management and regulatory agencies
- Instruct samplers of any changes in the system for the collection of samples

#### **REGULATORY COMPLIANCE SPECIALIST**

- Subject Matter Expert on lead and copper rules to report on regulatory compliance
- Participate in internal or external audits at all of the filter plants
- Monitor, review, and write comments on future and proposed regulations

# **KEY PERFORMANCE MEASURES**

- Collect and perform bacteriological testing on 210 240 samples monthly for the water treatment plants, raw water sources and distribution to maintain 100% compliance with Alabama Department of Environmental Management (ADEM)
- Collect and perform disinfection byproducts 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 water treatment 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 water treatment 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 water treatment plants to maintain 100% compliance with ADEM regulations
- 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 water treatment plant to maintain 100% compliance with ADEM regulations
- 9. Perform and analyze radiological contaminants testing annually at all water treatment plants to maintain 100% compliance with ADEM regulations
- 10. Collect and perform Long-Term 2 (LT2) testing for Giardia, Cryptosporidium, E. coli and Turbidity bimonthly at all water treatment plants to maintain 100% compliance with ADEM regulations
- 11. Collect and monitor additional raw water and source water testing as needed to maintain 100% compliance with ADEM regulations
- 12. Perform and document monthly facility, property 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 at least 90%
- 18. Investigate and respond to at least 95% of customer water quality complaints within 2 hours 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 biannually through unidirectional flushing to remove impurities in the distribution system



# WATER TREATMENT

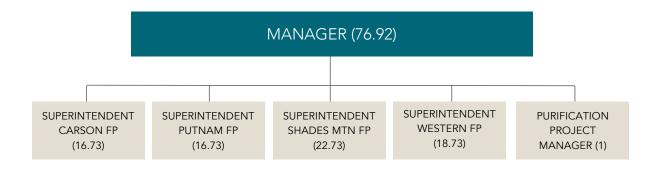
The BWW Water Treatment Department produces potable water to serve approximately 655,000 people via direct retail service in Jefferson County and four surrounding counties. Additionally, approximately 115,000 people are served via wholesale sales to consecutive systems. Four water filtration plants process and treat the raw water as follows:

Filtration Plant Sources and Capacity **FILTRATION PLANT** RATED CAPACITY SOURCE OF SUPPLY 80 MGD Cahaba River - Lake Purdy Shades Mountain Putnam 24 MGD Mulberry Fork, Smith Lake or Inland Lake Western 60 MGD Mulberry Fork or Smith Lake Carson 25 MGD Inland Lake, Smith Lake or Mulberry Fork

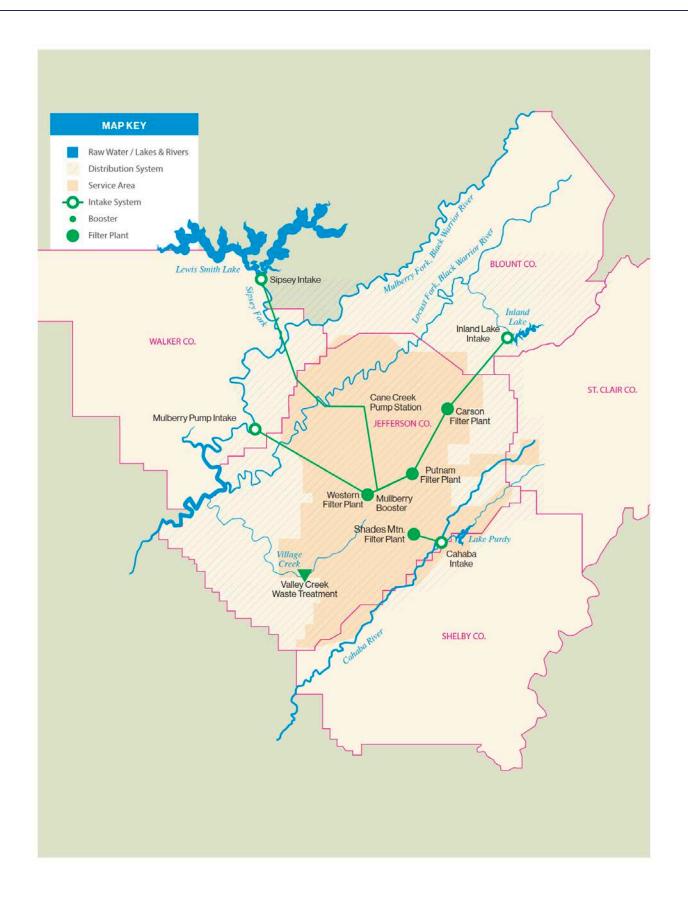
JEFFERSON COUNTY

Alabama Department of Environmental Management (ADEM) requires Grade IV Certified Operators at each filtration plant to ensure water quality and quantity meets or exceeds state and federal regulations. Each filtration 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 and to be recognized at the national level for safe and clean water.









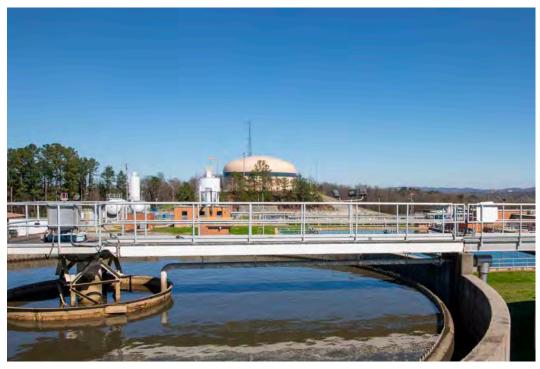


SHADES MOUNTAIN FILTER PLANT



**PUTNAM FILTER PLANT** 





WESTERN FILTER PLANT



CARSON FILTER PLANT





### WATER TREATMENT MISSION

To provide our customers with the highest quality water possible at the most affordable rate. To provide efficient, effective and reliable water services in a manner that preserves and conserves our precious water resources and the natural environment to ensure adequate water quality and supply for future generations.

### **SUMMARY OF ACTIVITIES**

- · Produce a high quality and quantity of water to the Birmingham area and systems that purchase water
- Perform water quality tests to ensure water quality
- Dose and maintain chemical feed points
- Fill and maintain storage tanks for drinking water and fire protection
- Backwash filters
- Adjust basins and clear well levels
- Coordinate with E&M staff to schedule maintenance of equipment
- Run lab tests to monitor required water characteristics and maintain highest quality of water
- Test and maintain all backflow devices



AS PART OF OUR OVERALL FILTER REHABILITATION PROGRAM, BWW HAS CHOSEN TO UPGRADE THE FILTERS AT EACH PLANT TO PROVIDE THE FLEXIBILITY FOR INSTALLATION OF GRANULAR ACTIVATED CARBON (GAC) IN THE FILTERS.



# **AWARDS**

# **CARSON**

- AWPCA Best Operated Plant Award 20.1 30.0 MGD
- EPA and AWWA Partnership for Safe Drinking Water President's Award (5 Years)
- Water Quality Fluoridation Award from the CDC
- EPA and AWWA Partnership for Safe Drinking Water Director's Award (15 Years)

### **PUTNAM**

- AWPCA Award of Excellence for Surface Water Plant Category 20.1 to 30 MGD
- Water Quality Fluoridation Award from the CDC
- ADEM AWOP 10 Year Optimized Plant Award
- EPA and AWWA Partnership for Safe Drinking Water President's Award (5 Years)
- AWWA Alabama/Mississippi Section Operator of the Year Award: Rodney Richardson
- EPA and AWWA Partnership for Safe Drinking Water Director's Award (16 Years)
- AWWA Alabama/Mississippi Section Water Treatment Plant of the Year 2021

### **WESTERN**

- Water Quality Fluoridation Award from the CDC
- EPA and AWWA Partnership Award of Excellence (8 Years)
- EPA and AWWA Partnership Director's Award (13 Years)
- AWPCA Award of Excellence for Surface Water 50 to 60 MGD

# **SHADES MOUNTAIN**

- ADEM AWOP 10-year Optimized Plant Award
- AWPCA Award of Excellence for Surface Water Greater than 60 MGD
- Water Quality Fluoridation Award from the CDC





# WATER TREATMENT DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$4,590,706.77	\$5,085,482.86	\$494,776.09	10.78%
Cafeteria Expense	5,697.80	5,783.92	86.12	1.51%
Power	3,103,391.00	3,196,492.00	93,101.00	3.00%
Transportation Expense	47,000.00	37,600.00	(9,400.00)	(20.00%)
General Inventory Consumption	14,550.00	10,300.00	(4,250.00)	(29.21%)
Chemicals	6,099,999.98	6,802,538.37	702,538.39	11.52%
Materials Structure Purification	285,000.00	258,000.00	(27,000.00)	(9.47%)
Supplies Expense Purification	391,000.00	385,950.00	(5,050.00)	(1.29%)
Sludge Handling Purification	23,400.00	22,100.00	(1,300.00)	(5.56%)
Materials Equipment Purification	425,100.00	391,000.00	(34,100.00)	(8.02%)
Materials Other P&P Maintenance	75,000.00	65,500.00	(9,500.00)	(12.67%)
Materials Oil P&P Maintenance	7,500.00	2,500.00	(5,000.00)	(66.67%)
Materials Electrical P&P Maintenance	43,500.00	34,500.00	(9,000.00)	(20.69%)
Uniforms - Non-Stock	89,950.00	61,250.00	(28,700.00)	(31.91%)
Utilities-Telephone	7,700.00	6,900.00	(800.00)	(10.39%)
Utilities - Gas & Water	79,800.00	86,800.00	7,000.00	8.77%
Pump Expenses Electrical P&P	57,000.00	42,000.00	(15,000.00)	(26.32%)
Fuel	77,525.00	78,800.00	1,275.00	1.64%
Miscellaneous Property	100,974.50	85,953.50	(15,021.00)	(14.88%)
Misc Gen Exp Membership Dues	8,698.12	7,948.88	(749.24)	(8.61%)
Travel Misc Other	26,481.90	27,989.00	1,507.10	5.69%
Other O&M Expenses	33,473.00	15,178.24	(18,294.76)	(54.66%)
Total Operation & Maintenance	\$15,593,448.07	\$16,710,566.77	\$1,117,118.70	7.16%

# HIGHLIGHTS OF BUDGET CHANGES

The 2022 Approved Budget increased by \$1,117,119 or 7.16% from the 2021 Approved Budget.

The major reasons for the variance are:

- Power expenses increased based on projection
- Chemical prices increased due to contract price increases
- Merit and cost of living adjustment increases



# WATER TREATMENT DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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
Operator IV	4.00	4.00	4.00	4.00	4.00
Operator III	12.00	12.00	12.00	12.00	12.00
Operator II	8.00	9.00	10.00	10.00	11.00
Operator I	1.00	0.00	0.00	0.00	0.00
Operator Trainee	4.00	4.00	4.00	4.00	7.00
Operator Intern	2.90	2.90	2.90	2.90	2.92
Worker - Maintenance - Purification	15.00	12.00	10.00	10.00	14.00
Worker - Maintenance - Purification Trainee	1.00	3.00	5.00	5.00	0.00
Supervisor - Filter Plant - Maintenance	3.00	3.00	3.00	3.00	4.00
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	4.00	4.00	4.00
Residual Plant Operator I	5.00	5.00	4.00	4.00	4.00
Solids Handler I	2.00	2.00	0.00	0.00	0.00
TOTAL DEPARTMENT PERSONNEL	73.90	72.90	72.90	72.90	76.92



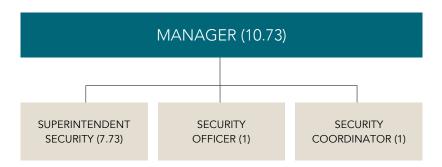
### **KEY PERFORMANCE MEASURES**

- 1. Maintain 100% compliance with all BWW, state and federal regulations for water 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%
- 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 BWW landfills



# **SECURITY**

The Security Department is responsible for all matters related to the security of BWW's critical facilities and personnel. The team develops and enforces security policies to ensure a safe environment for employees and visitors, along with ensuring the safety and security of all water operations. Console Operators monitor an integrated security system 24/7 from a central command center, an integrated security system that protects our 11 manned sites (4 treatment plants, 4 intake pumping stations, 2 dams, and our main campus) and over 50 unmanned pump stations and tanks.



#### **SECURITY MISSION**

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



### **SUMMARY OF ACTIVITIES**

- Manage the development and implementation of global security policies, standards, guidelines and procedures to ensure ongoing maintenance of security
- Work with the Executive Management team 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 BWW
- Establish a security policy to remain compliant with critical infrastructure standards and other relevant security standards
- Lead operational security-related activities to enhance the value of the organization's brand
- Review the organization's vulnerability assessment and update the emergency response plan
- Develop relationships with the Department of Homeland Security (DHS) and the local police
- Develop security outreach programs for all employees
- Develop and conduct workplace violence prevention/situational awareness training
- Oversee maintenance of all security equipment
- Work with consultants to design security improvements
- Develop a loss prevention program
- Develop and conduct ongoing training for security personnel
- Develop relationship with the local Emergency Management Agency (EMA)
- Conduct tabletop exercises with local and federal agencies
- Conduct threat assessments for assets not deemed "critical" per the vulnerability assessment



# SECURITY DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$715,465.31	\$761,573.52	\$46,108.21	6.44%
Cafeteria Expense	2,000.00	2,000.00		
Mileage Reimbursement	1,600.00	1,000.00	(600.00)	(37.50%)
Service Line	50.00	50.00	= = 0	12 15 25
Transportation Expense	1,500.00	2,500.00	1,000.00	66.67%
Inventory Expense	160.00		(160.00)	(100.00%)
Uniforms	750.00	250.00	(500.00)	(66.67%)
General Inventory Consumption	1,000.00	1,000.00	. =	0.00%
Security Guards Expenses	1,375,000.00	1,627,536.94	252,536.94	18.37%
Uniforms - Non-Stock	3,000.00	3,000.00		
Utilities-Telephone	750.00	500.00	(250.00)	(33.33%)
Supplies & Expenses	20,000.00	23,000.00	3,000.00	15.00%
Fuel	4,176.00	5,000.00	824.00	19.73%
Software Maintenance Support	9,000.00	9,000.00	8	-
Equipment Maintenance/Support	40,000.00	65,000.00	25,000.00	62.50%
NonCapital Equipment Replacement	195,000.00	130,000.00	(65,000.00)	(33.33%)
Miscellaneous Property	60.00		(60.00)	(100.00%)
Misc Gen Exp Membership Dues	10,000.00	12,000.00	2,000.00	20.00%
Travel Misc Other	8,800.00	8,800.00		0.00%
Consultants		14,535.08	14,535.08	100.00%
Total Operation & Maintenance	\$2,388,311.31	\$2,666,745.54	\$278,434.23	11.66%

# **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$278,434 or 11.66% from the 2021 Approved Budget.

The major reason for the variance is:

• Outsourced security increased due to the contract price increase and the addition of a site



## SECURITY DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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
Part-time Security Officer	0.80	0.73	0.73	0.73	0.73
Security Maintenance Technician	1.00	1.00	1.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	10.80	10.73	10.73	10.73	10.73

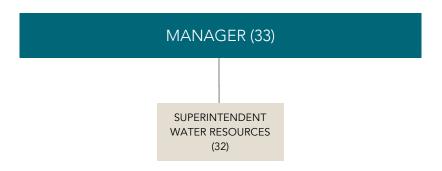
#### **KEY PERFORMANCE MEASURES**

- 1. Maintain National Incident Management System (NIMS) compliance through the annual tabletop training exercise and demonstrate lessons learned to enhance the BWW's emergency readiness
- 2. Perform and record quarterly security and facility testing to certify the Physical Integrated Security System is performing accurately
- 3. Monitor and notify Security Management team of 100% of security emergencies, threats and issues in a timely manner
- 4. Conduct annual security audits and risk assessments for all BWW facilities and assets
- 5. Perform quarterly system tests to maintain equipment readiness



### WATER RESOURCES

The Water Resources Department is responsible for ensuring the reliable and efficient operation of 4 intake stations, 4 industrial water pumping stations and 6 groundwater well sites. This is accomplished by supervising and maintaining operations of stations, tank sites, a 115kv substation, reservoirs, dams and other related sites.



#### **WATER RESOURCES MISSION**

To provide an adequate supply of high-quality raw water to BWW filter plants and commercial/industrial customers and to efficiently operate and maintain all facilities. Develop and implement the best management practices for watershed protection policy.





#### **SUMMARY OF ACTIVITIES**

- Repair malfunctioning equipment and arrange maintenance schedules for 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 and 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 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
- Host training seminars, social events and conduct guided tours at the Historic Cahaba Museum





## WATER RESOURCES DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	2,236,733.47	2,318,612.66	81,879.19	3.66%
Cafeteria Expense	5,918.46	5,358.68	(559.78)	(9.46%)
Power	4,754,556.00	4,905,389.00	150,833.00	3.17%
Mileage Reimbursement	18,162.96	14,201.44	(3,961.52)	(21.81%)
Transportation Expense	13,300.00	13,500.00	200.00	1.50%
Supplies Expense Purification	23,700.00	27,400.00	3,700.00	15.61%
Materials Electrical Pump Equipment	35,200.00	42,000.00	6,800.00	19.32%
Utilities - Electric	52,912.00	56,282.00	3,370.00	6.37%
Uniforms - Non-Stock	20,700.00	22,800.00	2,100.00	10.14%
Utilities-Telephone	12,780.00	10,080.00	(2,700.00)	(21.13%)
Pump Expenses Electrical	10,600.00	9,700.00	(900.00)	(8.49%)
Materials Electrical Structures	62,500.00	54,400.00	(8,100.00)	(12.96%)
Other Structural Material	17,000.00	18,000.00	1,000.00	5.88%
Intake Material Maintenance	23,000.00	29,000.00	6,000.00	26.09%
Reservoir Materials SOS Maintenance	51,500.00	51,500.00		
Fuel	25,715.00	24,600.00	(1,115.00)	(4.34%)
Miscellaneous Prop	40,382.80	57,983.75	17,600.95	43.59%
Structural Expenses	90,000.00	20,000.00	(70,000.00)	(77.78%)
Supplies Expense	85,500.00	79,500.00	(6,000.00)	(7.02%)
Travel Misc Other	7,844.67	9,163.31	1,318.64	16.81%
Consultants	46,800.00	47,000.00	200.00	0.43%
Other O&M Expenses	20,233.10	21,070.64	837.54	4.14%
Total Operation & Maintenance	\$7,655,038.46	\$7,837,541.48	\$182,503.02	2.38%

#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$182,503 or 2.38% from the 2021 Approved Budget.

The major reasons for the variance are:

- Power expenses Increased based on projections
- Merit and cost of living adjustment increases



## WATER RESOURCES DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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	15.00	14.00	12.00	12.00	13.00
Museum Coordinator	1.00	1.00	1.00	1.00	1.00
Station Operator Trainee	2.00	3.00	5.00	5.00	4.00
Worker - Maintenance - Purification	6.00	6.00	6.00	6.00	6.00
TOTAL DEPARTMENT PERSONNEL	33.00	33.00	33.00	33.00	33.00

#### **KEY PERFORMANCE MEASURES**

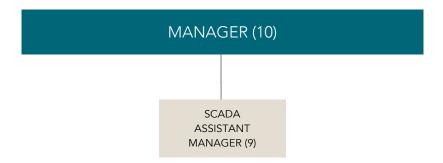
- 1. Record and monitor all pump stations and reservoir data (multilins, vibration levels, river/lake levels, packing, cooling water, chemical feeds) with a 95% accuracy rate
- 2. Maintain reservoir levels (tanks and basins) daily within the desired ranges with the least amount of starts and stops on motors and pumps
- 3. Perform and record preventative and predictive equipment maintenance to maintain equipment readiness of at least 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 for Shades Mountain Filter Plant to maintain 100% compliance with all regulatory requirements



# SUPERVISORY CONTROL & DATA ACQUISITION (SCADA)

Supervisory Control & 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) and digital or status information. They can send a status value (e.g. start a pump) and 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 BWW's SCADA system consists of Distributive Control System (DCS) equipment at all 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 (CORE) recovery command center is connected to all major operational facilities of the BWW. 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 the most critical operational decisions are made based on the data provided.



#### **SCADA MISSION**

To maximize the functions of the SCADA System to assure that BWW 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**

- Program and configure the control system at all major BWW water treatment plants and raw water pump stations to allow 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
- Perform the duties of the Emergency Switchboard Operator after normal work hours, weekends and holidays



- Assist and coordinate BWW personnel in after-hours emergencies to help limit the impact on customers
- Monitor and maintain operations for all communication equipment
- Provide data to management for analysis and decision making

## SCADA DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$281,160.96	\$328,552.54	\$47,391.58	16.86%
Mileage Reimbursement	1,291.80	645.90	(645.90)	(50.00%)
Transportation Expense	1,500.00	1,000.00	(500.00)	(33.33%)
Uniforms	100.00		(100.00)	(100.00%)
Materials Equipment Purchase	2,500.00	2,000.00	(500.00)	(20.00%)
Gen Inventory Consumption	3,000.00	1,500.00	(1,500.00)	(50.00%)
Facilities Other	5,000.00	5,000.00		-
Other Office Materials	1,132.40	566.20	(566.20)	(50.00%)
Uniforms - Non-Stock	500.00	500.00		
Utilities - Telephone	600.00	600.00	7-6-1	
Miscellaneous Property	1,251.75	1,251.75	7.5	
Misc Gen Exp Membership Dues	861.20	602.84	(258.36)	(30.00%)
SCADA operations	80,270.28	80,200.00	(70.28)	(0.09%)
Supervisory Materials	9,333.70	9,050.34	(283.36)	(3.04%)
Fuel	2,000.00	1,200.00	(800.00)	(40.00%)
Communication Equipment Maintenance	325,455.00	325,455.00		
Software Maintenance Support	15,000.00	15,000.00		
Equipment Maintenance Support	177,487.00	196,000.00	18,513.00	10.43%
Travel Misc Other	12,918.00	12,918.00	1 - 1 -	- 4
Total Operation & Maintenance	\$921,362.09	\$982,042.57	\$60,680.48	6.59%

#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$60,680 or 6.59% from the 2021 Approved Budget.

The major reasons for the variance are:

- 1 position was added
- Equipment maintenance & support expenses increased based on trend



### SCADA DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - SCADA System	1.00	1.00	1.00	1.00	1.00
Assistant Manager - SCADA	0.00	0.00	0.00	0.00	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	0.00
SCADA System Operator II	0.00	1.00	0.00	0.00	1.00
SCADA System Operator	4.00	3.00	4.00	4.00	4.00
Wireless Communication Technician	2.00	1.00	1.00	1.00	1.00
Total Department Personnel	10.00	9.00	9.00	9.00	10.00

#### **APPROVED NEW POSITION**

#### **ASSISTANT SCADA MANAGER**

- Provide management for Supervisory Control and Data Acquisition (SCADA) System
- Oversee the support and running of the SCADA system's infrastructure
- Manage data archiving and retrieval
- Plan maintenance, upgrades, and expansion of the SCADA system infrastructure over time
- Interface with Engineering, Operations and the Maintenance groups regarding their needs from SCADA

#### **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 four 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 BWW, 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 at least 98%
- 6. Implement an annual strategy to reduce electricity usage cost
- 7. Perform and verify the SCADA control system backup quarterly to confirm authenticity





### **INDUSTRIAL & COMMERCIAL ACCOUNTS**

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

The healthcare facilities are integral to the health and well-being of the communities we serve. The resilience of a community depends on the ability of its critical infrastructure sectors to reliably respond to its needs, particularly during emergency events. Healthcare facilities make up an essential component of this critical infrastructure and must consistently maintain their water capabilities to meet the needs of their community members. Water supply interruption can be caused by several types of events such as a natural disaster, construction damage or even an act of terrorism. Because water supplies can and do fail, it is imperative to understand and address how patient safety, quality of care, and the operations of our facilities will be impacted.

The beverage industry in our service area is growing rapidly due to the high quality of water that we provide. When the water supply to a facility is interrupted, we should assess the problem quickly. The response to the interruption will depend greatly on the type of interruption; complete loss of water, reduced pressure, or water discoloration and the estimated length of time necessary to return water service to normal. As water is the main ingredient to produce their product it is essential to correct any issue as soon as possible.

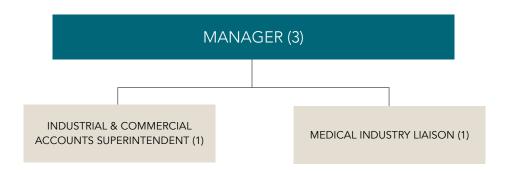
Alabama Department of Environmental Management (ADEM) defines a consecutive system as "A public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems." (ADEM Admin. Code r. 335-7-1-.01). BWW 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 Remlap-Pine Mountain Water)
- Two compliance systems (Alabama Power and University of Alabama Birmingham)
- Five emergency connections (Shelby County Water, Irondale 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 BWW's system (compliance, standard operating procedures, etc.). Each consecutive system can maintain water services for at least 24 hours (non-emergency) as needed for BWW system repair. BWW conducts water quality testing for its consecutive systems and has assisted with leak surveys in the past. Approximately 115,000 residents are served via BWW consecutive systems.

One of the largest non-potable water customer is US Steel. In the 1980s, their water consumption averaged 35-40 MGD; however, consumption reduced significantly due to unfavorable market conditions that led to the closure of the Fairfield blast furnace. US Steel recently announced the restart of construction for an electric arc furnace. This project was completed in 2021 with a projected water consumption of 8-10 MGD.





#### INDUSTRIAL AND COMMERCIAL MISSION

The Industrial and Commercial Accounts Department 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 BWW and industrial/commercial/wholesale customers, helping with
  water issues by communicating with individuals and groups face-to-face and hosting one-on-one meetings
  by telephone or in person
- Address 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 customer reporting dashboards
- Coordinate the planning requirements and execution for the annual raw water conference with internal departments, customers and industry agencies
- Proactively monitor customer reporting data to design strategies that will support compliance and consistency according to the ADEM requirements
- · Work with customers to develop action plans based on findings from ADEM system audits
- Create and maintain emergency contracts for customers and 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 concerns, 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 and 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 executive reports/briefing on the activity of customers and impact on revenue
- Track and report on non-revenue water and volume and status of collections

### INDUSTRIAL & COMMERCIAL DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$336,654.18	\$363,999.53	\$27,345.35	8.12%
Cafeteria Expense	1,100.00	1,100.00		9.0
Mileage Reimbursement	645.90	645.90		
Transportation Expense	1,500.00	2,500.00	1,000.00	66.67%
Uniforms	750.00	250.00	(500.00)	(66.67%)
General Inventory Consumption	1,000.00	1,000.00		
Facilities Other	1,500.00	3,500.00	2,000.00	133.33%
Uniforms - Non-Stock	1,500.00	1,500.00		
Supplies & Expenses	13,451.20	15,132.60	1,681.40	12.50%
Fuel	8,250.00	8,250.00		
Misc Gen Exp Membership Dues	1,679.34	3,337.15	1,657.81	98.72%
Travel Misc Other	11,195.60	24,458.08	13,262.48	118.46%
Total Operation & Maintenance	\$379,226.22	\$425,673.26	\$46,447.04	12.25%

#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$46,447 or 12.25% from the 2021 Approved Budget.

The major reason for the variance is:

- Labor increased due to merit and cost of living adjustment increases
- Travel expenses increased due to additional customer base



## INDUSTRIAL & COMMERCIAL DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - Industrial & Commercial Accounts	1.00	1.00	1.00	1.00	1.00
Superintendent - Industrial & Commercial Accounts	1.00	1.00	1.00	1.00	1.00
Medical Industry Liaison	0.00	0.00	0.00	1.00	1.00
TOTAL DEPARTMENT PERSONNEL	2.00	2.00	2.00	3.00	3.00

#### **KEY PERFORMANCE MEASURES**

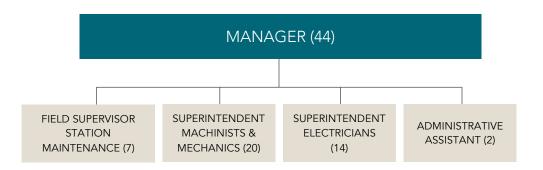
- Manage all industrial and commercial accounts to ensure 100% compliance with all local, state, and BWW
  regulations and requirements
- 2. Review monthly SAP reporting to make sure that 100% of accounts are read and billed per their contract requirements
- 3. Review Consumer Confidence Report (CCR) information with ADEM at all consecutive locations to ensure 100% reliability
- 4. Complete 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, raw water, medical and beverage issues/concerns as it relates to meter reading, billing issues, meter service and repair within 72 hours of receipt



### **ELECTRICAL & MECHANICAL**

The Electrical & Mechanical Maintenance Department (E&M Shop) supports the maintenance of electrical and mechanical equipment throughout the entire BWW system. The E&M Shop is on call 24/7 to repair and maintain the system's 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 BWW's assets.



#### **ELECTRICAL AND MECHANICAL MISSION**

To provide high-quality electrical and mechanical support to ensure BWW's infrastructure is operable at full capacity with limited interruptions in service.

#### **SUMMARY OF ACTIVITIES**

- · Maintain plants and all assets on a continuous improvement path for quality and efficiency
- Coordinate maintenance activities for facilities and production equipment
- Develop and implement a predictive and preventive maintenance program
- Track and control maintenance inventory
- Maintain close coordination with production departments to resolve equipment breakdowns and other production related opportunities
- Perform root cause analysis for any abnormal conditions and failures which may result in corrective actions to prevent recurrences



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

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$2,356,472.85	\$2,623,242.88	\$266,770.03	11.32%
Cafeteria Expense	1,722.40	3,875.40	2,153.00	125.00%
Power	1,708,457.91	1,785,338.52	76,880.61	4.50%
Transportation Expense	98,871.47	94,315.00	(4,556.47)	(4.61%)
General Inventory Consumption	8,968.06	12,400.00	3,431.94	38.27%
Material Structures/Tanks	10,000.00	15,000.00	5,000.00	50.00%
Facilities Other	37,863.60	62,865.00	25,001.40	66.03%
Rent / Storage Facilities	45,000.00	45,000.00	L	T Age
Material Electrical Pump Equipment	312,132.58	317,010.96	4,878.38	1.56%
Uniforms - Non-Stock	45,955.19	51,000.13	5,044.94	10.98%
Utilities - Telephone	9,000.00	9,000.00		
Utilities - Gas & Water	20,000.00	24,000.00	4,000.00	20.00%
Material Electrical Structures	35,500.00	35,500.00	2.0	- 39
Fuel	136,435.15	144,207.00	7,771.85	5.70%
Miscellaneous Property	20,445.25	21,279.75	834.50	4.08%
Supplies	35,433.76	38,000.00	2,566.24	7.24%
Travel Misc Other	16,298.29	18,347.56	2,049.27	12.57%
Other O&M Expenses	18,951.77	24,435.42	5,483.65	28.93%
Total Operation & Maintenance	\$4,917,508.28	\$5,324,817.62	\$407,309.34	8.28%

#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$407,309 or 8.28% from the 2021 Approved Budget.

The major reasons for the variance are:

- 4 positions were added
- Power expenses increased based on projections



## ELECTRICAL & MECHANICAL DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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	6.00	6.00	7.00	7.00	9.00
Industrial Control Electrician - Journeyman	2.00	2.00	1.00	1.00	2.00
Building Maintenance Electrician Journeyman	1.00	1.00	1.00	1.00	1.00
Instrumentation Technician	1.00	1.00	1.00	1.00	0.00
Field Supervisor	1.00	1.00	1.00	1.00	1.00
Mechanic - Senior	1.00	1.00	1.00	1.00	1.00
Maintenance Mechanic II	9.00	9.00	9.00	9.00	10.00
Maintenance Mechanic I	6.00	6.00	6.00	6.00	7.00
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
TOTAL DEPARTMENT PERSONNEL	40.00	40.00	40.00	40.00	44.00



#### **APPROVED NEW POSITIONS**

#### INDUSTRIAL CONTROL MASTER ELECTRICIAN

- Perform skilled work at the Master Electrician level
- Design, build, install and maintain District Metering Area (DMA) site control panels, Solar DMA sites and YSI brand panels as per Alabama Department of Environmental Management (ADEM).
- Install wiring, explosion-proof fittings and remote-control wiring
- Perform electric and electronic troubleshooting and repair

#### INDUSTRIAL CONTROL JOURNEYMAN

- Perform skilled work at the Journeyman Electrician level
- Install, maintain, and repair various electrical systems and equipment
- Maintain instruments providing accurate information regarding controls

#### MAINTENANCE MECHANIC I

- Diagnose machine malfunctions
- Repair machines, equipment, and structures
- Assemble, install, and repair wiring, electronic components, pipe systems, plumbing, machinery, or equipment

#### MAINTENANCE MECHANIC II

- Diagnose machine malfunctions
- Repair machines, equipment, and structures
- Assemble, install, and repair wiring, electronic components, pipe systems, plumbing, machinery, or equipment
- Record maintenance type and cost

#### **KEY PERFORMANCE MEASURES**

- 1. Perform preventive and predictive maintenance on essential equipment to maintain equipment readiness of at least 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 at least 80% of work orders received annually



BIRMINGHAM WATER WORKS CUSTOMERS CAN BE CONFIDENT THAT THEIR DRINKING WATER IS HIGH QUALITY AND MEETS OR SURPASSES THE STRICT STANDARDS SET BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM).

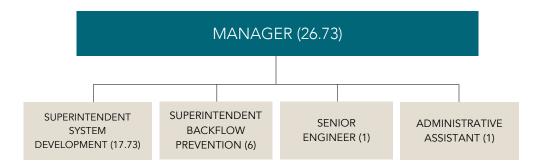


### SYSTEM DEVELOPMENT

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

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

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



#### SYSTEM DEVELOPMENT MISSION

To administer the development of the BWW's Distribution System to ensure 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 developers
- Determine the Distribution System's capacity to provide water to individual customers and residential/commercial developers
- Review, approve and issue all new water service connections (domestic, fire and irrigation) to the BWW's distribution mains
- Prepare contractual agreements for the installation of water mains and related appurtenances, 4-inch and larger domestic and fire service connections and fire hydrants
- Prioritize water main replacement projects based upon criteria consisting of excessive maintenance, water quality and/or fire protection due to aging infrastructure



- Design water main relocation projects based upon conflicts with state and local governing bodies performing roadway improvements
- Develop construction drawings and specifications for water main replacement and reinforcement projects
- Review and approve construction drawings and develop specifications for new main installations (residential and commercial developments), reinforcement and relocation projects
- Prepare bid packages, hold pre-bid conferences, evaluate bids and recommend bid award to the lowest responsive and responsible bidder
- Approve and coordinate the installation of all new fire hydrants
- Maintain records on all public fire hydrants and fire service connections
- Complete estimates of cost for installations and adjust contractual agreements upon completion of installations
- Coordinate all water main installations with other departments and obtain approval from governing bodies
- Administer the Backflow Prevention and Cross Connection Control Policy requirements by performing field inspections on commercial and residential connections and maintaining compliance records and reports
- Inspect the installation of new water mains, valves and fire hydrants on bid reinforcement projects and new development installation projects



AS PART OF EPA'S RULES, WE PRODUCE AN ANNUAL WATER QUALITY REPORT, WHICH IS ALSO KNOWN AS A CONSUMER CONFIDENCE REPORT. OUR REPORT DETAILS AND OUTLINES THE TESTING WE DO FOR DRINKING WATER CONTAMINANTS AND THEIR LEVELS IN BIRMINGHAM WATER WORKS' DRINKING WATER.



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

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$740,800.94	\$702,326.33	(\$38,474.61)	(5.19%)
Mileage Reimbursement	172.24	172.24		
Service Line	750.00	750.00		11 - 10
Transportation Expense	23,300.00	23,200.00	(100.00)	(0.43%)
Inventory Expense	400.00	800.00	400.00	100.00%
Uniforms	1,820.00	570.00	(1,250.00)	(68.68%)
Meters	1,500.00	500.00	(1,000.00)	(66.67%)
Valves	700.00	500.00	(200.00)	(28.57%)
General Inventory Consumption	6,180.00	5,680.00	(500.00)	(8.09%)
Supervision Materials	325.51		(325.51)	(100.00%)
Facilities Other	5,350.00	5,600.00	250.00	4.67%
Other Office Materials	1,075.78	452.96	(622.82)	(57.89%)
Maps and Records Materials	207.87	47.97	(159.90)	(76.92%)
Uniforms - Non-Stock	3,600.00	4,145.00	545.00	15.14%
Utilities - Telephone	1,300.00	1,000.00	(300.00)	(23.08%)
Supplies & Expenses	11,418.51	20,666.21	9,247.70	80.99%
Fuel	32,200.00	30,400.00	(1,800.00)	(5.59%)
Miscellaneous Property	\$1,043.12	\$834.50	(\$208.62)	(20.00%)
Misc Gen Exp Membership Dues	3,272.56	3,216.58	(55.98)	(1.71%)
Travel Misc Other	16,491.98	9,430.14	(7,061.84)	(42.82%)
Consultants		5,870.87	5,870.87	100.00%
Total Operation & Maintenance	\$851,908.51	\$816,162.80	(\$35,745.71)	(4.20%)

#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget decreased by \$35,746 or 4.20% from the 2021 Approved Budget.

The major reason for the variance is:

• Salary for staff replacements are less than incumbent salary



## SYSTEM DEVELOPMENT DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - System Development	1.00	1.00	1.00	1.00	1.00
Superintendent - Backflow 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	1.00	0.00	1.00	1.00	1.00
Senior Engineer	0.00	1.00	1.00	1.00	1.00
Senior Project Coordinator	1.00	1.00	1.00	1.00	1.00
Project Coordinator	3.00	3.00	3.00	3.00	5.73
Field Investigator	2.00	2.00	2.00	2.00	1.00
Backflow Inspector	2.00	2.00	2.00	2.00	3.00
Backflow Specialist	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00
Construction Inspectors	0.00	0.00	6.00	6.00	7.00
TOTAL DEPARTMENT PERSONNEL	16.00	16.00	23.00	23.00	26.73

#### **APPROVED NEW POSITIONS**

#### **BACKFLOW INSPECTOR**

- Maintain the public health, safety and welfare ensuring compliance with local State and Federal laws pertaining to Backflow Prevention
- Conduct inspections of commercial, industrial and residential sites
- Review all preliminary plans, design drawings and mechanical specifications relative to proposed commercial fire and domestic service connections. Assist Project Coordinator with large services

#### PROJECT COORDINATOR

- Review plans submitted and consult as necessary for the installation, relocation and/or removal of the BWW's pipeline infrastructure
- Evaluate and procure all necessary materials for proposed construction projects
- Ensure project documents are complete, current, and maintained appropriately



#### **KEY PERFORMANCE MEASURES**

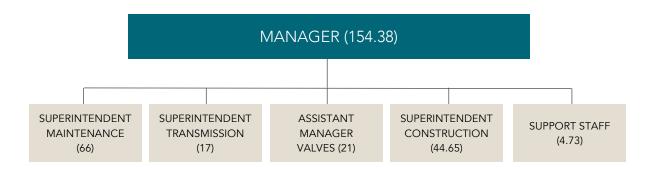
- Collaborate with the Distribution Department to successfully complete at least 64% of the yearly water main, service line and valve replacements capital projects on budget and within the designated project timeline
- 2. Prepare and distribute 100% of the Backflow Program Notification letters annually to BWW customers to maintain certified backflow testing documentation for 100% compliance with state laws and regulations
- 3. Distribute 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 three business days with no more than 10% of complaints escalated to management
- 5. Implement at least 80% of System Development's projects in accordance with the Capital Budget requested and authorized by the Board of Directors
- 6. Complete at least 90% of the construction worksheets for any updates or changes to the distribution system and submit to the Mapping and Records Department within 30 business days



### DISTRIBUTION

The Distribution Department is responsible for overseeing the maintenance and construction of BWW's infrastructure to include scheduling the repair and replacement of pipelines, fire hydrants, valves, and other BWW distribution assets. The department ensures that regulatory requirements and standards are consistent with operational improvements.

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



#### **DISTRIBUTION MISSION**

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

#### **SUMMARY OF ACTIVITIES**

- Install new water lines and replace older infrastructure
- Make large taps (4 to 36 inches)
- Install fire, domestic, and irrigation vaults with meter settings
- Install water mains, service lines, meter settings, fire hydrants and valves for reinforcement projects
- Collect water samples for EnviroLab testing as a prerequisite for turning on new water mains
- Complete drawings for the new installation of reinforcement jobs
- Repair and replace fire hydrants
- Install loops in the water mains when there is a conflict with other utility lines
- Maintain transmission lines
- Maintain the right-of-way easements
- Build and maintain roads and access points
- Repair water main leaks



## DISTRIBUTION DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$7,402,276.64	\$7,690,838.11	\$288,561.47	3.90%
Cafeteria Expense	14,579.20	16,583.95	2,004.75	13.75%
Service Line	252,100.00	320,900.00	68,800.00	27.29%
Transportation Expense	1,104,500.00	1,067,000.00	(37,500.00)	(3.40%)
Meters	102,200.00	125,200.00	23,000.00	22.50%
Valves	13,100.00	12,000.00	(1,100.00)	(8.40%)
General Inventory Consumption	735,800.00	685,000.00	(50,800.00)	(6.90%)
Materials Distribution Mains TD	235,000.00	270,000.00	35,000.00	14.89%
Materials Transmission Mains TD	36,000.00	36,000.00		
Contractor Charges Distribution Mains	1,084,500.00	1,300,000.00	215,500.00	19.87%
Contractor Charges Transmission Mains	6,000.00		(6,000.00)	(100.00%)
Contractor Charges Services	2,434,000.00	2,375,000.00	(59,000.00)	(2.42%)
Paving Meter Installation	10,000.00	5,000.00	(5,000.00)	(50.00%)
Paving Distribution Mains	1,001,000.00	950,000.00	(51,000.00)	(5.09%)
Paving Transmission Mains	3,500.00	-	(3,500.00)	(100.00%)
Paving Services	403,000.00	301,500.00	(101,500.00)	(25.19%)
Contractor Charges Meter	17,000.00	13,000.00	(4,000.00)	(23.53%)
Facilities Other	162,000.00	153,500.00	(8,500.00)	(5.25%)
Distributions Mains	18,000.00	17,450.00	(550.00)	(3.06%)
Supplies Expenses Purification	8,700.00	9,200.00	500.00	5.75%
Utilities - Electric	75,000.00	79,000.00	4,000.00	5.33%
Uniforms - Non-Stock	77,100.00	64,600.00	(12,500.00)	(16.21%)
Utilities - Gas & Water	52,400.00	49,500.00	(2,900.00)	(5.53%)
Fuel	438,800.00	426,500.00	(12,300.00)	(2.80%)
Miscellaneous Property	93,046.75	100,333.74	7,286.99	7.83%
Structural Expenses	8,345.00	9,962.40	1,617.40	19.38%
Uniforms	14,870.00	14,700.00	(170.00)	(1.14%)
Travel Misc Other	7,492.44	7,299.82	(192.62)	(2.57%)
Consultants		26,350.08	26,350.08	100.00%
Other O&M Expenses	26,617.78	13,154.43	(13,463.35)	(50.58%)
Total Operation & Maintenance	\$15,836,927.81	\$16,139,572.53	\$302,644.72	1.91%



#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$302,645 or 1.91% from the 2021 Approved Budget.

The major reasons for the variance are:

- 6 Full-time and 5 Part-time positions were added
- Contractor Charges Distribution Mains increased based on trends



WATER IS TRANSPORTED TO HOUSES AND BUSINESSES. THE BIRMINGHAM WATER WORKS DELIVERS, ON AVERAGE, 100 MILLION GALLONS OF WATER PER DAY.



## DISTRIBUTION DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - Distribution	1.00	1.00	1.00	1.00	1.00
Assistant Manager	1.00	1.00	1.00	1.00	1.00
Superintendent of Construction	0.00	0.00	1.00	1.00	1.00
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	0.00	0.00	0.00	0.00
District Supervisor	13.00	14.00	13.00	13.00	13.00
Field Supervisor	8.00	7.00	6.00	6.00	6.00
Inspector - Construction	6.00	6.00	0.00	0.00	0.00
Leak Utility Worker I	23.00	22.00	22.00	22.00	22.00
Leak Utility Worker II	17.00	18.00	17.00	17.00	17.00
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	22.00	21.00	21.00	21.00	25.00
Utility Worker II	9.00	9.00	10.00	10.00	13.65
Dump Truck Utility Worker I	6.00	6.00	6.00	6.00	6.00
Distribution Maintenance Worker II	11.00	10.00	10.00	10.00	10.00
Distribution Maintenance Worker	16.00	17.00	18.00	18.00	25.00
Distribution Maintenance Worker Trainee	6.00	5.00	5.00	5.00	0.00
Administrative Assistant III	1.00	1.00	1.00	1.00	1.00
Distribution Specialist Team Leader	0.00	1.00	1.00	1.00	0.73
Distribution Aide III	1.00	0.00	0.00	0.00	0.00
Distribution Specialist I	3.80	3.80	0.80	0.80	0.00
Distribution Specialist II	0.00	0.00	3.00	3.00	3.00
TOTAL DEPARTMENT PERSONNEL	154.80	151.80	145.80	145.80	154.38



#### **APPROVED NEW POSITIONS**

#### **UTILITY WORKER II (5)**

- Install water mains, valves, services, meter boxes, fire hydrants, vaults, etc. and locate leaks and lines within Distribution System
- Promote customer relations
- Maintain and replace fire hydrants, and meet with Fire Department officials

#### UTILITY WORKER I – CONSTRUCTION (2)

- Assist Utility Worker II and train new employees
- Locate lines within Distribution System
- Assist with restoring paving and concrete

#### **UTILITY WORKER I - VALVES**

- Assist and train new employees
- Locate leaks and lines within Distribution System
- Install bracing, blocking and strap fittings, pipes, valves, cuts and mains

#### **DISTRIBUTION MAINTENANCE WORKER**

- Assist in locating and installing water mains, valves, and fire hydrants
- Perform manual excavations and tamping of backfill after excavations
- Replace paving and concrete, repair sleeves and split sleeves

#### **DISTRIBUTION MAINTENANCE WORKER - CONSTRUCTION**

- Assist Utility Worker II and train new employees
- Locate lines within Distribution System
- Assist with restoring paving and concrete

#### **TEAM LEAD**

- Install water mains, services, meter boxes, fire hydrants and vaults
- Locate leaks and lines within Distribution System
- Operate vehicles and heavy equipment
- Manage work teams for the duration of the construction project



#### **KEY PERFORMANCE MEASURES**

- 1. Inspect 15% of 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
- 4. Repair at least 95% of the reported water main breaks within 30 days
- 5. Assign and dispatch personnel within 48 hours to at least 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 at least 80% of Level 2 (water leak, no property damage) 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 at least 64% of the yearly capital projects within budget and within the designated project timeline
- 9. Complete at least 90% of the construction worksheets for any updates or changes to the distribution system and submit to the Mapping and Records Department within 30 business days
- 10. Maintain raw water transmission lines, pipelines, right of ways and underground facilities within 30 business days from initial complaint/report of leaks, irregularities or encroachments
- 11. Confirm the construction materials used for capital projects within 90 business days

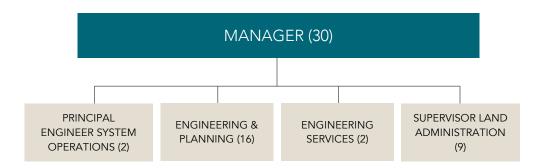


### **ENGINEERING**

The Engineering Department designs and oversees new Capital Improvement Plan (CIP) infrastructure projects, manages and approves designs from external consultants and oversees the design and construction of our Capital Maintenance Repair and Replacement projects. The Engineering Department is responsible for addressing drinking water regulatory issues in the system to attain reliable, high quality and great tasting water.

The department is responsible for land administration and land surveying services which include monitoring all activities on BWW property, developing, coordinating and surveying property maintenance projects, and acting as a liaison to the Board on all property issues.

The department is responsible for environmental services and watershed protection through source water monitoring, watershed construction activities, plant residuals disposal and excavated spoil management.



#### **ENGINEERING MISSION**

To provide professional engineering and management services in the planning, design, construction and maintenance of the BWW 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
- Manage the Capital Improvement Plan (CIP)
- Investigate and resolve water pressure complaints
- Research alternative water quality treatment options
- Oversee asset management and reliability planning
- Manage the BWW Watershed Protection Policy
- Provide land administration surveying and management services for BWW property
- Manage environmental services necessary for residuals and spoil handling
- Operate a Mobile Pilot Plant that tests water process treatment alternatives

### ENGINEERING DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$997,699.30	\$1,070,031.46	\$72,332.16	7.25%
Transportation Expense	25,600.00	23,900.00	(1,700.00)	(6.64%)
Facilities Other	9,000.00	8,000.00	(1,000.00)	(11.11%)
Other Office Materials	5,860.17	8,113.29	2,253.12	38.45%
Material Structures/Tanks	2,400.00	45,000.00	42,600.00	1775.00%
Supplies Expense	40,000.00	15,000.00	(25,000.00)	(62.50%)
Material Equipment Purchase	50,000.00	50,000.00		
Landfill - Midfield	10,000.00	10,000.00		)
Landfill - Sicard Hollow Road	10,000.00	10,000.00		1 6 6
Spoil Stockpile - Putnam	20,000.00	20,000.00	1	L G
Spoil Stockpile - Sicard Hollow	15,000.00	15,000.00		
Fuel	23,300.00	16,800.00	(6,500.00)	(27.90%)
Misc Gen Exp Membership Dues	5,650.48	8,962.66	3,312.18	58.6%
Supplies Expenses SoS Ops	61,000.00	60,800.00	(200.00)	(0.33%)
Travel Misc Other	47,882.08	55,648.96	7,766.88	16.22%
Consultants	110,000.00	55,890.49	(54,109.51)	(49.19%)
Other O&M Expenses	18,568.25	13,983.39	(4,584.86)	(24.69%)
Total Operation & Maintenance	\$1,451,960.28	\$1,487,130.25	\$35,169.97	2.42%



#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget increased by \$35,170 or 2.42% from the 2021 Approved Budget.

The major reason for the variance is:

• Merit and cost of living adjustment increases

## ENGINEERING DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Chief Engineer	1.00	1.00	1.00	1.00	1.00
Engineer - Principal	5.00	5.00	5.00	5.00	5.00
Engineer - Senior	5.00	4.00	4.00	4.00	4.00
Engineer II	1.00	1.00	1.00	1.00	1.00
Engineer	4.00	4.00	4.00	4.00	4.00
Engineering Technician	1.00	1.00	1.00	1.00	1.00
Land Surveyor - Senior	0.00	0.00	0.00	0.00	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	0.00
Nace Paint % Coating Inspector	1.00	1.00	1.00	1.00	0.00
Coordinator - Project - Senior	2.00	1.00	1.00	1.00	1.00
Project Coordinator	2.00	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
Watershed - QCI	0.00	0.00	0.00	0.00	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
Total Department Personnel	33.00	31.00	31.00	31.00	30.00



#### **APPROVED NEW POSITIONS**

#### WATERSHED - QCI

- Enforce the BWW's watershed protection policy
- Review construction site erosion control plans submitted by developers and ensure compliance through periodic inspections
- Investigate reports of environmental problems within the watersheds

#### SENIOR LAND SURVEYOR

- Plan, organize and implement survey projects to have all BWW properties surveyed and marked
- Research public records, maps, deeds, and legal descriptions to determine property ownership
- Acquire real property, rights-of-way, and easements for the purpose of building Water Works Projects
- Prepare extensive records and data logs of survey projects

#### PROJECT COORDINATOR

- Oversee and conduct field investigations and check fieldwork when completed
- Track project changes and produce updated project schedules in conjunction with engineering project management
- Assist in coordinating and reviewing contract administration and other work as requested by engineering project management



BWW'S MOBILE PILOT PLANT TESTS WATER PROCESS TREATMENT ALTERNATIVES.

#### **KEY PERFORMANCE MEASURES**

- 1. Collaborate with other departments to successfully complete at least 64% of the yearly capital projects within budget and within the designated project timeline
- 2. Finalize all the engineering planning and design for assigned projects within 60 to 90 business days, according to applicable industry specifications and standards
- 3. Contract, certify and manage 100% of all Engineering Department projects that are overseen by consulting engineers
- 4. Conduct yearly water quality research and development throughout the utility system to ensure compliance with all national and state requirements
- 5. Identify and analyze all water pressure issues and complaints within 2 business days
- 6. Resolve at least 80% of water pressure issues and complaints within 5 to 7 business days
- 7. Survey and manage 100% of BWW facilities, properties and contractual assets yearly to ensure 100% compliance with all local, state and federal requirements
- 8. Complete at least 90% of the construction worksheets for any updates or changes to the distribution system and submit to the Mapping and Records Department within 30 business days



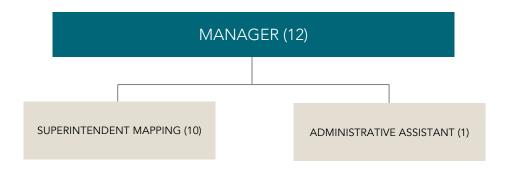
### MAPPING & RECORDS

The Mapping & Records Department is responsible for providing accurate visuals that depict the components of the BWW's system and meeting internal and external customer needs as well as promoting excellent record-keeping standards. The department is comprised of the Drafting Team, the Geographic Information System (GIS) Team and the Records Retention Team.

The Drafting Team maintains and updates all BWW's detail pages, valve maps, line maps, valve cards, worksheets, construction drawings, design drawings, graphic renderings, "as-built" drawings and other special projects.

The GIS Team updates and maintains the company's GIS database and produces various types of special project maps. The team is in the process of coordinating a companywide GPS collection project to capture all valves and fire hydrants.

The Records Retention Team assists each department with requests to purge files for record disposal in compliance with the State of Alabama Department of Archives and History (ADAH) rules and regulation.



#### **MAPPING & RECORDS MISSION**

To provide accurate visuals that depict the components of the BWW 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 records
- Fulfill printing needs for the company
- Update map corrections
- Maintain leak data
- Create and maintain permanent records storage
- Program, troubleshoot and download the GPS units
- Deploy an SAP/GIS web interface for the purpose of tracking water leak notifications and work orders

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

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$255,372.21	\$233,841.90	(\$21,530.31)	(8.43%)
Cafeteria Expense	688.96	688.96		
Mileage Reimbursement	258.36		(258.36)	(100.00%)
Uniforms	250.00	100.00	(150.00)	(60.00%)
Maps and Records Materials	7,035.60	7,995.00	959.40	13.64%
Uniforms - Non-Stock	250.00	100.00	(150.00)	(60.00%)
Utilities-Telephone	600.00	600.00	F = 5 = 4	
Supplies & Expenses	8,407.00	10,000.05	1,593.05	18.95%
Misc Gen Exp Membership Dues	1,722.40	1,722.40		
Travel Misc Other	1,722.40	2,583.60	861.20	50.00%
Consultants		3,315.96	3,315.96	100.00%
Total Operation & Maintenance	\$276,306.93	\$260,947.87	(\$15,359.06)	(5.56%)

#### **HIGHLIGHTS OF BUDGET CHANGES**

The 2022 Approved Budget decreased by \$15,359 or 5.56% from the 2021 Approved Budget.

The major reason for the variance is:

• Salary for staff replacements are less than incumbent salaries



#### **SECTION 7: OVERVIEW OF DEPARTMENTS**

# MAPPING & RECORDS DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
Manager - Mapping Records	1.00	1.00	1.00	1.00	1.00
Mapping & Records - Superintendent	1.00	1.00	1.00	1.00	1.00
Drafter - Senior	3.00	3.00	3.00	3.00	2.00
Drafter	3.00	3.00	3.00	3.00	3.00
GIS Technician II	1.00	1.00	1.00	1.00	1.00
GIS Analyst	0.00	0.00	0.00	1.00	1.00
GIS Technician I	2.00	2.00	2.00	2.00	2.00
Administrative Assistant II	1.00	1.00	1.00	1.00	1.00
Total Department Personnel	12.00	12.00	12.00	13.00	12.00

#### **KEY PERFORMANCE MEASURES**

- 1. Process 85% of certified worksheets and other work requests 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 in accordance with the State of Alabama Department of Archives and History rules and regulations



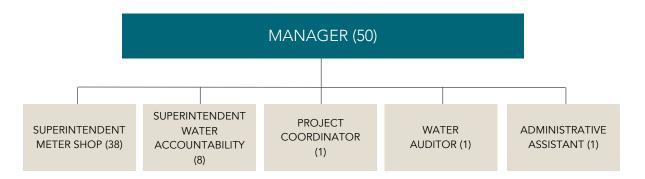
# WATER ACCOUNTABILITY

The Water Accountability Department is comprised of the Meter Shop, the Leak Survey and the Water Accountability Administration teams.

The Meter Shop Team makes all new taps 2 inches and smaller, constructs all meter vaults 4 inches and larger, tests meters, maintains meter sets and meter boxes and replaces meters as part of the annual meter changeout program.

The Leak Survey Team surveys and detects leaks in water mains and service lines and assists the Distribution Department, as needed.

The Water Accountability Administration Team sets strategy and tactics to be used by the Meter Shop and the Leak Survey teams to help manage non-revenue water.



#### WATER ACCOUNTABILITY MISSION

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 BWW for future growth.



OUR WATERSHED PROTECTION POLICY LIMITS DEVELOPMENT IN AREAS CLOSE TO OUR WATER SOURCES, WHICH REDUCES POLLUTANTS. WATERSHEDS ARE AREAS OF LAND WHERE ALL THE WATER THAT DRAINS OFF RUNS INTO A RIVER, STREAM OR LAKE.



#### **SECTION 7: OVERVIEW OF DEPARTMENTS**

#### **SUMMARY OF ACTIVITIES**

- Maintain, test and repair residential and commercial metering equipment and enclosures
- Perform annual leak survey of BWW distribution system that includes handheld leak detection equipment,
   leak noise correlators and leak noise logging systems
- Define areas of concern for potential upgrades and replacement
- Create new service taps and connections
- Maintain meter box/vault enclosures for protection of BWW 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 the Distribution Department's Leak Repair Crew by locating leaks that are difficult to pinpoint
- Provide monthly reports of leaks detected, leak volumes and leak locations
- Provide overall guidance and strategy for the monitoring and reporting of non-revenue water
- Gather data and perform testing in compliance with the AWWA approved methodology for the annual water audit
- Provide reports and data on non-revenue water

### WATER ACCOUNTABILITY DEPARTMENT O&M EXPENDITURES BUDGET SUMMARY

COMMITMENT ITEM	2021 NET BUDGET	2022 NET BUDGET	\$ VARIANCE	% VARIANCE
Labor	\$1,844,734.64	\$1,862,238.25	\$17,503.61	0.95%
Mileage Reimbursement		861.20	861.20	100.00%
Transportation Expense	78,000.00	82,000.00	4,000.00	5.13%
Uniforms	4,400.00	4,500.00	100.00	2.27%
General Inventory Consumption	125,900.00	106,400.00	(19,500.00)	(15.49%)
Facilities Other	120,500.00	113,000.00	(7,500.00)	(6.22%)
Oth Office Mat TD Op	1,665.50	2,472.12	806.62	48.43%
Utilities - Electric	12,400.00	14,400.00	2,000.00	16.13%
Uniforms - Non-Stock	20,200.00	19,000.00	(1,200.00)	(5.94%)
Utilities - Telephone	500.00	350.00	(150.00)	(30.00%)
Supplies & Expenses	3,500.00	3,500.00		
Fuel	156,000.00	152,500.00	(3,500.00)	(2.24%)
Miscellaneous Property	4,750.00	2,500.00	(2,250.00)	(47.37%)
Structural Expenses	500.00	1,000.00	500.00	100,00%
Misc Gen Exp Membership Dues	2,900.00	1,350.00	(1,550.00)	(53.45%)
Travel Misc Other	22,000.00	34,000.00	12,000.00	54,55%
Total Operation & Maintenance	\$2,397,950.14	\$2,400,071.57	\$2,121.43	0.09%



#### HIGHLIGHTS OF BUDGET CHANGES

The 2022 Approved Budget increased by \$2,122 or 0.09% from the 2021 Approved Budget.

# WATER ACCOUNTABILITY DEPARTMENT PERSONNEL SUMMARY

Job Title	2018	2019	2020	2021	2022
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 Technician	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	6.73	5.00	5.00	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	3.00	3.00	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
Total Department Personnel	51.73	50.00	50.00	50.00	50.00



#### **SECTION 7: OVERVIEW OF DEPARTMENTS**

#### **KEY PERFORMANCE MEASURES**

- 1. Collaborate with other departments to successfully complete at least 64% of the yearly capital projects within budget and within the designated project timelines
- 2. Evaluate and resolve all service orders within 3 business days
- 3. Test new meters for accuracy of 98.5% or greater and replacement meters 90% or greater accuracy annually as established by the AWWA M6 Manual standards
- 4. Finalize all leak surveys for the distribution system every 30 months
- 5. Provide necessary or requested data to the Engineering Department to enable an AWWA methodology standard water audit on all water usage within BWW's service area yearly by September 30
- 6. Complete at least 90% of the construction worksheets for any updates or changes to the distribution system and submit to the Mapping & Records Department within 30 business days





## DESCRIPTION OF THE SYSTEM

Birmingham Water Works serves an area of approximately 700 square miles within the Birmingham-Hoover Metropolitan Area including portions of Jefferson, Shelby, Blount, St. Clair, and Walker Counties. Potable water service is provided to a population of approximately 655,000 with an additional population of approximately 115,000 served by consecutive systems that are fed with BWW-produced water.

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

#### LAKE PURDY-CAHABA RIVER SYSTEM

Part of the BWW's original purchase from The Birmingham Water Works Company in July 1951, included the Lake Purdy-Cahaba River System which dates back to the 1880s. The Cahaba River watershed in Jefferson, St. Clair and Shelby counties is east of Birmingham and drained by the Cahaba and Little Cahaba Rivers. With 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 5.6 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 Shades Mountain Filtration Plant.

#### **INLAND LAKE SYSTEM**

This 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 20.5 billion gallons. The watershed above the dam is about 72 square miles in area. The dam is located approximately 27 miles northeast of Birmingham 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 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 both Carson and Putnam Filtration Plants.

#### **SIPSEY SYSTEM**

Operated under a permit from the U.S. Army Corps of Engineers, the Sipsey System 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 Birmingham, as well as a booster pumping station, a transmission pipeline, and terminal control reservoirs. The 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 Carson Filtration Plants.

#### **MULBERRY SYSTEM**

With its source the Mulberry Fork of the Black Warrior River in Walker County, 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 24-hour period. Work was completed in 1995 to increase the pump station capacity to the fully 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 Western Filtration Plant. The Mulberry System includes a booster pumping station with a 25-million-gallons per-day capacity located in the vicinity of the control reservoirs. Water can be pumped via this station to the 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 BWW currently has a sufficient water supply and is projected to be able to meet its needs through at least the year 2032 barring any unforeseen circumstances. In 2007, the BWW prepared a Water Supply Needs Assessment, which examined future needs for water supply through the year 2075. In 2009, the BWW 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 BWW can meet the expected demands of the Birmingham-Hoover Metropolitan Area through the year 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.

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

#### **ANNUAL RAINFALL**

Established by records of the United States Weather Bureau, the average annual rainfall since 1900 has been approximately 55 inches. The lowest annual rainfall on record was 28.86 inches recorded in 2007. The absence of any major seasonal variations in rainfall in the Birmingham-Hoover Metropolitan Area usually ensures a dependable supply of surface water.

#### **FILTRATION PLANTS**

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

#### FILTRATION PLANT SOURCES AND CAPACITY

FILTRATION PLANT	RATED CAPACITY	SOURCE OF SUPPLY	
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	
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 feed into an integrated distribution system increasing the overall reliability of the system.

(See "DESCRIPTION OF THE SYSTEM – Sources of Supply.")

#### **PUMPING FACILITIES**

Pumping facilities at each of the four filtration plants deliver water into the 13 major and 7 minor service areas of the distribution system. In addition to these pumping facilities, the system has 16 major pumping stations, pumping from 1 million to 28 million gallons per day. These major pumping stations deliver water from lower service areas to higher service areas. In addition to the above, there are a number of smaller booster pumping stations delivering water to isolated areas at higher elevations. These smaller stations range in pumping capacity from 20 to 400 gallons per minute.

#### 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 6.3 million gallons capacity, improve the flow and pressure throughout the distribution system. All but two of the tanks have been built or acquired by the BWW since it purchased the System from the Birmingham Water Works Company in 1951. In addition to the above distribution storage, the BWW has a total of 27 million gallons of filtered water storage capacity in clear wells at its various filtration plants. The BWW also has raw water storage of approximately 36 million gallons at its Shades Mountain Filtration Plant.

#### TRANSMISSION AND DISTRIBUTION LINES

The general topography of the Birmingham-Hoover Metropolitan Area, ranging in elevation from 300 to 1,200 feet above sea level, requires that the distribution system be separated into 13 major and 7 minor zones, 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 smaller 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 the System is afforded for all zones.

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

#### **ENVIRONMENTAL MATTERS**

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

The BWW is not under any U.S. Environmental Protection Agency (EPA) consent decree but recently entered a consent agreement with the Alabama Department of Environmental Management (ADEM) regarding development of improved lead and copper service line inventory and increased lead and copper sampling frequencies. ADEM asserted that the BWW had not previously maintained a sufficiently accurate inventory of existing lead service lines or provided enough tier-1 sampling sites. They additionally asserted that the BWW did not test the requisite 50% of samples from lead service lines in 2016. This monitoring compliance issue is in no way indicative of any water quality



problems within the System. The results from lead and copper samples taken in 2016 (and from a similar resampling event conducted in 2019) indicate that no samples were found to be above the respective EPA action levels.

#### **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 BWW acquired the System in 1951 until the System was acquired by the City in 1998, the BWW imposed rate increases from time to time. The annual rate increases since 2003 are as follows:

2004	8.80%
2005 (JANUARY)	7.30%
2005 (JUNE)	6.50%
2006	8.75%
2007	7.75%
2008	7.70%
2009	13.20%
2010	6.90%
2011	6.90%
2012	3.90%
2013	4.90%
2014	3.90%
2015	3.90%
2016	4.90%
2017	3.90%
2018	2.90%
2019	3.90%
2020	3.90%
2021	0.00%
2022	3.90%

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 BWW's obligations.



## Current water rates are as follows (Effective January 1, 2022):

Typical Rates for Each 100 Cubic Feet of Water Delivered\*

#### **CURRENT WATER RATES**

F 11 6 200 11 6	\$2.66
For the first 300 cubic feet per month	
For 400 to 1,500 cubic feet per month	\$3.96
Over 1,500 cubic feet per month	\$6.93
COMMERCIAL AND ALL OTHER WATER USERS RATE	
Per cubic feet per month	\$4.16
WHOLESALE RATE	
Per cubic feet per month	\$3.42
BASE CHARGE RATES	
Monthly base charge – per month for 5/8-inch meter (in addition to the above	\$26.26
Varied monthly base charges for other meter sizes	\$34.82 – \$2,038.57
FIRE SERVICE RATES	
Fire Service Rental Rates (per year) (based on size)	\$333.83 – \$8,357.68
MUNICIPAL FIRE HYDRANTS RATE	
Fire Hydrants (per year through September 2022)	\$226.25

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



# COMPARISON OF WATER RATES WITH OTHER SYSTEMS

A comparison of the BWW'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 2, 2021 follows:

Charlottesville, Virginia	\$ 75.58
New Orleans, Louisiana	70.31
Montgomery, Alabama	67.20
Chapel Hill, North Carolina	62.71
Birmingham, Alabama	61.96
Austin, Texas	60.06
Richmond, Virginia	59.16
Norfolk, Virginia	56.70
Atlanta, Georgia	54.96
Asheville, North Carolina	50.21
San Antonio, Texas	49.57
Knoxville, Tennessee	42.60
Chattanooga, Tennessee	40.37
Mobile, Alabama	38.44
Louisville, Kentucky	38.06
Marietta, Georgia	35.48
Nashville, Tennessee	35.97
Charlotte, North Carolina	\$ 32.33



# **RESULTS OF OPERATIONS**

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

# OPERATIONS STATISTICS YEAR ENDED DECEMBER 31

	2016	2017	2018	2019	2020
Number of customers	190,758	192,636	192,429	193,530	195,212
Miles of Mains in Service	4,012	4,025	4,052	4,060	4,095
Number of Fire Hydrants	13,681	13,688	12,805	13,894	13,032
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)	38.9	37.1	38.8	40.5	41.4
Single day, peak day demand (in million gallons)	131.2	115.6	125.3	138.5	131.1

# MAJOR INDUSTRIAL/GOVERNMENTAL CUSTOMERS

The following table contains the 10 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, 2020 were \$200,382,268.

#### JEFFERSON COUNTY

Customer	Revenue	% Total of Operating Revenue
UAB	3,746,210	1.87%
US Steel	2,283,479	1.14%
ERP Compliant Coke	1,645,579	0.82%
Birmingham Housing Authority	1,213,146	0.61%
Graysville Water Co	1,015,599	0.51%
St. Vincent's Hospital	767,958	0.38%
Buffalo Rock Co	757,471	0.38%
ACIPCO	720,559	0.36%
Barber's Pure Milk Company	674,040	0.34%
Town of Mulga	663,549	0.33%
Grand Total	13,487,591	6.73%



# **GLOSSARY**

**Accrual Basis of Accounting** – A basis of accounting under which increases and decreases in economic resources are recognized as soon as the underlying event or transaction occurs. Revenues are recognized when earned and expenses are recognized when incurred, regardless of the timing of related cash flows.

Amortization - The gradual elimination of a liability in regular payments over a specified time period.

**Annual Budget** – A plan covering a single fiscal year (January 1 - December 31) that details how BWW will generate income and prioritize spending based on priorities, goals and needs.

Backflow Prevention and Cross Connection Control Policy – Program mandated by the Alabama Department of Environmental Management (ADEM), the U.S. Environmental Protection Agency (EPA) Office of Water and the Federal Safe Drinking Water Act. The purpose of the policy is to protect BWW's potable water system against actual or potential cross connections, back pressure, and back siphonage.

**Bond** – A debt instrument/security used to fund capital projects or asset purchase with a written promise to pay a specific amount of money with interest within a specific time period, usually long term.

**Budget Process** – The process by which the BWW 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.

**Buried Infrastructure Program –** The program is funded by the BWW's Capital Budget. It is focused on the replacement of 2-inch galvanized steel pipe and 2-inch unlined cast iron pipe that have exceeded their useful life in older communities in the BWW's service area. This improves water quality, service and reliability to customers in the older communities and has been instrumental in the utility's water loss initiative to reduce leakage in the distribution system.

**Business Sustainability and Capacity Building (BSCB) Program** – Program created to increase the number of contractors and vendors required to meet the needs of the Operation & Maintenance and Capital Improvement Plan budgets by providing guidance on how to access capital and capacity to the many small local businesses including Historically Underutilized Businesses.

Capital Expenditure - Expenditures that result in the acquisition of or the addition of fixed assets.

Consumer Confidence Report (CCR Report) – The CCR is an annual report on the quality of water. The report details and outlines contaminants and their levels in drinking water. BWW is federally mandated to provide this report to customers and wholesalers.

**Capital Improvement Plan (CIP)** – Process by which BWW evaluates the operating condition of the organization's assets to identify the need for upgrades and improvements.

Capital Project - Planned process to construct, purchase, or install a new asset or improve an existing asset.

**Capital Reserve Fund** – Established for unexpected capital needs when shortfalls in anticipated capital funding occur.



**Consecutive Water Systems –** Other public water systems that receive some or all of their finished water from BWW through direct connection to the BWW distribution system.

**Debt Service Coverage** – Generally expressed as a percentage of current-year debt service, generally in the range of 115 to 150 percent, and is a requirement included in the bond indentures associated with revenue bonds.

**Debt Service Coverage Ratio** – The margin of safety ratio associated with bond indebtedness reflecting the ratio of the actual or projected net revenue available for debt service to annual debt service payments.

**Demand Shortfall Fund –** Established for unexpected capital and operating needs when demand is significantly below projections due to climatic events.

**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.

**Economic Development Fund** – Established to provide funding for capital projects that would enable the growth of the utility system.

**EUM Framework** – The framework which BWW manages the utility to ensure that implemented strategies support effective utility management and ultimately result in mission accomplishment and vision fulfillment. The adoption of EUM has been essential in communicating a clear direction to all who are responsible for ensuring the success of the BWW.

**Historically Underutilized Business Program (HUB)** – This is a program designed to encourage the participation of underserved firms. The program fosters competition and ensures non-discrimination in contract awards with a goal of at least 30% of goods and services sourced by BWW from these marginalized vendors.

**Mobile Pilot Plant –** This is a mobile test lab that navigates between filter plants. The pilot plant is designed to evaluate differing raw water sources and distribution systems at each plant and functions as an alternative test process treatment.

Potable Water – Water that is free of contaminants and ready for consumption.

PAYGO (Pay As You Go) – It is the practice of financing expenditures with funds that are currently available rather than borrowed.

**Project Drivers (Capital Budget)** – Capital projects are classified/listed by priority. Each project is placed into one of the six categories; however, it is possible that a project could fall into multiple categories. When this occurs, effort is made to identify the most significant reason for the project.

Rate Stabilization Fund – Funds reserved for unexpected capital and operating needs if the BWW faced events that severely challenge its financial position during the year.

Revenue Fund – Funds reserved to maintain 45 days of operating revenues.

**Watershed Protection Policy** – This policy establishes requirements for development in the Cahaba River/Lake Purdy Watershed to manage/control pollution and in order to protect the public water supply.



## **ACRONYMS**

**ADAH** Alabama Department of Archives and History

**ADEM** Alabama Department of Environmental

Management

**ACH** Automated Clearing House

A/R Accounts Receivable

**AWPCA** Alabama Water Pollution Control Association

**BBB** Better Business Bureau

**BCIA** Birmingham Construction Industry Authority

**BPEM** Business Process Exception Management

**BSBC** Business Sustainability and Capacity Building

**BWW** Birmingham Water Works Board

**CADD** Computer Aided Design and Drafting

**CCF** Centum Cubic Feet

**CCR** Consumer Confidence Report

**CCTV** Closed Circuit Television

**CDC** Centers for Disease Control

CI Pipe Cast Iron Pipe

**COLA** Cost-of-Living Adjustment

**CORE** Control Operations Room and Emergency

Recovery

**CPI** Consumer Price Index

**CPR** Clean Paint and Repair

**CRM** Customer Relationship Management (SAP)

**DHS** Department of Homeland Security

**DSE** Distribution System Evaluation

**E&M** Electrical & Mechanical Department

**EMA** Emergency Management Agency

**EPA** Environmental Protection Agency

**ERP** Enterprise Resource Planning

**EUM** Effective Utility Management

FI Financial Information System (SAP)

FTE Full Time Equivalent

**GAC** Granular Activated Carbon

**GFOA** Government Financial Officers Association

**GIS** Geographic Information System

**GPS** Global Positioning System

**HR** Human Resources

**HUB** Historically Underutilized Business

**HVAC** Heating, Ventilation and Air Conditioning

IT Information Technology

**KV** Kilo Volts

LAN Local Area Network

LT2 Long Term Testing (Lab)

**LIMS** Laboratory Information Management System

**MDL** Minimum Detection Limits

MGD Million Gallons per Day

M&R Maintenance & Repair

**NIMS** National Incident Management System

**NRW** Non-Revenue Water

**NST** National Standard Thread

**O&M** Operation & Maintenance

**OPEB** Other Post-Employment Benefits

PAYGO Pay As You Go

PFP Putnam Filter Plant

PMO Project Management Office

**PS** Pump Station

**PSA** Public Service Announcement

**QA/QC** Quality Assurance/Quality Control

**RL** Reporting Limits

**R&R** Renewal and Replacement

**RSE** Rate Stabilization and Equalization Model

**SAP** Systems, Applications and Products

**SCADA** Supervisory Control and Data Acquisition

**SMFP** Shades Mountain Filter Plant

**TAT** Testing Turnaround Time

**UAB** University of Alabama at Birmingham

**VOC** Volatile Organic Compounds

**WAN** Wide Area Network

WFP Western Filter Plant

WIFIA Water Infrastructure Finance and Innovation

Act

**WQO** Water Quality Operations

