

2016 Annual Report

Then and Now...

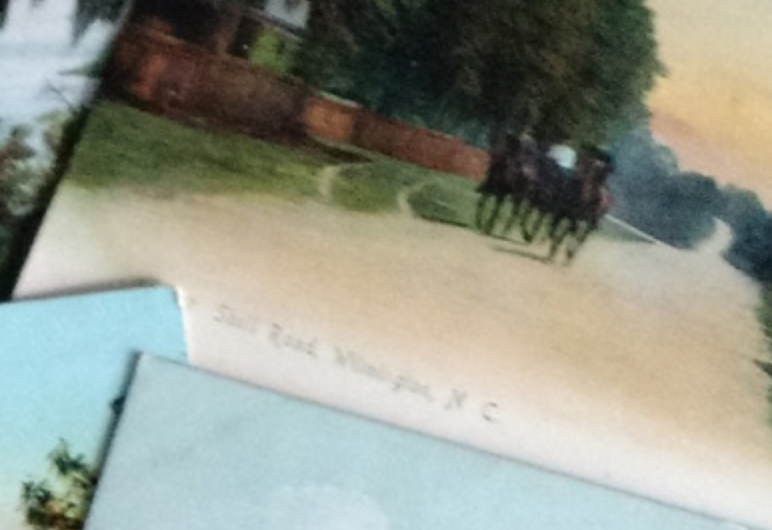


Clarendon Water Works, 1908

MAP
OF
Wilmington, N.C.
SHOWING
SEWER DESIGN
SCALE 1 in. = 495 ft.
HAZLEHURST & ANDERSON
CONSULTING ENGINEERS



Sweeney Water Treatment Plant, 2016



Shill Road, Wilmington, N.C.



CAPE FEAR RIVER, WILMINGTON, N.C.



Wilmington

TO OUR CUSTOMERS AND STAKEHOLDERS

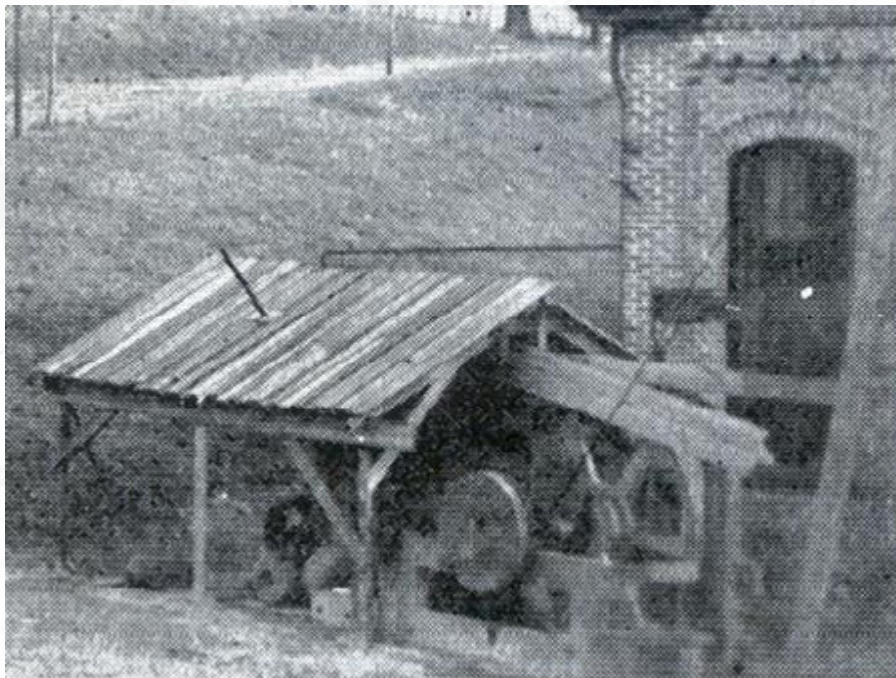
“The more things change, the more they stay the same.” While this expression is normally attached to the ins and outs of life, for those of us in public utilities, it perfectly captures our vocation. Over time, the processes that produce your drinking water and clean your wastewater have constantly evolved, incorporating the latest technologies to do the job and do it well. The goal of our public service, however, has always stayed the same: to protect the public, keep the environment clean, and provide the community with a sturdy backbone from which it can grow.

Since the earliest of times, all of our lives have depended on the availability of safe drinking water. As we began to come together and live in larger groups, the need to properly handle our waste became increasingly important. For the city of Wilmington and, over time, the majority of New Hanover County, the evolution of these services was essential to securing their place in North Carolina’s future.

This year’s annual report is produced with this history in mind; we want to give you an idea of how water and sewer services advanced over time to the community’s benefit. While Cape Fear Public Utility Authority’s eight years of operations can be seen as a mere sliver in time by comparison, we believe this account can provide some essential context for the actions we must take for the nearly 200,000 people we serve.



*John H. Sweeney
Chief Operating Engineer
from 1881 to 1931*



Sweeney Water Treatment Plant First Pumping Station, 1884

Today, CFPUA’s employees manage and maintain our systems in a way that honors those who came before us. Previous generations built the initial infrastructure, then expanded and strengthened it as the area grew and took shape. The example they set remains an essential part of our mission today: to provide the same high-quality services they started. Every day we address both short- and long-term challenges laid before us, focusing on the expectations of our customers and stakeholders while properly aligning our plans to make sure we are ready for their upcoming needs.

Nothing is more emblematic of these efforts than our ever-progressing sewer system. When CFPUA was formed, one of our charges was to take the significant investment being made by our ratepayers and upgrade the infrastructure to cut down on wastewater spills. As a result of the hard work of our dedicated staff, we have been able to cut spills by close to 50% and the amount spilled into the environment by nearly 80%.

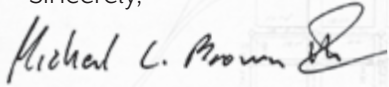
Because of this shared success, CFPUA is free to enter into partnerships with Wilmington and New Hanover County that address critical environmental and economic needs. 2016 was filled such collaboration, including the completion

of the Heritage Park and Marquis Hills Area Septic-to-Sewer projects and the Flemington/U.S. 421 water and sewer project. Because of these efforts, more than 1,000 homes were removed from failing septic systems that harm the environment while a relatively untapped area of the county was opened for greater, and more inclusive, economic development.

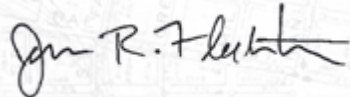
There's another advantage to consistently delivering on a daily, yearly, and multi-year basis: the increasing confidence of the credit agencies that assess the strength of an organization and assign it bond ratings that directly impact its future. This year, Moody's Investors Service upgraded CFPUA's bond rating to a level that matches Standard and Poor's; both agencies now place us one rating below their highest marks. Because of this acknowledgement of our performance, CFPUA is able to receive favorable interest rates for our financing of capital improvements, resulting in lower debt service costs to the utility and our ratepayers. In fact, a bond sale held in 2016 netted more than \$30 million in savings on future debt service costs.

We can't wait to see where our work will lead us in 2017. On behalf of the Board Members and the employees of Cape Fear Public Utility Authority, we thank you for your support and we hope you enjoy reading this report.

Sincerely,



Michael C. Brown, III
Chair



James R. Flechtner, PE
Executive Director



Water Main Repair Work

BOARD MEMBERS



Appointed by New Hanover County
Seated in 2010
Term ends in 2019
Committees: Executive & Finance

Michael C. Brown, III
Chair



Jointly appointed by City of Wilmington & New Hanover County
Seated in 2011
Term ends in 2017
Committees: Executive & Finance

Patricia O. Kusek
Vice Chair



Appointed by New Hanover County
Seated in 2012
Term ends in 2017
Committees: Executive, Finance, Long Range Planning

C. Lawrence Sneed, Jr.
Secretary



Appointed by the City of Wilmington
Seated in 2013
Term ends in 2018
Committees: Executive, Finance, Communications

William A. Norris
Treasurer



Appointed by City of Wilmington
Seated in 2011
Term ends in 2017
Committees: Long Range Planning, Human Resources, Communications

Cindee Wolf
Member



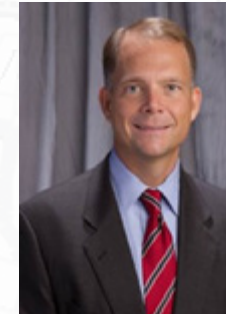
Appointed by City of Wilmington
Seated in 2014
Term ends in 2016
Committees: Human Resources & Communications

Kevin O'Grady
Councilman



Appointed by City of Wilmington
Seated in 2010
Term ends 2018
Committee: Long Range Planning

Charlie Rivenbark
Councilman



Appointed by New Hanover County
Seated in 2013
Term ends in 2018
Committee: Human Resources

Woody White
Commissioner



Appointed by New Hanover County
Seated in 2015
Term ends in 2018
Committee: Long Range Planning

Rob Zapple
Commissioner



Appointed by New Hanover County
Seated in 2016
Term ends 2019
Committee: Finance

Jennifer Adams
Member



Appointed by City of Wilmington
Seated in 2016
Term ends 2019
Committees: Long Range Planning & Human Resources

Charles (Chuck) Davis
Member



Donna S. Pope
Clerk to the Board

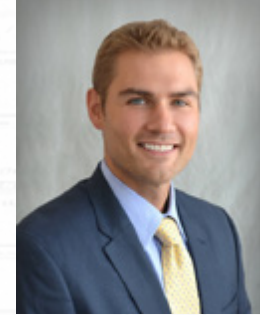
MANAGEMENT TEAM



James R. Flechtner, PE
Executive Director



Frank C. Styers, PE
Chief Operations Officer



John McLean, CPA
Chief Financial Officer



Carel Vandermeijden, PE
Director of Engineering



Beth Eckert
Environmental Management Director



Tom Morgan
Human Resources Director



Kristi Irick
Director of Customer Service



Mike McGill
Chief Communications Officer



Leslie Ogilvie
Assistant to the Executive Director

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Bradley
Creek

Hewletts
Creek



James A. Loughlin

THEN: BASIC SANITATION

Since colonial times, the state of North Carolina has placed an emphasis on the proper handling of sewage. It enforced quarantine laws on incoming vessels to prevent the spread of “infectious distempers” and the City of Wilmington cited property owners who failed to keep their outhouses clean.

The creation of centralized sewer services took hold across the United States in the mid- to late-1800s as it became clear that properly handling sewage could dramatically reduce the incidence of water-borne diseases. After North Carolina established its Board of Health in the 1870s, significant programs were launched to detail proper sanitation practices to the public. Based on the success of these efforts, the state took over the responsibility for advising towns and their key institutions about sewer treatment.

As Wilmington continued to grow, private industry saw the need to provide safe sewer services to the workers whose presence buoyed its success. In 1901, Wilmington Sewerage Company began its operations along Burnt Mill Creek to provide services to the city. About a decade later, the city purchased the system and, over time, improved its processes and expanded its footprint.

Soon after these initial investments were made, an era of growth in public utilities began, fueled by the use of federal funding from the Public Works Administration. At the time, no one knew just how important a strong sewer system our parents, grandparents, and great-grandparents would become to the growth of the city and the defense of a nation.



James A. Loughlin (Northside) Wastewater Treatment Plant

NOW: BASIC SANITATION

When sewer systems fail, the impact is not just on the environment, but on the confidence the public has in their essential services. CFPUA was created nearly ten years ago, in part, because the City of Wilmington and New Hanover County needed to upgrade their sewer systems, and with a great deal of speed.

Thanks to the shared commitment of CFPUA's ratepayers, staff, and key stakeholders in local government, we have cut sewer spills by nearly 50% and the amount of wastewater spilled into the environment by nearly 80%; the percentages are based on a comparison between the last five years before CFPUA began operations to our last five years of work, June 2011 through June 2016.

Because of the improvements to the overall sewer system, CFPUA is addressing the long-term needs of the region instead of repairing broken infrastructure. As the city makes several improvements to the heart of downtown, CFPUA has partnered with them to upgrade our infrastructure at the same time, saving time, money, and inconvenience.

When it comes to New Hanover County, CFPUA is working with the county to move its most problematic areas for septic system failures – Marquis Hills and Heritage Park – onto centralized sewer services at reduced costs. The construction of both projects was completed in 2016, enabling more than 1,000 residents to tap onto reliable sewer service and end the harmful environmental impacts caused by failing septic systems.



Sewer System Maintenance



Downtown Wilmington

THEN: FIRE PROTECTION

The second half of the 19th century was a period when the growth of America's cities did not coincide with their ability to fight major fires. The horse-drawn firefighting equipment of the time was no match for large-scale events. The history books are dotted with "Great Fires" that occurred in Chicago, Boston, San Francisco, and Seattle. Port cities the size of Wilmington were not immune, suffering fires that were devastating in terms of loss of life and property.

During the period, the creation of a public water supply in Wilmington for drinking water and fire protection was the subject of much debate. City aldermen considered the creation an important step, while some residents preferred well or spring water and expressed that they did not want to pay the fees and taxes needed to construct such a system.

In 1886, Wilmington experienced its most notable fire of the era. A steamboat named the Bladen caught fire and drifted into the riverfront, setting fire to the docks and downtown buildings nearby. The fire resulted in \$1 million worth of damage at the time (\$26.6 million in today's dollars). Following the fire, the Wilmington City Fire Department was formed by volunteering firefighting groups.

Business owners also supported the creation of a public water source to fight fire and bolster growth. In following years, the City of Wilmington would purchase the private Clarendon Water Works and all of its components, down to the last tool, for \$65,000 plus the assumption of \$80,000 in bonded indentures. A safer Wilmington was taking shape.



Horse-drawn fire truck



Wilmington Fire Department, 1930s

NOW: FIRE PROTECTION

Today, fire protection in the City of Wilmington and New Hanover County assures the public that, if they ever need emergency services, hundreds of professional firefighters and staff personnel are available immediately and are dedicated to preserving their safety. These essential first responders utilize the latest advances in firefighting equipment, including engines that are capable of pumping more than a thousand gallons of water per minute, to respond to the hundreds of emergency calls they receive every year.

Our area's ability to fight fires would be placed in jeopardy if it could not draw upon the safe and reliable water service provided by CFPWA. In addition to maintaining proper pressure and flow throughout a 1,000-plus-mile-long system of plants and water mains, our staff ensures the nearly 8,000 hydrants located throughout our service area are inspected, maintained, and ready for duty.

When you consider how our water also arms thousands of private water suppression systems with the capability of extinguishing or limiting fires before first responders can get to a scene, CFPWA plays an indispensable, protective role for the people who live in, work in, and visit our community.



New Hanover County Fire Department



A reliable supply of fire protection



Wilmington Fire Department

THEN: DISEASE PROTECTION

Drinking water has always been a product, created using processes developed by generations of public servants and improved over time. As our nation moved headlong into the Industrial Revolution, safe and reliable water and sewer systems became an essential need. With more people living together in urban settings, infectious diseases began decimating their dreams of a better life.

As a result, the state of North Carolina established a Board of Health in 1877, with Wilmington resident Dr. Thomas Fanning Wood serving as its secretary. Dr. Wood and his team began public education efforts that led to state public health laws aimed at reducing death rates from disease. The state also took responsibility for determining the safety of water supplies and providing advice to towns, businesses, schools, and hospitals.

Just after the turn of the 20th century, analysis of public water supplies began as water companies across the state worked to ensure their water was safe. As a result, deaths from infectious diseases caused by impure water sources were essentially eradicated.

Throughout the 1900s, as our nation's knowledge about treating water improved, so did our area's water quality. The city's first waterworks, Clarendon, began incorporating sand filters to purify river water, a supply greatly needed to handle the growing population. Other advances like the use of dry alum and soda ash were also added to the process.

Issues of salt water intrusion that impact residents of New Hanover County today were also faced by Wilmington in the 1900s. While the state found the city's water to be of good quality, salt levels in the river water necessitated not one, but two, moves of the water intake to points farther up the Cape Fear River. The second move, to King's Bluff in Bladen County, solved the saltwater problem and remains the location of our raw water intakes.



Sweeney Water Plant Lab, 1950s



Clarendon water works, early 1900s

NOW: DISEASE PROTECTION

As it was in the early days of Wilmington's water, the core of Cape Fear Public Utility Authority's mission is to provide high quality services that protect public health. When CFPUA took over the city and the county water systems back in 2008, the latest technologies were used to protect the population and provide safe, clean drinking water.

In the years since CFPUA began its operations, a new plant was constructed in Ogden to use state-of-the-art membrane technology to treat naturally filtered groundwater. CFPUA also renovated and expanded our Sweeney Water Treatment plant, adding ultraviolet light to further disinfect the drinking water while adding capacity to serve new residents. As a result, we have received awards for our high water quality for the last eight years in a row.

When CFPUA received the results of tests showing one of our water systems – the Flemington well system – was at risk for future contamination from the nearby Duke Energy plant, we immediately worked out an agreement with Duke to secure another reliable source of drinking water. A water line was installed under the Northeast Cape Fear River to connect the Flemington community directly to our Sweeney plant. Earlier this year, the project was completed and the area's residents were seamlessly switched, ensuring the safety of their water.

While the state of North Carolina continues to oversee and regulate testing that confirms our high level of quality, the responsibility for much of the testing process shifted during the 20th century to the local water utilities. Today, CFPUA staff conducts tens of thousands of tests a year to make sure that the roughly 20 million gallons of drinking water we supply every day meets or exceeds state and federal standards throughout our entire 1,000-mile-plus-long system of water mains.

At the end of the year, when you total it all up, CFPUA provides the people of Wilmington and most of New Hanover County with seven billion gallons of safe, clean drinking water.



Ozone Generator



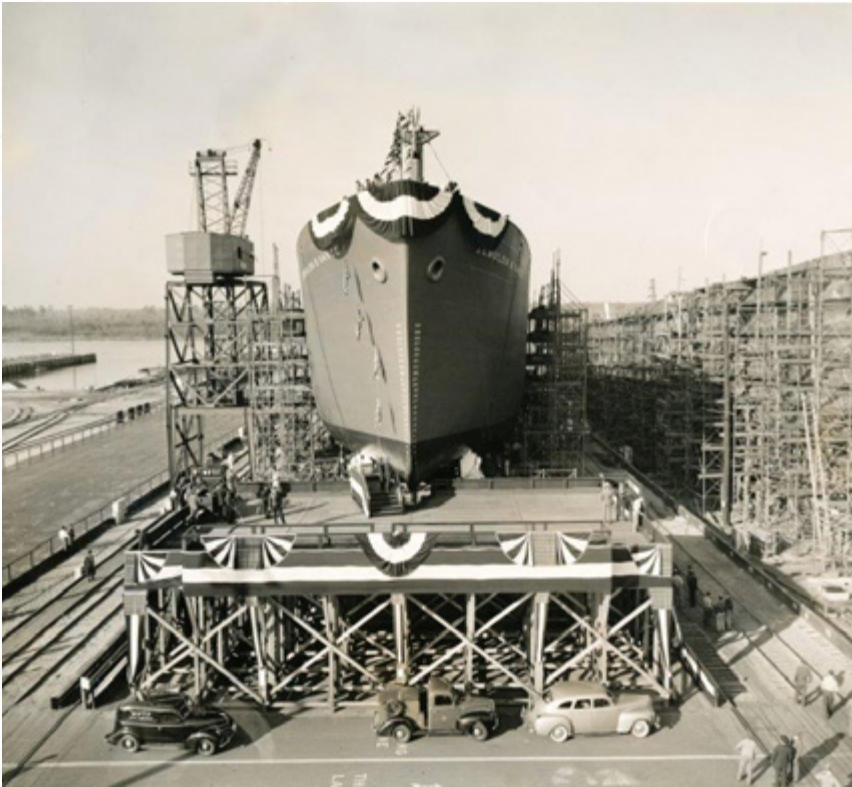
CFPUA's water testing lab

THEN: ECONOMIC DEVELOPMENT

When water and sewer systems began taking shape around the turn of the 20th century, their main purpose was to protect the public. As they began dramatically reducing the destructive impact of disease and fire, smaller cities throughout the United States became viable centers for business and industry.

Wilmington in the early 20th century became a perfect example of this trend. As the city's utilities came together and were bolstered by federal funding, the city's water works expanded, pumping more and more water to fill the community's growing needs. Over time, the city cemented itself as North Carolina's main sea port and a major railway hub, fueling economic development. By the 1930s, the city was pumping more than 150 million gallons of water each year in support of its residents and businesses, an amount that would exponentially increase in the 1940s.

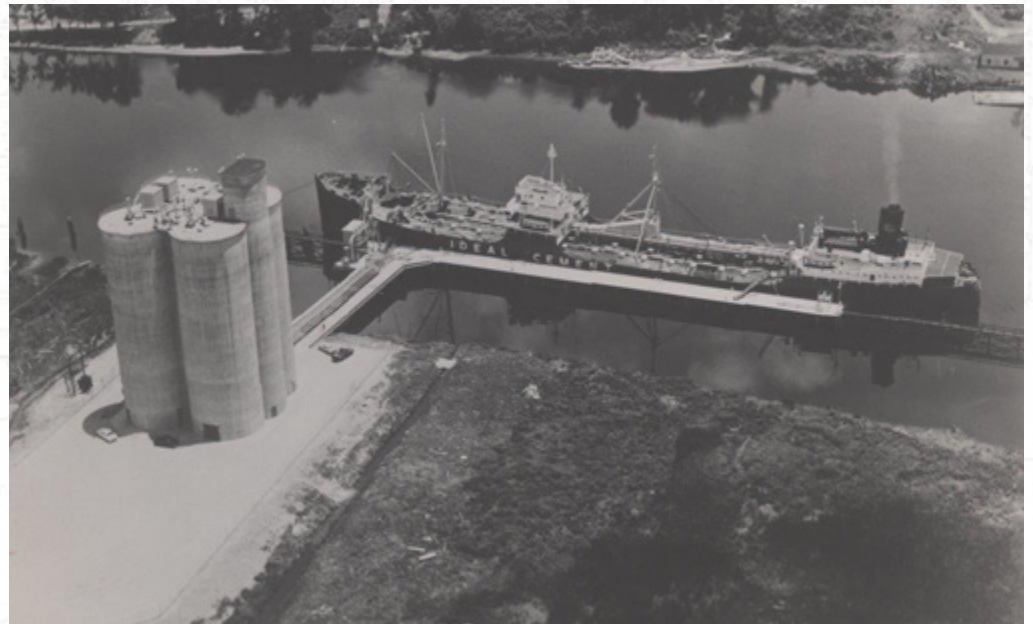
When the military expanded in the region in support of the war effort, strong water and sewer infrastructure handled the growth and the city rose in stature.



Christening of U.S.S. Zebulon B. Vance

The city built the Sweeney Water Plant just in time for a population that would more than double within three years from 43,000 to 100,000. The city's shipyards alone bustled with more than 23,000 workers as they launched more than 240 wartime vessels.

Following the war, with Wilmington's role as a port city secure, its economy continued to grow as people moved to areas throughout New Hanover County. The 60s and 70s saw an increased demand for services farther from the city center while the 1980s saw the extension of Interstate 40, forming a stronger economic bond with the rest of the state, and requiring even sturdier infrastructure.



Ideal Cement

NOW: ECONOMIC DEVELOPMENT

As we have seen throughout this report, safe and reliable water and sewer infrastructure is the backbone of a community's ability to offer its citizens a better way of life. Protecting the population from disease and fire, while properly handling waste to keep its environment clean, makes Wilmington and New Hanover County an attractive place for people to live and businesses to thrive.

Since CFPUA was formed, our work to strengthen the water and sewer systems continues to bear fruit throughout our service area. Approximately 200,000 people use our services every day and several studies indicate that the number will grow notably over the coming years. In addition to upgrading our infrastructure, CFPUA is taking an active role in supporting city and county leaders to meet the needs of new residents and businesses. There is no truer example of this central role than our work to aid in the extension of our services to the U.S. 421 Corridor.

This year, CFPUA completed construction of water and sewer lines under the Northeast Cape Fear River to the western part of the county. The project's first purpose was to protect public health; the drinking water for approximately 200 residents in the Flemington area was at risk from future groundwater contamination. As the water project came together, it simply made sense for CFPUA to partner with the city and county to bring sewer services under the river at the same time. Through a partnership between CFPUA, New Hanover County, and the City of Wilmington, the sewer line was installed within months.

Now that the lines have been built, CFPUA is continuing to work with our city and county stakeholders to help them take advantage of the fact that the U.S. 421 Corridor is now a fertile area for future development.



Port of Wilmington



Downtown Wilmington

THEN: ENVIRONMENTAL PROTECTION

The development of the area's sewer system followed much of the same path taken for the creation of the public water system. A need became abundantly clear; the city of Wilmington had to protect the population, and the nature around it, in order to preserve it as a quality location to live and work. People simply would not live where sewage wasn't being properly handled.

Close to the same time the public water system was being formed, the city purchased the private Wilmington Sewerage Company, which built and operated a plant along Burnt Mill Creek. The cost: \$3,000 in cash and \$100,000 in gold bonds. Investment in the form of federal New Deal funds followed, allowing for sewer expansion efforts throughout what is now the center of the city. Because of the investment, the sewer system was ready for a world war that would lead to a rapid rise in the city's population.

Expansion continued after WWII as the Baby Boom began in earnest. Having proven its worth during the war, Wilmington's ports became the home of North Carolina's ports and the focal point for people seeking to start a life. As the suburbs expanded and increased the demand for services, the sewer

system adapted as well, resulting in the formation of the county's Water and Sewer District in 1984. In the following ten years, developers conveyed more than 100 sewer systems to the county.

Eventually the sewer systems began to show their age and increasing, noteworthy failures highlighted the need for additional investment. To achieve the necessary investment, the city and county debated consolidation for several years before forming Cape Fear Public Utility Authority in 2007. CFPUA began operations on July 1, 2008.



Wilmington, Late 1800s

NOW: ENVIRONMENTAL PROTECTION

Since CFPUA began operations, we have taken the tools provided by our ratepayers and key stakeholders in local government to dramatically improve our major sewer lines. Over the years, significant assessments were made to determine where immediate action would prevent spills from occurring and harming the environment.

As a result, CFPUA created and implemented capital improvement plans that both tackled the issues at hand and planned for the future. “Return on investment (ROI)” is a measure used in the business community to describe the success of an endeavor; for our customers, ROI describes the progress CFPUA has made in taking accurate investment aimed at aging infrastructure and implementing it properly through prudent management. As a result, CFPUA successfully handles more than six billion gallons of wastewater every year.

Earlier in our report, we detailed our sewer spill statistics. They deserve to be mentioned again. When you compare the last five years of CFPUA’s operations to the five years before we were formed, Cape Fear Public Utility Authority has cut sewer spills by nearly 50% and the amount of wastewater spilled into the environment by nearly 80%.

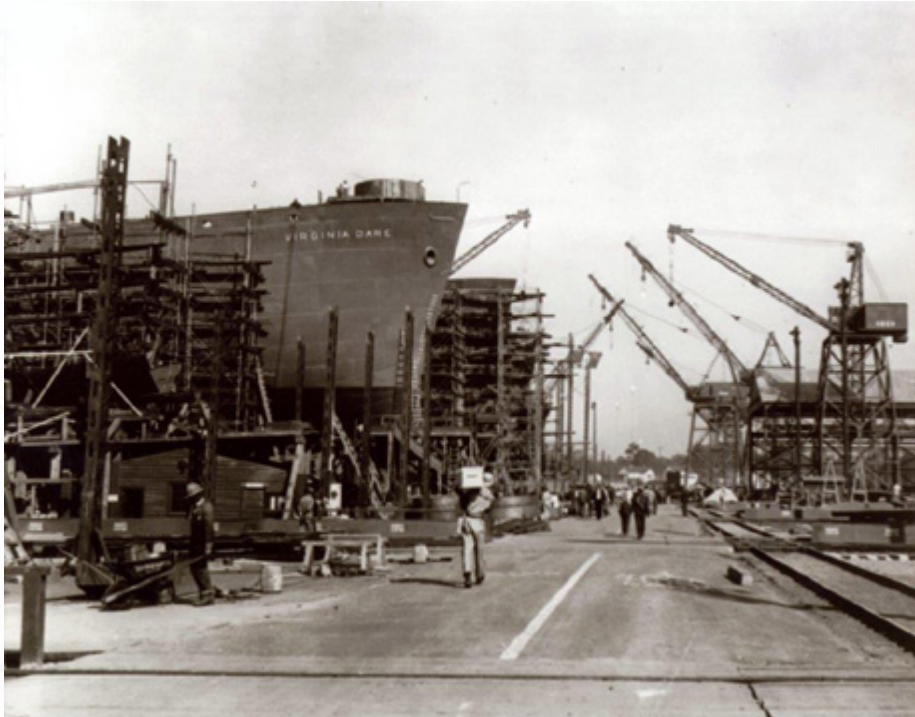
As a public utility, CFPUA would be remiss if we only focused on upgrading infrastructure. Sometimes the greatest changes can come from the pipe up. Over the years, CFPUA’s Community Compliance staff has worked closely with the business community in protecting our environment through the proper handling of their fats, oils, and grease (FOG). At the same time, they have provided the public with tens of thousands of fat-collection devices that have kept hundreds of thousands of ounces of grease from clogging the sewer system and causing future spills.



Northeast Interceptor Rehabilitation



3rd Street Renovation



Wilmington Shipyard during WWII



Block Shirt Factory

EXECUTIVE COMMITTEE

The Executive Committee, which comprises officers of the Board, met monthly to review Board meeting schedules and agendas, appoint committee members, and receive legal advice. The Executive Committee also reviewed legal issues that may affect the Authority. This committee consults with other members of the Board who have expertise or interest in certain areas and solicits input from the public. Members oversee and monitor the performance of the Executive Director.

FINANCE COMMITTEE

The Finance Committee meets monthly to review financial information and to make financial recommendations to the Board. The Authority's Treasurer serves as Finance Committee Chair.

The Finance Committee recommends a budget calendar, water and sewer rates, and the Operating Budget to the Authority Board. The committee reviewed and discussed the recommended FY17 budget, presented by the Executive Director and Chief Financial Officer, and recommended a budget with no rate increase at the June Authority Board meeting.

The committee received and discussed the Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2015 prepared by Authority staff. The auditor presented a "clean" opinion on these financial statements, which also received the Government Finance Officers Association's Certificate of Achievement for Excellence in Financial Reporting. The committee also reviews the monthly financial reports and discusses financial trends.

The committee reviewed and recommended more than 100 agenda items requiring Board action relating to a variety of financial issues. Throughout the year, the committee discussed and approved documentation necessary to issue approximately \$156 million in refunding bonds. The refunding transaction resulted in an interest savings of over \$34 million over the next 20 years. Prior to the issuance of this debt, the Authority received an upgrade in its bond rating to Aa1 from Moody's.

Customer Service and Finance departments collectively prepared briefings for the committee throughout the year in order to provide updates on the process of procuring a new Authority Enterprise Resource Planning (ERP) System. Ultimately, a recommendation was brought to the committee for their approval of a new ERP system. The committee also supported the recommendation to enter into a new contract with a third party collection agent. In addition to providing feedback on the monthly updates provided by Customer Service regarding data and statistical information, the committee will also provide feedback to revisions on customer service policies and ordinances.

LONG RANGE PLANNING COMMITTEE

The Long Range Planning Committee generally met monthly during fiscal year 2016, and reviewed over 25 action/information items and presentations. The committee's reports included items requiring Board action and other noteworthy information that were reported to the Board during its regularly scheduled meetings.

Significant achievements during this reporting period included the development and approval of the FY17 Capital Improvement Program and the 10-year Capital Improvement Program for 2017 through 2026. The committee also reviewed and considered a number of items including: House Bill 44 impacts on mandatory connection efforts; mobile home parks mandatory connections; the consideration of potable water reuse options; the design-build initiative and associated projects; the U.S. Highway 421 Corridor Utilities project; updates on the inter-basin transfer and the Cape Fear River Basin Water Supply Evaluation; the Pender County inter-basin transfer certificate; and the planning of the Castle Hayne water and sewer services.

The committee also received updates on the progress of programs such as fee recommendations, as well as updates on various capital projects, on-line GIS tools, and master planning efforts.

HUMAN RESOURCES COMMITTEE

The Human Resources Committee is a standing committee that meets as needed. The function of the committee is to review, advise, and recommend action as it relates to matters that involve the Authority's employees, and other matters as designated by the Board.

The Human Resources Committee met six times during fiscal year 2016. Items considered at the meetings were: review and approval of the employee incentive payment plan to encourage achievement of licenses and certifications by staff; approval of the entry into the State Health Plan



Flemington/U.S. 421 Project

for employee health insurance and the process to ensure that retiree health insurance is provided; adoption of the Evergreen Classification and Compensation Study; review of the Executive Director, Internal Auditor, and consulting attorney firm's contract performance; and review and approval of the FY17 pay plan and its employee compensation adjustments.

COMMUNICATIONS COMMITTEE

CFPUA's Communications Committee, comprised of three board members and the Chief Communications Officer, meets quarterly to review our efforts to inform ratepayers, stakeholders, and the media about a variety of important topics. In 2016, the committee reviewed and assessed CFPUA's plans to apprise our audiences about our highest-profile construction projects – Heritage Park, Marquis Hills and the Flemington/U.S. 421 Corridor – as well as information efforts about our water quality work in the aftermath of the crisis in Flint, Michigan.

Consistent and transparent outreach to the people we serve, and answer to, in the press and the public resulted in significant coverage that was viewed and read by tens of thousands of our customers. In just two days in March, CFPUA received more than 30 minutes of positive coverage about the completion of the Heritage Park project and our first-ever, full-scale emergency drill. When CFPUA was discussed as part of the political season, we detailed the many positive impacts of our work through several media interviews and placement of an op-ed in the StarNews. The op-ed ran for more than 30 days on the StarNews' homepage.

Finally, our open approach and steady stream of information culminated in a May 23, 2016 editorial in the StarNews titled, "CFPUA was right decision for our area." The editors strongly stated their support for how we conduct our work for those we serve, speaking to "how well the Authority is run and how steadily it has improved." The piece then repeated the information we have put forward to our customers about our affordable rates and strong bond ratings, simply adding CFPUA "has done its job well." The piece graces our back cover.



Bradley Creek Marina, 1970s.



Smith Creek Bridge



Nanofiltration Water Treatment Plant



UV Disinfection, Sweeney Water Treatment Plant



Lock and Dam #1



Raw Water Supply Main

AWARDS

Sweeney Water Treatment Plant: 2015 North Carolina Area-Wide Optimization Program (AWOP) – Certificate of Facility Optimization, Turbidity Removal

Government Finance Officers Association's Certificate of Achievement for Excellence in Financial Reporting: 7th consecutive year

Government Finance Officers Association Distinguished Budget Presentation Award: 4th consecutive year

Administrative Services: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 6th consecutive year. **GOLD**

Centralized Maintenance: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 2nd year. **GOLD**

Customer Service: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 2nd consecutive year. **GOLD**

Engineering: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 5th consecutive year. **GOLD**

Environmental Management Laboratory Services: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 1st year. **GOLD**

Environmental Management Community Compliance: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 7th consecutive year. **GOLD**

Utility Services, Collection System Operations & Maintenance: North Carolina Department of Labor Achievement in Outstanding Safety and Health - 4rd consecutive year. **SILVER**

Utility Services, Pump Station Maintenance: North Carolina Department of Labor Achievement in Outstanding Safety and Health - 5th consecutive year. **SILVER**

Utility Services, Water Quality: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 7th consecutive year. **GOLD**

Utility Services, Meter Services: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 1st year. **GOLD**

Wastewater Treatment, James A. Loughlin Wastewater Treatment Plant: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 3rd consecutive year. **GOLD**

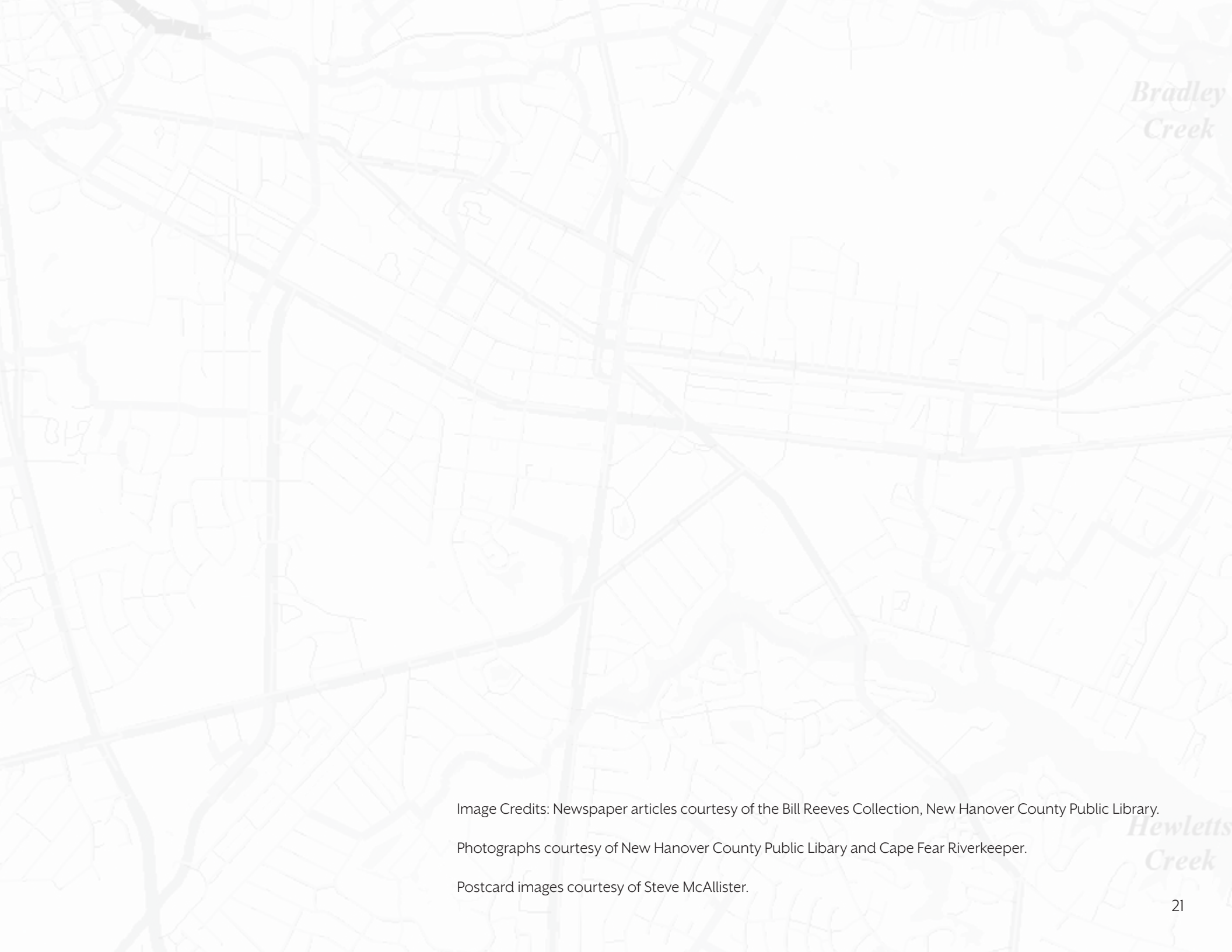
Wastewater Treatment, M'Kean Maffitt Wastewater Treatment Plant: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 7th consecutive year. **GOLD**

Water Treatment, Nano Filtration Plant: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 7th consecutive year. **GOLD**

Water Treatment, Sweeney Water Treatment Plant: North Carolina Department of Labor Achievement in Outstanding Safety and Health – 4th consecutive year. **GOLD**

CFPUA Administrative Offices: Safety & Health Achievement Recognition Program – S.H.A.R.P. Recognition

Nano Filtration Plant: Safety & Health Achievement Recognition Program – S.H.A.R.P. Recognition



*Bradley
Creek*

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Photographs courtesy of New Hanover County Public Library and Cape Fear Riverkeeper.

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*Hewletts
Creek*

Water And Sewerage Improvements Lead City Along Path Of Progress

By BOB MATTHEWS
Staff Writer

Wilmington's water and sewerage department ranks second to none in the Southeast in affording the public adequate fire, safety, and health protection.

The history of the department since 1881 features the gradual development from private to public owned water and sewerage systems.

This modernization program has enabled the city to assist citizens to curb better the menaces of fire and disease through provisions for adequate water supplies and sewerage disposal.

Since 1925 the plant has been remodelled, filters added, reservoir covered, new pumps installed, and mains extended to several parts of the city that formerly did not have the necessary fire protection.

Mains Renewed

Mains that had been in the ground since 1881—mains that were entirely too small for domestic service, to say nothing of fire service—were replaced. Hydrants were added in the business section and outlying districts until the present setup which includes about 500 hydrants spaced throughout the city.

There are now very few houses in the city that are not within the 500

day all sizes are made in either 24 or 30 inch lengths.

In the northern section of the city under one of the prominent buildings there is an old sewer vault that runs the drain known as the Horse Pond drain. This drain meanders in a southwesterly direction from near the corner of Third and Walnut streets to the present location of the fire house boat.

The vault was used as a sort of a receiving shed for sewers. There are several pipe lines that end in this vault, each one of which once carried sewerage from a residence. When these old sewers cave in, as they often do, then the department is put to a great amount of expense and trouble making repairs to the street as well as to the sewer.

Wade Nominal Chief

The present organization works under and with the cooperation of James E. L. Wade, commissioner of public works.

The department forces consist of M'Kean Maffitt, superintendent; J. D. Mote, assistant superintendent; J. H. Sweeney, chief engineer; Miss Mary Lucas Cantwell, clerk; J. R. Hall, foreman; T. D. Hall, foreman; S. P. Sykes, assistant engineer; F. M. Griffith, mechanic; W. M. Wilson, engineer.

O. G. Sanford, filter operator; Charlie Lee, filter operator; Leroy Easterling, junior assistant; R. D.

W. M. Mote, filter operator.

J. A. Cloud, civil engineer, of New York city, was the contractor for the construction of the plant. John C. Chase was employed as superintendent. The late John H. Sweeney was employed as chief operating engineer, which position he held until his death on November 3, 1931, just 21 days before his fiftieth anniversary in that capacity.

Just here it may be well to pause and pay tribute to one who followed the path of duty for a half century never failing to give the best he had to the work in hand. Typical of his work and philosophy of life throughout is the sign he had placed above the boilers: "Trust in the Lord. But keep two gauges of water in the boilers on your own account."

This philosophy has been passed to water works operators throughout the country and has taught them not to depend too greatly upon some one else but to "be sure you are right, and then go ahead."

First of Wood

The present plant was of wooden structure and was located on the present site. The equipment consisted of three small pumps, two for domestic service and one for fire service; two small low pressure boilers and the necessary appurtenances.

Water was drawn from the river and pumped to the city direct without any effort at purification. Fire

OUR VIEW

CFPUA was right decision for area

StarNews Editorial Board

The other day, at its monthly meeting, the board of the Cape Fear Public Utility Authority voted to cut some of its fees.

Starting July 1, the charge for a residential hookup to CFPUA's system will go down from \$1,920 to \$1,510. The charge for a house's sewer hook-up will go from \$2,460 to \$2,030.

That's still a lot of money, but in one swoop, the board cut \$800 off the total cost of a newly built home in Wilmington and much of New Hanover County.

That looks like good news to us.

The CFPUA is one of those faceless bureaucracies with an addiction to jaw-breaking jargon. (It calls those chopped fees "Systems Development Charges.")

Almost every citizen likes to take shots at CFPUA. Conservatives paint the authority as a bunch of irresponsible, tax-and-spend bureaucrats. (Just check some of the chatter that ricocheted around social media during the recent primaries.) Liberals and environmentalists shriek every time sewage leaks into a local tidal creek, even though CFPUA has massively reduced those spills since its inception.

Born out of chaos in 2008, when two systems were merged, it wouldn't be surprising if CFPUA were dysfunctional.

What's astounding, however, is how well the authority has actually run and how it's steadily improved.

Earlier this month, the system got good grades in a study of the state's water and sewer systems by the UNC School of Government.

Back in March, a study by the N.C. League of Municipalities found that CFPUA customers paid some of the lowest water and sewer rates in the state.

"Tax-and-spend liberals"? That

doesn't hold water.

Moody's just upgraded CFPUA bonds to Aa1, just one grade below its highest level. That ensures the authority gets a good rate when it does have to borrow money. The board recently refinanced \$30 million of its debt to better rates.

As for sewage leaks, since its establishment the CFPUA's staff have managed to cut the number of spills in half and the volume of what's spilled by 77 percent. Technicians are running cameras through pipes to identify trouble spots, pipes that will need to be replaced soon, and trying to anticipate problems.

Water is something Americans take too much for granted. For a few dollars a day, turn a knob and it pours out the faucet, clean and fresh. And not only that, but our dirty water is pumped away and we usually never see any of this mass of mainly underground infrastructure.

The CFPUA's board practices a balancing act, trying to keep rates low while paying for maintenance and repairs — much of it long ignored in the pre-CFPUA days. It's also built enough reserves to be able to deal effectively with a major emergency.

Meanwhile, more people move into the area, which means more water and sewer lines have to be laid ... and maintained.

Although it gets its share of complaints, the CFPUA has done its job well. Several current board members' terms will shortly expire, though, so the Wilmington City Council and New Hanover County Commissioners will have to pick replacements.

Voters need to pay close attention to this prospect. We'll need the best people we can find so that the CFPUA can stay balanced — thrifty but willing to spend what it takes to keep our water and sewer system safe and in good repair.

Neither of those things should be taken for granted.

Wilmington Morning Star, May 14, 1939



Cape Fear
Public Utility Authority

Stewardship. Sustainability. Service.

Wilmington StarNews, May 23, 2016