



ISO 14001:2015 ♦ NC Star Public Sector ♦ ISO 45001:2018



**WATER AND SEWER AUTHORITY
OF CABARRUS COUNTY
CONCORD, NORTH CAROLINA**

**ANNUAL REPORT
FISCAL YEAR 2020-2021**

TABLE OF CONTENTS

	<u>Page</u>
Letter to the Board of Directors	3
Administration/Human Resources	4
Engineering	6
Wastewater Operations	12
Water Operations	23
Finance	25



WATER & SEWER AUTHORITY
OF CABARRUS COUNTY

Office: 232 Davidson Hwy.
Concord, NC 28027

704.786.1783 ♦ 704.795.1564 Fax
www.wsacc.org

MEMORANDUM

TO: Board of Directors
FROM: Michael Wilson, CPA
Executive Director
DATE: January 13, 2022
SUBJECT: Annual Report FY 2020-2021

The financial results for the fiscal year ending on June 30, 2021 continued to improve as a result of the sixth consecutive annual sewer rate increase ranging from five percent (5%) to two and one half percent (2.5%), sewer flows exceeding budget by almost 627 million gallons and unspent budgeted expenditures. Final revenues over expenditures on the budgetary basis were \$2,721,980. Rainfall during FY 20-21 continued to fall from the prior year level totaling more than 60.5 inches to 56.14 inches which was still significantly higher than the average of 46 inches for Cabarrus County. The continued strong growth and higher than normal rainfall has placed a burden on the interceptors and treatment plants and has accelerated plans for providing more capacity. The challenge for FY 21-22 will be to plan for the Rocky River Regional Wastewater Treatment Plant (RRRWTP) Expansion and sewer transportation system while allowing for continued growth and maintaining affordable rates for the customers of Cabarrus County.

System Development Fee collections totaled \$6,179,136. Construction and demand for new services remained strong with 1,773 homes and 892 apartments receiving building permits that will connect to the sewer system.

As you will see in the annual report a number of repair, replacement, and refurbishment projects and sewer transportation projects are underway. The Gravity Thickener Mechanism project is complete, and the Back Creek and Lower Coddle Creek Interceptors projects have been designed and right of way acquisition is underway. WSACC staff is working with Brown and Caldwell to commence the construction of the RRRWTP Expansion Project as quickly as possible.

Looking to the future, WSACC has selected Black & Veatch to update our Master Plan. The Master Plan will look at the long term demand for both water and sewer needs. Once the sewer needs are identified, Black & Veatch will assist WSACC with filing for a new sewer capacity permit above the current 34 MGD at the RRRWTP. The Master Plan will also allow for updating our Capital Improvement Program to reflect changing needs in the county. WSACC will be issuing debt in the spring of 2022 to finance the expansion of the RRRWTP and install the Lower Coddle Creek Parallel Interceptor. WSACC staff will continue to be supportive of the efforts of management to identify areas to reduce costs and make improvements to the efficiency of operating the RRRWTP. I would like to thank each and every employee and Board member for their continued support.

Administration/Human Resources

Administration/Human Resources consists of three employees: the Deputy Executive Director-Administration; the Executive Secretary/Secretary to the Board of Directors; and a Human Resources Intern. Administration is a diversified area of WSACC because we: provide clerical support assistance to the Board of Directors, Executive Director, Deputy Executive Director-Administration, Finance Director and the Engineering Director. This ranges from general correspondence and letter writing to the development of various policies and procedures for WSACC.

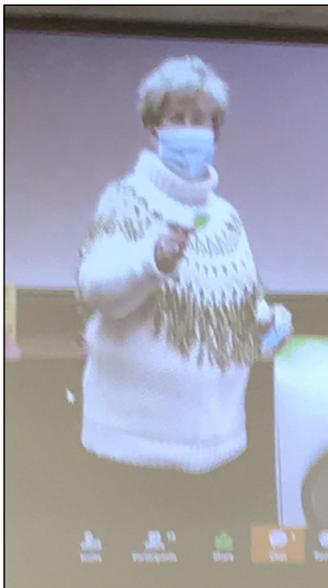
Some highlights of the past year for the Administration/Human Resources Department include:

- Promoted WSACC participation in the community through personal, professional and staff participation in appropriate Chamber of Commerce activities and various social and professional events and meetings.
- Promoted professional affiliations by staff to enhance training and job knowledge related directly to their positions with WSACC such as with the North Carolina American Waterworks Association/Water Environment Association, Water Environment Federation and numerous departmental professional affiliations for Engineering, Finance and Human Resources.
- WSACC received four Gold Awards from the North Carolina Department of Labor in recognition of outstanding safety and health efforts. To qualify for an annual safety award, a firm must (1) have had no fatalities during the calendar year at the site or location for which the award was given; and (2) have maintained an incidence rate at least 50 percent below the average for its particular industry group.

This is the 12th consecutive year that the Administrative Office, Coddle Creek Reservoir/Lake Howell and the Muddy Creek Wastewater Treatment Plant have received the NCDOL Gold Award. This is the 4th year the Rocky River Regional Wastewater Treatment Plant has received the NCDOL Gold Award. NCDOL's Commissioner, Josh Dobson, congratulated WSACC for their continued efforts to promote and provide a safe work environment in 2020.



- WSACC had to cancel the 2020 Family Fun Day due to health concerns relating to the spread of Covid-19.
- WSACC held a flu clinic for employees on October 5, 2020. A tent was set up outside for the Cabarrus County Employee Health Center staff to administer the flu shots.
- An Employee Appreciation Luncheon was held on October 8, 2020 in the parking lot at the RRRWWTP. Employees were required to follow the safety protocols related to the Covid-19 pandemic. Grate Catering served hamburgers and hotdogs and Poppin John's ice-cream was on site to serve ice-cream.
- The 2020 Holiday/Awards Luncheon was held virtually on December 3, 2020. A bar-b-que lunch box from Jim' N Nicks was provided to all employees. Service awards and door prizes were virtually presented. WSACC had 50 employees that received the Safety Incentive Award.



- In April 2021, WSACC held several virtual meetings with insurance brokers to find the best insurance rate for employees and prepare for the 2021-2022 open enrollment. WSACC chose Blue Cross and Blue Shield of NC. Benefit meetings were set up for employees with the required social distancing to prevent the spread of Covid-19.

Engineering

The primary focus of the WSACC Engineering Department continues to be the development, update, timing, and management of projects associated with the WSACC Capital Improvement Program. During the past fiscal year, the Engineering Department has continued to manage and coordinate various engineering studies and capital improvement projects. This has included wastewater transmission (interceptor) and wastewater treatment plant design work, and bidding and construction phase work.

The Engineering Department currently consists of twelve employees: the Engineering Director, Assistant Engineering Director, Construction Project Manager, Engineering Technician, Utility Systems Engineer Intern, Utility Interceptor System Supervisor, five Utility Maintenance Technicians, and Reservoir Maintenance Technician.

The Engineering Department also provides technical assistance to other WSACC departments and member jurisdictions' utility staff in the implementation of engineering-related WSACC policies and procedures in areas such as wastewater flow monitoring, transmission/treatment flow acceptance and inflow/infiltration.

Some highlights of the past year for the Engineering Department include:

Rocky River Regional Wastewater Treatment Plant (RRRWTP) Expansion Study and Preliminary Engineering Report

WSACC contracted with Brown and Caldwell in January 2020 to study options for expansion of the RRRWWTP from 26.5 million gallons per day (MGD) to 34 MGD. WSACC staff has worked with Brown and Caldwell and Charlotte Water staff to establish existing capacity limitations and condition of associated equipment, evaluate alternatives for implementing the plant expansion, select an alternative, explore alternative delivery methods, and advance design and cost estimation efforts for the selected alternative.



Lower Coddle Creek Parallel Interceptor

WSACC continued to work with Gavel & Dorn Engineering on design of a parallel interceptor which will provide additional wastewater conveyance capacity in the lower portion of the Coddle Creek basin. Completion of this project will improve conveyance capacity in the Coddle Creek basin overall in response to continuing growth.

Back Creek Interceptor Extension

WSACC continued to work with Black & Veatch for design of an interceptor extension which will provide additional wastewater conveyance capacity in the Back Creek basin. Completion of this project will improve overall conveyance capacity in the Back Creek basin and will allow WSACC to accept wastewater flow from Charlotte Water into this basin.

RRRWWTP Electrical Improvements

WSACC continued to work with Southeastern Consulting Engineers on design for replacement of electrical cables, switchgear, and related features at the RRRWWTP. WSACC and Southeastern Consulting Engineers also coordinated with Brown and Caldwell on the overall layout relative to the expected layout for the expanded RRRWWTP. Replacement of the aging cables and equipment will improve reliability for the electrical system at the RRRWWTP and will help WSACC to ensure that capacity is available for future expansion efforts as needed.



Shop Office Upfit at RRRWWTP

WSACC contracted with Carlos Moore Architect for design of the Shop Office Upfit project at the RRRWWTP, and with Liles Construction to complete construction for the project. The Shop Office Upfit includes expanded and combined office space for Maintenance and SCADA department personnel, along with a meeting area and a library to house operation and maintenance (O&M) manuals and associated documentation.



Gravity Thickener Mechanism Replacement

WSACC previously contracted with Willis Engineers to complete design for replacement of the two existing mechanical drive mechanisms for the RRRWWTP Gravity Thickeners. The existing thickener mechanisms were original equipment from 1978. JS Haren replaced one gravity thickener mechanism during the 2019-2020 fiscal year, and replaced the other gravity thickener mechanism in the 2020-2021 fiscal year. The upgrade included replacement of the original carbon steel mechanisms with stainless steel, eliminating the costly and invasive job of having to clean and paint the mechanisms.



Lower Rocky River Interceptor Rehabilitation

WSACC contracted with Hydrostructures for design of interceptor rehabilitation and associated improvements to the Lower Rocky River Interceptor, and with CaJenn Construction & Rehab Services for the completion of the rehabilitation efforts. The referenced gravity line had previously been identified as having significant inflow and infiltration, and the improvements should help to reduce associated flows to the RRRWWTP.

Administration Building Addition at RRRWWTP

WSACC contracted with Carlos Moore Architect for design of the Administration Building Addition project at the RRRWWTP, and with Liles Construction to complete construction for the project. The Administration Building Addition project includes expanded and combined control room and office space for Operations personnel, along with a dedicated IT equipment room.



Lower Rocky River Pump Station Bar Screen Replacement

WSACC contracted with McKim & Creed for design of bar screen and influent gate replacement at the Lower Rocky River Pump Station, and with Hall Contracting Corporation for construction. This work involves replacement of the existing medium duty screens (installed with original construction of the pump station) with heavy duty screens. Installation of the heavy duty screens and replacement gates should provide more reliable service and lead to a reduced frequency required for rebuilding the screens.

Lower Rocky River Pump Station Expansion

WSACC contracted with Brown and Caldwell for design of a capacity expansion at the Lower Rocky River Pump Station, and with Laughlin-Sutton Construction Company for construction. This work involves installation of two new pumps for additional capacity, replacement of four existing pumps, and associated electrical / controls work and force main improvements. Expansion of the Lower Rocky River Pump Station will provide greater capacity to receive wastewater from contributing areas.

Dutch Buffalo Interceptor Rehabilitation

WSACC contracted with Hydrostructures for design of interceptor rehabilitation and associated improvements to the Dutch Buffalo Interceptor. The referenced gravity line had previously been identified as having significant inflow and infiltration, and the improvements should help to reduce associated flows to the RRRWWTP.

Lower Back Creek Interceptor Evaluation

WSACC contracted with Frazier Engineering, P.A. for study of manhole and pipe conditions for the Lower Back Creek Interceptor. The referenced gravity line had previously been identified as having significant signs of wear from corrosive gases prevalent in this portion of the collection system and from general wear over time.

Muddy Creek WWTP Bulk Caustic Tank

WSACC contracted with Willis Engineers for design of a bulk caustic tank at the Muddy Creek WWTP. WSACC uses caustic at the Muddy Creek WWTP to maintain a stable environment for wastewater treatment and to help ensure compliance with applicable permit limits. WSACC currently receives caustic in "mini-bulk" deliveries at the Muddy Creek WWTP due to historically low usage rates and associated small tank sizes. However, with increasing flows at the plant, and given the cost savings of purchasing caustic by the tanker, these improvements should help to reduce overall cost for caustic at the Muddy Creek WWTP.

RRRWWTP Pipeline Condition Assessment

WSACC contracted with Brown and Caldwell for evaluation of existing manholes, gravity lines, and force mains at the RRRWWTP, to determine what rehabilitation efforts may be needed as part of the continuing expansion design effort. The referenced lines and manholes are largely part of the original construction at the plant, and these features have experienced wear over the years from corrosive atmospheres. The results of this evaluation will help to ensure that appropriate rehabilitation efforts are included as part of upcoming construction work so that affected lines can continue to operate into the future as needed.

Below is a list of projects that were initiated, ongoing, or completed during FY 20-21:

PROJECT NAME	ENG. FIRM	ENG. CONTRACT AMOUNT	CONTRACTOR	PROJECT DATES (Constr. Start)	CONSTRUCTION CONTRACT AMOUNT	STATUS (Complete)
RRRWWTP Expansion Study and Preliminary Engineering Report	Brown & Caldwell	1.925M	TBD	TBD	TBD	TBD
Lower Coddle Creek Parallel Interceptor	Gavel & Dorn Engineering	\$156,780	TBD	TBD	TBD	TBD
Back Creek Interceptor Extension	Black & Veatch	1.025M	TBD	TBD	TBD	TBD
RRRWWTP Electrical Improvements	Southeastern Consulting Engineers, Inc.	0.495M	TBD	TBD	TBD	TBD
Shop Office Upfit at RRRWWTP	Carlos Moore Architect	\$13,440	Liles Construction	Started June 2020	\$328,593	Complete
Gravity Thickener Mechanism Replacement	Willis Engineers	\$120,000	JS Haren	Started December 2019	\$1,218,408	Complete
Lower Rocky River Interceptor Rehabilitation	Hydrostructures	\$114,620	CaJenn Construction & Rehab Services	Started September 2020	\$1,593,501	Complete
Lower Rocky River Pump Station Bar Screen Replacement	McKim & Creed	\$169,361	Hall Contracting Corporation	Started November 2020	\$1,326,150	30%
Lower Rocky River Pump Station Expansion	Brown & Caldwell	\$317,805	Laughlin-Sutton Construction Company	TBD	\$2,219,163 (inc. \$730,578 for pumps)	Bid Awarded
Administration Building Addition at RRRWWTP	Carlos Moore Architect	\$32,475	Liles Construction	Started August 2020	\$142,450	Complete
Dutch Buffalo Interceptor Rehabilitation	Hydrostructures	\$23,868	TBD	TBD	TBD	TBD
Lower Back Creek Interceptor Evaluation	Frazier Engineering, P.A.	\$87,700	TBD	TBD	TBD	TBD
Muddy Creek WWTP Bulk Caustic Tank	Willis Engineers	\$20,000	TBD	TBD	TBD	TBD
RRRWWTP Pipeline Condition Assessment	Brown & Caldwell	\$164,524	TBD	TBD	TBD	TBD

Listed below are the flows that have been accepted for each jurisdiction:

Flow Acceptance Letters		
Total Flows Accepted July 1, 2020 - June 30, 2021		
Jurisdiction	FY 19-20 Amount Accepted * (Gallons/Day)	FY 20-21 Amount Accepted * (Gallons/Day)
Concord	664,838	920,900
Harrisburg	42,330	310,668
Kannapolis	333,950	402,980
Mount Pleasant	9,000	--
Charlotte Water	505,651	418,179
Subtotal	1,555,769	2,052,727
MCWWTP	47,605	3,150
Grand Total	1,603,374	2,055,877

*Based on the flow requirements of the North Carolina Department of Environmental Quality rules and regulations

RRRWWTP – FY 20-21 average daily flow – 21.72 MGD

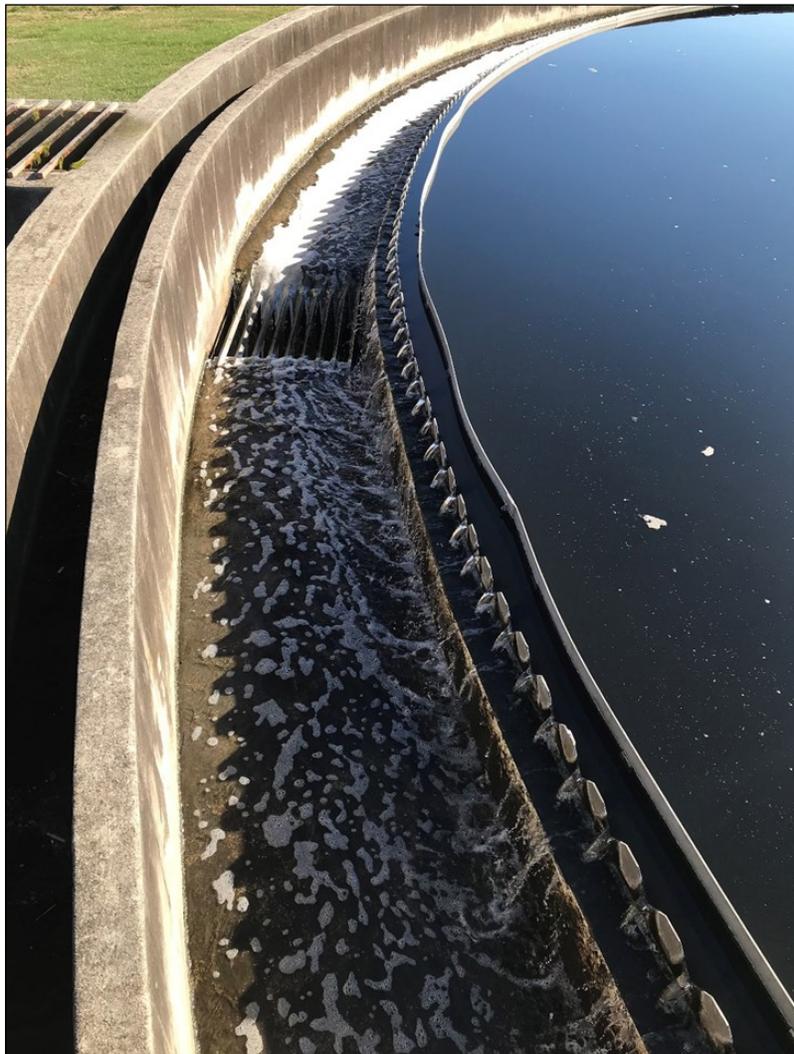
MCWWTP – FY 20-21 average daily flow – 0.181 MGD

Wastewater Operations

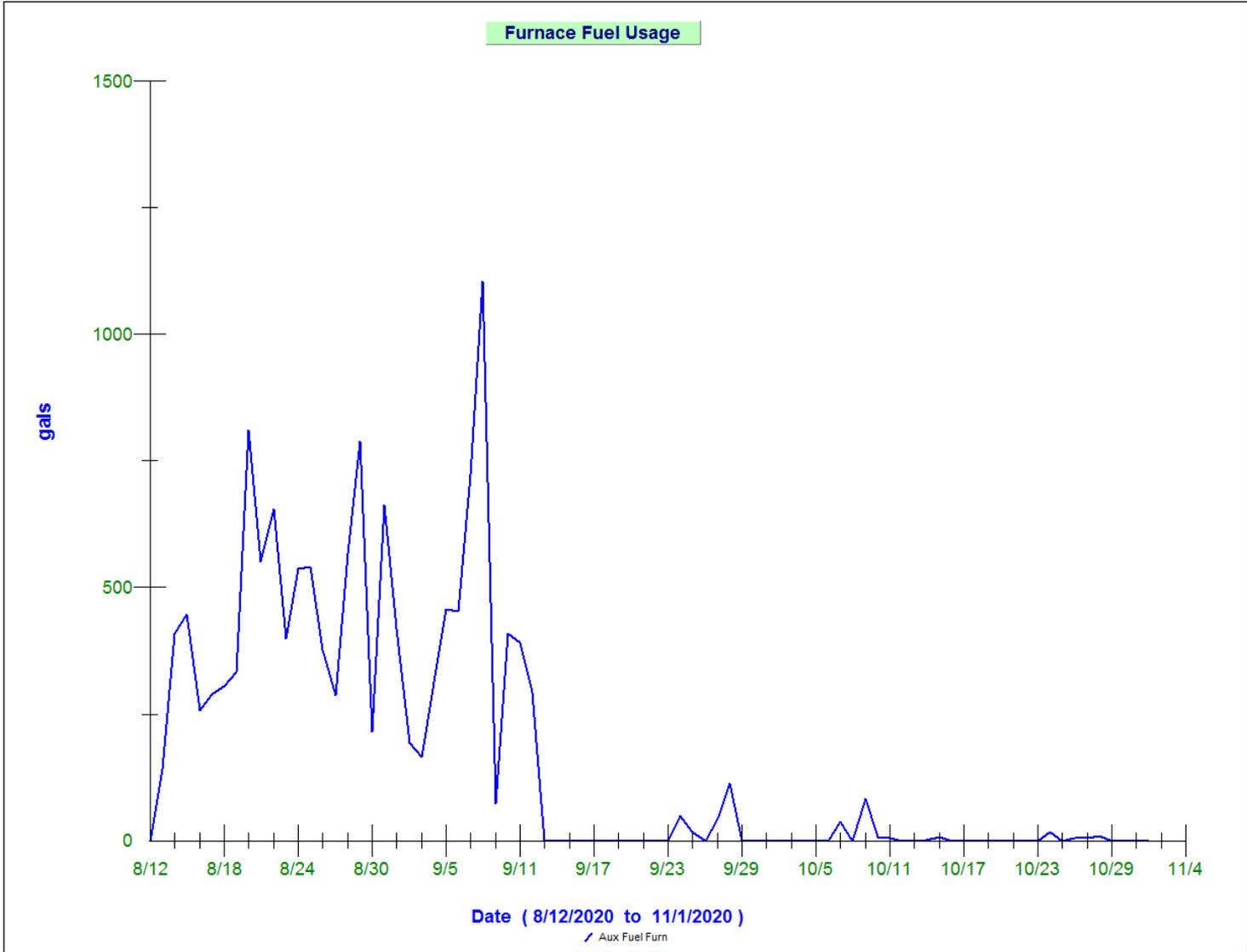
The Wastewater Operations Department consists of the maintenance and operation for the Rocky River Regional Wastewater Treatment Plant (RRRWWTP) which is currently rated for 26.5 million gallons per day of flow; the Muddy Creek Wastewater Treatment Plant rated at 300,000 gallons per day of flow; the pretreatment operations at the RRRWWTP and the water and wastewater Laboratory at the RRRWWTP. The RRRWWTP operates under the National Pollutant Discharge Elimination System (NPDES) permits issued by the North Carolina Department of Environment and Natural Resources, Water Quality Division. The RRRWWTP also has a Title V Air Permit issued by the Division of Air Quality. There are sixteen full-time employees in the Wastewater Operations Department, eleven full-time employees in the Maintenance Department, four full-time employees in the SCADA Department, two full-time employees in the Pretreatment Department and four full-time positions in the Laboratory, one of which splits duties between the Lab and Operations. Beginning in 2022, the RRRWWTP will begin a multi-year construction process of expanding the treatment capacity to 34.0 million gallons per day.

Some highlights of the past year for Wastewater Operations include:

- RRRWWTP was in compliance with our NPDES permit with no violations or missed samples.
- FY July 2020-June 2021 – Carolina Management Team refurbished weir wall of secondary clarifier #4, #6 and #8.



- September 2020 – Started wasting old micro organisms back to the Main Pump Station which resulted in improved sludge dewatering and 65% reduction in daily average fuel usage as displayed in the graph below.
- September 2020 - Brown and Caldwell preformed stress testing on secondary clarifiers as part of the plant expansion study.



- October 2020 – A second lime storage tank was installed to increase storage capacity.



- November 2020 through February 2021 – The administrative control room at the RRRWWTP was expanded. Two offices and a server room was added as well.



- January 21, 2021 – Roberto Scheller with the North Carolina Division of Water Resources (NCDWR) completed a plant inspection with no issues found.
- February 2021 through April 2021 – A pilot DAFT/NEF unit was set up to test treatment of the furnace scrubber blowdown water.
- March 2021 – Annual furnace stack testing was performed. We successfully passed all required parameters.



- April 2021 - Annual oxygen plant turnaround.

During this time we had two Wastewater Treatment Plant Operators earn a Grade IV Wastewater Treatment Plant Certification, three Wastewater Treatment Plant Operators earn a Land Application Certification, and one Wastewater Treatment Plant Operator earn a Grade I Wastewater Treatment Plant Certification.

RRRWWTP Maintenance:

- WSACC completed the annual O2 plant turnaround with Mohawk Cryo. The turnaround needs to be performed yearly to thaw and remove any built up hydrocarbons in the cold end gel trap. During the weeklong turnaround WSACC and a contractor replaced the reversing heat exchanger plug valves with new butterfly valves. The existing plug valves were original to the plant. Due to their age it was becoming hard to find quality rebuild parts. The turnaround went well and was completed on time.



- During the 2020 Incinerator turnaround, WSACC worked with Industrial Furnace (IFCO) to reskin the incinerator's outer shell on hearths one and two. These hearths see the most corrosion due to being the primary drying zone for the sludge. IFCO also completed the annual turnaround inspection and provided WSACC with recommendations on continued maintenance of the incinerator.



- WSACC Maintenance Staff moved into the new shop maintenance up-fit. The new up-fitted area provides individual offices for supervisors and other staff, along with providing a resources room for prints and O&M manuals, bathroom, mini kitchen area, and common area. After moving into the new office WSACC Maintenance Staff demoed the old office which increased the area available in the shop for the fabrication/repair area. A dividing wall was also built to separate the inventory area from the fabrication/repair area.



- WSACC completed a full stack test for all required monitoring pollutants. WSACC was below 75% of the permit limit for all pollutants except NO_x, which was still less than the permit limit. All pollutants that are 75% of the limit or less from two consecutive years receive a two year reprieve from being tested.

Muddy Creek Wastewater Treatment Plant (MCWWTP) - Operations:

- June 2021 - New Operator in Responsible Charge (ORC) was hired to operate the MCWWTP. This was due to the former ORC retiring.
- June 2021 - New NPDES permit became active.
- August 2021 - Roberto Scheller with NCDWR conducted an annual inspection on the MCWWTP and there were no issues found.

MCWWTP was in compliance with our NPDES permit with no violations or missed samples.

Laboratory:

Performed in excess of 22,900 analyses on water and wastewater samples collected from RRRWWTP, MCWWTP, Town of Harrisburg, Corning, Inc., and the industrial users served by the RRRWWTP and MCWWTP.



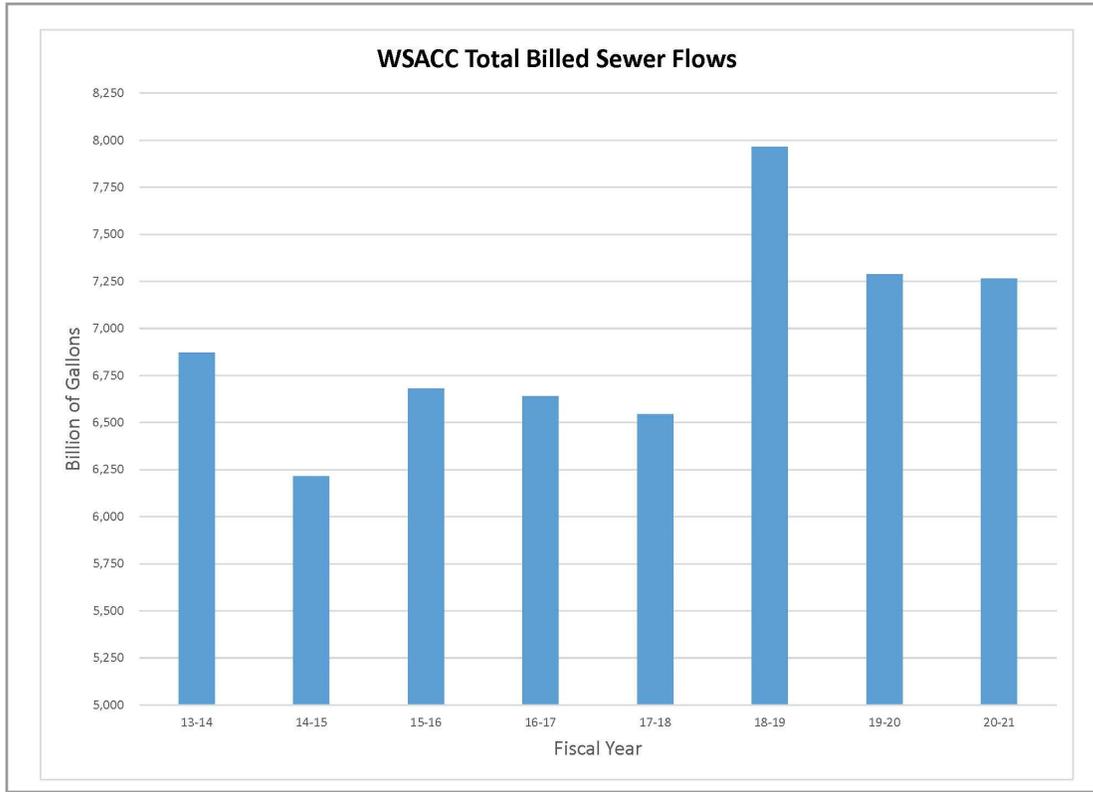
Laboratory cont'd

- Organized multiple species whole effluent toxicity testing at the MCWWTP during quarterly bioassay testing in October 2020 and April 2021.
- Organized sample collection and analysis of samples for the priority pollutant scan at the MCWWTP in July 2020.
- Received a new NPDES permit for MCWWTP effective June 1, 2021. The laboratory began analyzing samples to comply with the new permit requirements.
- In November 2020, the lab was inspected by the NC Department of Health and Human Services Division of Public Health/Laboratory and maintained its certification for total coliform and E.coli analysis of drinking water.
- Continued to monitor trunklines on a quarterly basis for the continuation of baseline establishment, and to monitor for changes in wastewater.
- During December 2020-January 2021, the lab coordinated sample analyses with Brown and Caldwell for the RRRWWTP Expansion design study.
- Sampled trunklines and RRRWWTP influent for oil and grease in an effort to identify and eliminate areas with high oil and grease concentrations.
- Collected samples from RRRWWTP and MCWWTP influent for COVID-19 analysis for UNCC.

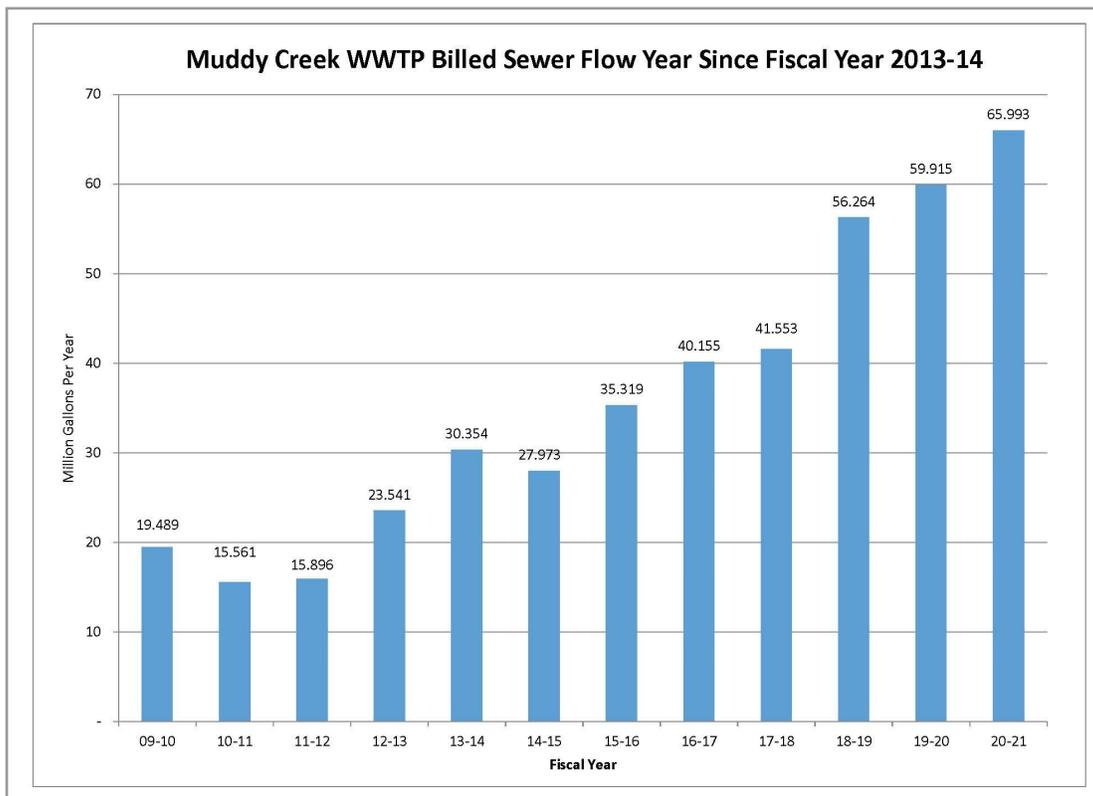
Pretreatment:

- Operated the pretreatment program in accordance with State and Federal pretreatment regulations without any deficiencies. Compliance is verified by annual State inspections and audits.
- Successfully completed the ISO 4001:2015 surveillance audit for WSACC's Environmental Management System for the wastewater, water and collections departments.
- Successfully obtained certification for the new ISO 45001:2018 standard for WSACC's Health and Safety Program for the wastewater, water, collections and administration departments.
- Completed and received approval from DEQ for the Pretreatment Annual Report for 2020 as required by the RRRWWTP NPDES Permit.
- Developed a new training program for septage haulers. All of the haulers were required to complete training in order to renew their septage permit issued by WSACC.

The RRRWWTP treated an average billable wastewater flow of 20.43 million gallons a day for a yearly total of 7.286 billion gallons. A graph showing the wastewater billing flow into the RRRWWTP is shown below:



A graph showing the historical wastewater flows into the Muddy Creek WWTP is shown below:



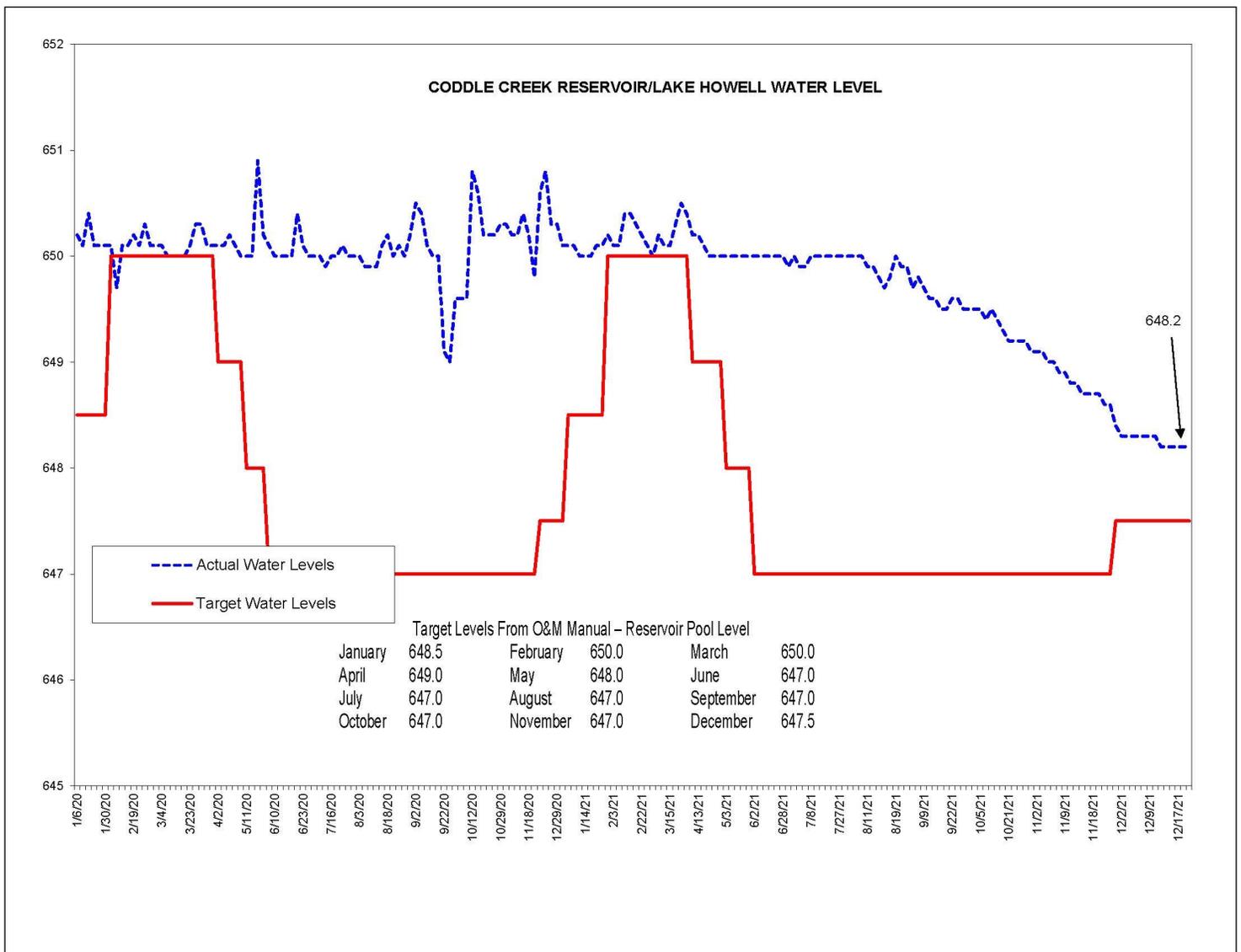
Water Operations

Water Operations at WSACC consists of the maintenance and operation of two raw water reservoirs. The Coddle Creek Reservoir / Lake Howell is a 1,300-acre impoundment on Coddle Creek that is owned and operated by WSACC, and provides raw water for the cities of Concord and Kannapolis. The City of Concord withdrew an average of 7.58 million gallons per day from Coddle Creek Reservoir / Lake Howell, and the City of Kannapolis did not withdraw any water from Coddle Creek Reservoir / Lake Howell during FY 2020-2021. Lake Concord is a 100-acre lake that supplies raw water to the City of Concord during emergency conditions.

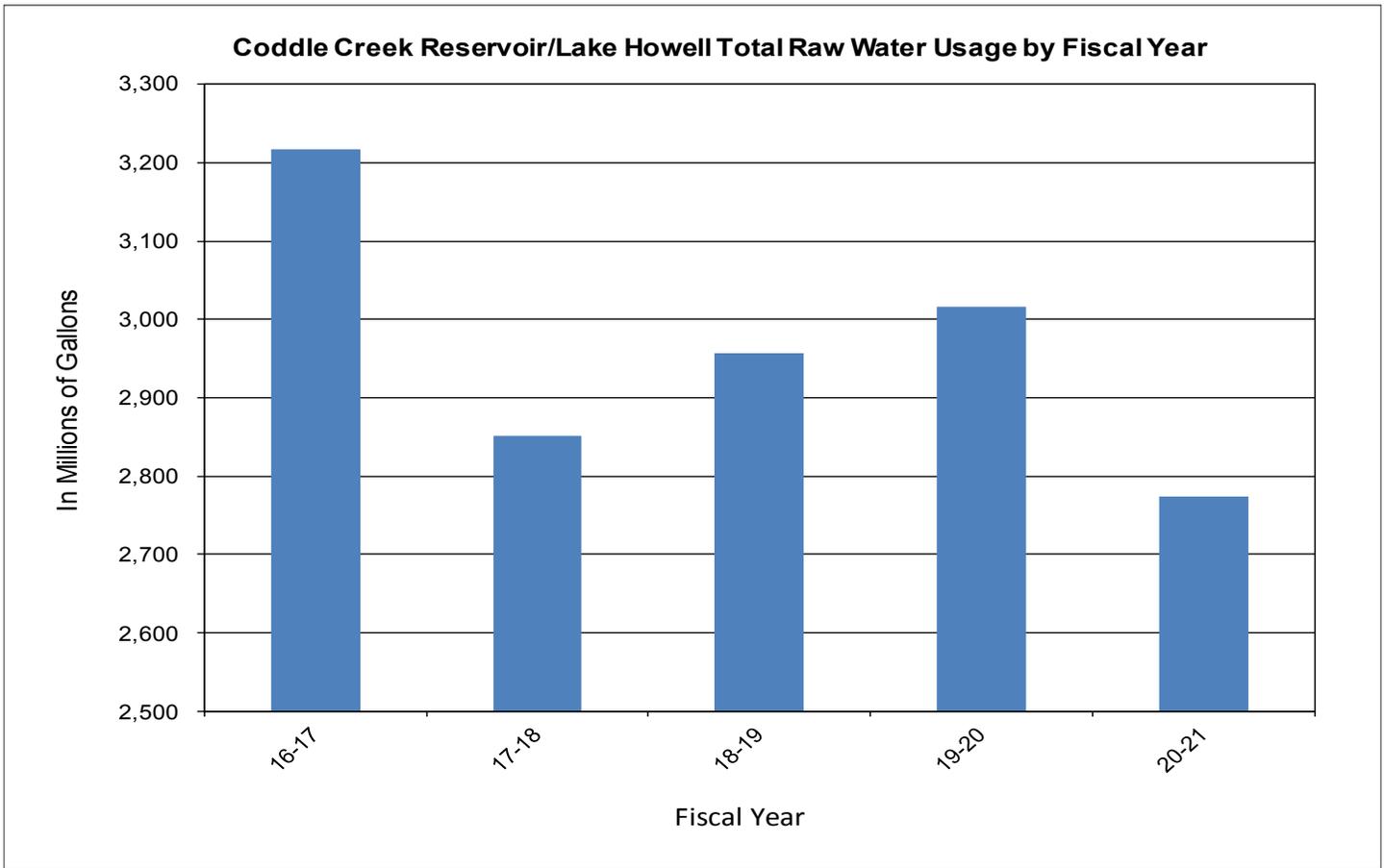
Some highlights of the past year for Water Operations include:

- Coddle Creek Reservoir / Lake Howell and Lake Concord were both visited by NC DEQ – DWR for water quality sampling as part of the 5-year basin-wide assessment. NC DEQ – DWR conducted monthly water quality sampling starting in May 2021, with completion in September 2021.

Shown below is a graph of the Coddle Creek Reservoir / Lake Howell water elevations for this fiscal year:



The amount of water withdrawn from Coddle Creek Reservoir/Lake Howell is shown below:



Fiscal Year	Quantity in Millions of Gallons	Notes
16-17	3216.724	Value from previous Annual Report graph
17-18	2851.9	Value from Lake Howell Withdrawals spreadsheet
18-19	2957.1	Value from Lake Howell Withdrawals spreadsheet
19-20	3016.2	Value from Lake Howell Withdrawals spreadsheet
20-21	2774	Value from Lake Howell Withdrawals spreadsheet

Finance

The mission of the Finance Department is to provide accurate and timely financial information to the Board, Executive Director, and Department Heads so that reliable and informed decisions can be made regarding the financial operations of WSACC.

The Finance Department's primary functions are to monitor, record, and report all financial transactions for the Authority, and to ensure that reasonable internal controls are in place to safeguard the Authority's assets.

The Finance Department's principal activities include revenue collection, procurement and disbursements for goods and services, payroll processing, investment and debt management, asset management, preparation and monitoring of the annual budget, and preparation of the Annual Comprehensive Financial Report (ACFR).

Highlights of the past year for the Finance Department include:

- Delivered a balanced budget recommendation for Fiscal Year 2021-2022 which included a less than net one percent rate increase to the Board in March 2021. The budget was subsequently approved at the April 15, 2021 Board meeting.
- Successfully administered \$5,458,892 in construction in progress including the following major capital projects exceeding \$300,000 in FY 2021 expenditures.
 - ⇒ RRRWWTP 34 MGD Expansion/Design - \$1,149,328
 - ⇒ Lower Rocky River Bar Screen Replacement - \$909,510
 - ⇒ Gravity Thickener Mechanism - \$370,066
 - ⇒ Back Creek Interceptor Extension - \$473,738
 - ⇒ Lower Rocky River Interceptor Rehab - \$1,649,262
 - ⇒ Step 2 Aeration Mixers - \$336,600

A list of achievements and activities for the past year includes:

- Potter & Company, CPAs, PA, completed the annual audit of the year ended June 30, 2021. An unmodified opinion of WSACC's financial statements was issued with no material weakness findings. This is the highest level of assurance given by independent auditors and our desired outcome.
- WSACC earned its 24th consecutive Certificate of Achievement for Excellence in Financial Reporting.

WSACC's current financial position is presented on the following pages by using the Management's Discussion and Analysis from WSACC's ACFR.

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Water and Sewer Authority of Cabarrus County (WSACC), we offer readers of WSACC's financial statements this narrative overview and analysis of the financial activities of WSACC for the fiscal year ended June 30, 2021. We encourage readers to read the information presented here in conjunction with the transmittal letter at the front of this report and the additional information that we have provided in WSACC's financial statements, which follow this narrative.

Financial Highlights:

In Fiscal Year 2020-21, WSACC maintained a strong financial position for its enterprise operating fund. Key performance indicators were revenue growth and overall positive departmental budget variances.

- The assets and deferred outflows of resources of WSACC exceeded its liabilities and deferred inflows of resources at the close of the fiscal year by \$159,074,961 (net position).
 - Of this amount, \$19,835,206 (unrestricted net position) may be used to meet any ongoing obligations and future expenditures.
 - \$9,376,259 is restricted as part of system development fees and is limited to how those funds are to be spent.
 - This amount also represents an increase in operating revenues from prior year of \$716,847 and an increase of \$1,836,413 in operating expenses.
 - Total liabilities decreased by \$2,184,659 from the previous fiscal year.
- WSACC's total net position increased by \$5,967,870 compared to an increase of \$4,374,213 in the Fiscal Year 20.
 - This increase is primarily attributable to additional rate increases associated with operating revenues and a significant increase in capital contributions from other governments and system development fees.
 - At the end of the current fiscal year, unrestricted net position was \$19,835,206 or 12 percent of Total Net Position compared to \$17,062,510 for the previous fiscal year.
- WSACC's total net debt decreased by \$2,461,804 or 38 percent during the current fiscal year.

Overview of the Financial Statements:

This discussion and analysis are intended to serve as an introduction to WSACC's basic financial statements. WSACC's primary mission is to provide wholesale water and wastewater treatment services to the Citizens of Cabarrus County. WSACC does not provide other general government types of services or programs. Operational expenses, capital expansion program and debt payments are funded almost entirely through rates, fees, and other charges for water and wastewater treatment services. As such, WSACC is considered to be, and therefore presents its financial report as a stand-alone enterprise fund.

As a stand-alone enterprise fund, WSACC's basic financial statements consist of a *Statement of Net Position*; a *Statement of Revenues, Expenses and Changes in Net Position*; and a *Statement of Cash Flows*. These statements, together with the *Management's Discussion and Analysis*, provide both short-term and long-term financial information and implications for WSACC's financial position. To further illuminate the information contained in these statements, *Notes to the Financial Statements* and *Statements of Revenues and Expenditures-Budget and Actual*, appear immediately following the basic financial statements. In addition to this discussion and analysis, other required supplementary information, generally statistical and historical in nature, is presented.

The *Statement of Net Position*, similar to a balance sheet, presents WSACC's basic financial position through disclosure of information about WSACC's assets and liabilities. Net Position represents the difference between total assets and deferred outflows of resources and total liabilities and deferred inflows of resources.

The *Statement of Revenues, Expenses and Changes in Net Position*, similar to private sector income statements, provides information regarding WSACC's total economic resource inflow and outflow (accrual method of accounting). The difference between these inflows and outflows represents the change in Net Position which links this statement to the *Statement of Net Position*.

The *Statement of Cash Flows* deals specifically with the flow of cash and cash equivalents arising from operating, financing, and investing activities. Because WSACC's *Statement of Revenues, Expenses and Changes in Net Position* is a measurement of the flow of total economic resources, operating income usually differs from net cash flow from operations. To enhance the reader's understanding of this difference, the *Statement of Cash Flows* also includes reconciliation between these two amounts. In accordance with accounting principles generally accepted in the United States of America, a reconciliation of cash and cash equivalents is also presented in this statement.

The *Notes to the Financial Statements* provide additional information that explains some of the information in the financial statements and is considered essential to a full understanding of the data provided in the basic financial statements.

Other Information – In addition to the basic financial statements and accompanying notes, this report also presents certain required supplementary information concerning WSACC's progress in funding its obligation to provide postemployment and pension benefits to its employees. This section includes detailed information related to Other Post-Employment Benefits (OPEB) and Local Government Employees' Retirement System (LGERS).

Financial Analysis of WSACC:

As noted earlier, Net Position may serve over time as one useful indicator of a government's financial condition. The assets and deferred outflows of WSACC exceeded its liabilities and deferred inflows by \$159,074,961 at the close of the fiscal year as compared to \$153,107,091 at the end of the previous fiscal year. The following table reflects a condensed Statement of Net Position.

NET POSITION		
	2021	2020
Current and other non-current assets	\$ 37,394,212	\$ 32,852,137
Capital assets, net	133,946,506	134,279,446
Total assets	171,340,718	167,131,583
Deferred outflows of resources	1,353,939	1,155,657
Long-term liabilities outstanding	7,793,104	9,508,576
Other liabilities	4,059,635	4,528,822
Total liabilities	11,852,739	14,037,398
Deferred inflows of resources	1,766,957	1,142,751
Net position:		
Net investment in capital assets	129,863,496	127,734,632
Restricted	9,376,259	8,309,949
Unrestricted	19,835,206	17,062,510
Total Net Position	<u>\$ 159,074,961</u>	<u>\$ 153,107,091</u>

One of the largest portions of Net Position (82 percent) reflects WSACC's net investment in capital assets (e.g. land, buildings, interceptor sewer lines, treatment plants, and equipment); less any related debt still outstanding that was issued to acquire those items. WSACC uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending. Although WSACC's investment in its capital assets is reported net of the outstanding related debt, the resources needed to repay that debt must be provided by other sources, since the capital assets cannot be used to liquidate these liabilities. An additional portion of WSACC's net position, \$9,376,259, represents resources that are subject to restrictions on how they are to be used. The remaining balance of Net Position totaling \$19,835,206 is unrestricted and may be used to fund pay-as-you go capital projects, replacement reserves, or any other legal purpose. In accordance with GASB Statement 68, WSACC is allocated its proportionate share of the Local Government Employee's Retirement System's net pension asset or liability, deferred outflows of resources, deferred inflows of resources, and pension expense. Decisions regarding the allocations are made by the administrators of the pension plan, not by WSACC. WSACC's overall financial position has improved over the past several fiscal years as WSACC continues to take aggressive action to address issues impacting its overall financial health.

Changes in Net Position:

WSACC's Net Position increased by \$5,967,870 for the fiscal year ended June 30, 2021. The following table summarizes the changes in net position.

CHANGES IN NET POSITION		
	2021	2020
Operating revenues, charges for services	\$ 18,031,899	\$ 17,315,052
Operating expenses:		
Salaries and employee benefits	5,616,998	5,782,108
Utilities	1,932,460	1,967,530
Repairs and maintenance	1,321,280	1,470,114
Insurance	207,106	191,834
Materials and supplies	1,389,869	1,331,342
Professional services	1,554,391	817,121
Depreciation	7,399,818	6,011,914
Other	386,247	399,793
Total operating expenses	19,808,169	17,971,756
Operating income (loss)	(1,776,270)	(656,704)
Nonoperating revenue (expense):		
Gain on sale of capital assets	37,518	17,551
Interest expense	(156,882)	(216,601)
Investment earnings	70,111	465,592
Total nonoperating revenue (expense)	(49,253)	266,542
Income (loss) before capital contributions	(1,825,523)	(390,162)
Capital contributions:		
Capital contributions - governments	1,616,297	-
System development fees	6,177,096	4,764,375
Total capital contributions	7,793,393	4,764,375
Change in net position	5,967,870	4,374,213
Total net position - beginning of year	153,107,091	148,732,878
Total net position - end of year	\$159,074,961	\$153,107,091

WSACC’s Changes in Net Position provides information concerning what contributed to the net changes reported in the schedule of Net Position. Several financial factors that positively and negatively impacted the increase in Net Position are highlighted below.

- Total Revenues: Total operating and non-operating revenues were \$18,139,528 or \$341,333 more than the \$17,798,195 reported for the prior year.
 - Operating Revenues: Total operating revenues (which are charges for services provided to customers) increased by four percent over the prior fiscal year. This is due to an increase in rates and extreme fluctuations in water flows compared to the previous fiscal year. Operating revenues consist of fixed and variable treatment and interceptor revenues, sludge disposal, and raw water charges.
 - Investment Earnings: Investment earnings decreased by \$395,481 to \$70,111 for the current year compared to \$465,592 in Fiscal Year 2020. WSACC continued to invest in commercial paper holdings in FY 2021. Interest earnings decreased by 85 percent from prior year due to the COVID pandemic and low interest rates being offered in the market.
- Total Expenses: Total operating and non-operating expenses were \$19,965,051 or \$1,776,694 more than the \$18,188,357 for the prior year.
 - Operating Expenses: Total operating expenses increased by a net of \$1,836,413 from the prior fiscal year. This reflects significant increases in depreciation and professional legal and engineering services.
 - The chart below depicts how operating funds were spent for the Fiscal Year 2020-2021.



- System Development Fees (SDF): WSACC began implementation of SDF’s in the Fiscal Year 2019 to replace the Capital Recovery Fee. Due to an increase in new development of home and apartment complexes, WSACC received \$6,177,096 during the Fiscal Year 2021 representing an increase of 30 percent over the prior year. These funds are restricted to a specific purpose and classified as a capital contribution. SDF Fees apply to only new connections and are used to help recover the capital cost of infrastructure necessary in providing water and sewer services.

Capital Asset and Debt Administration:

Capital Assets - WSACC's cumulative investment in capital assets as of June 30, 2021, amounted to \$133,946,506 (net of accumulated depreciation). These assets include land, buildings, improvements to land, water treatment and distribution infrastructure, sewer treatment and collection infrastructure, machinery and equipment, furniture and fixtures, and vehicles. The table below indicates the valuation of the assets by category:

CAPITAL ASSETS			
(amounts shown net of depreciation)			
		2021	2020
Land	\$	7,861,153	\$ 7,861,153
Construction in progress		8,471,694	4,257,477
Sewer treatment and collection		104,946,244	110,921,502
Biosolids handling		7,135,615	7,695,695
Buildings and improvements		1,735,154	1,215,367
Improvements to land		389,304	433,341
Equipment		2,692,522	1,122,509
Furniture and fixtures		110,377	188,874
Vehicles		604,443	583,528
Total	\$	133,946,506	\$ 134,279,446

Major capital asset transactions during the fiscal year include the following:

- Additional construction in progress expenditures were incurred for the following projects:
 - RRRWWTP Expansion to 34 MGD Project - \$458,688
 - Inflow/Infiltration Reduction - \$20,932
 - RRRWWTP Expansion Design Study - \$690,641
 - Lower Rocky River Bar Screen Replacement - \$939,223
 - Muddy Creek NPDES Permits - \$1,350
 - RRRWWTP Electrical Distribution Improvements - \$93,300
 - Gravity Thickener - \$370,066
 - Lower Coddle Creek Interceptor Project - \$216,805
 - Back Creek Interceptor Extension Project - \$473,738
 - Lower Rocky River Interceptor Rehab Project - \$1,649,262
 - Step 2 Aeration Basin Mixers - \$336,600
 - Lower Rocky River Additional Pump Capacity - \$238,000

Commitments - WSACC had construction commitments for several projects totaling \$4,740,263 as of June 30, 2021. Those commitments were funded out of current cash reserves and capital contributions.

Long-term Debt: As of June 30, 2021, WSACC had total debt outstanding of \$4,083,010. The entire \$4,083,010 is state revolving loan funds secured solely by specified revenue sources.

Outstanding Long-Term Debt					
	<u>2020</u>	<u>Additions</u>	<u>Transfers</u>	<u>Retirements</u>	<u>2021</u>
State Revolving Loans	\$ 6,544,814	\$ -	\$ -	\$ 2,461,804	\$ 4,083,010

WSACC’s total debt decreased by \$2,461,804 or 38 percent during the past fiscal year, due to the normal debt service for the state revolving loans.

WSACC has not issued public debt and currently does not have a bond rating by the rating agencies. In addition, WSACC is not a taxing authority and is not subject to any legal debt margin.

Overall Financial Position:

The overall financial position of WSACC remained stable during the fiscal year ended June 30, 2021. WSACC’s operating activities continued to generate positive cash flows of \$5,008,443.

Economic Factors and Next Year’s Budgets and Rates

The following key economic county indicators reflect the changing environment of WSACC’s service areas. The economic climate will be the biggest factor impacting future budget recommendations.

- Cabarrus County’s unemployment rate decreased from 7.60 percent in the prior year to 4.40 percent as of June 30, 2021.
- Population growth experienced an increase to approximately 226,165 in Cabarrus County.
- Cabarrus County’s building inspection activity reflected an increase from 71,036 inspections in the prior year to 72,520 inspections for the current year.
- Cabarrus County is home to a diversified business base of industries. The pace of growth within the County has increased significantly. WSACC will be starting several large capital projects in the next couple of years to keep up with the anticipated growth.

These factors, as well as others, were considered in preparing the budget for Fiscal Year 2022. On April 15, 2021, WSACC Board of Directors approved a \$16,833,659 operating budget for FY 2022, which represents less than a one percent increase from the original budget adopted for the 2020-2021 fiscal year. Appropriations were made in the Fiscal Year 2022 budget for various operating expenses in the amount of \$818,822 and capital projects in the amount of \$4,494,833. Management believes that increased revenues and continued restrictions on spending will maintain a solid financial position.

Budgeted sewer flows are projected with additional increases of 401 million gallons for the Fiscal Year 2022 due to the extreme fluctuations in rainfall and continued housing growth within Cabarrus County. These two indicators directly impact sewer flows. Annual sewer flows for FY 2022 are estimated at 7.040 billion gallons.

Requests for Information:

This financial report is designed to provide a general overview of WSACC's finances for all those with an interest in this area. Questions concerning any of the information found in this report or requests for additional information should be directed to Shelley Farris, WSACC, 232 Davidson Hwy, Concord, NC 28027, (704) 786-1783. Prior fiscal year Annual Comprehensive Financial Reports can be obtained at the following website: <http://www.wsacc.org>.