

AGENDA
Lower Cape Fear Water & Sewer Authority
1107 New Pointe Boulevard, Suite # 17, Leland, North Carolina
8:30 a.m. – Finance Committee Meeting
March 14, 2022

MEETING CALL TO ORDER: Chairman Rivenbark

PRESENTATION: PowerPoint for Fiscal 2022-2023 Budget

DISCUSSION: Directors' Comments and Questions

ACTION/DIRECTION: Schedule final review for May 9, 2022, at 8:30 am prior to Regular Meeting and Public Hearing

ADJOURNMENT



AGENDA

**Lower Cape Fear Water & Sewer Authority
1107 New Pointe Boulevard, Suite # 17, Leland, North Carolina
9:00 a.m. – Regular Monthly Board Meeting
March 14, 2022**

MEETING CALL TO ORDER: Chairman Rivenbark

INVOCATION

PLEDGE OF ALLEGIANCE

APPROVAL OF CONSENT AGENDA

- C1** - Minutes of February 14, 2022, Regular Board Meeting
- C2** - Minutes of December 13, 2021, Long Range Planning Committee Meeting
- C3** - Kings Bluff Monthly Operations and Maintenance Report
- C4** - Bladen Bluffs Monthly Operations and Maintenance Reports
- C5** - Budget Amendment #1
- C6** - Final Master Planning Document
- C7** – Resolution by Governing Body of Applicant for Replacement of the Walkway and Air Backwash Building at Kings Bluff Raw Water Pump Station
- C8** - Resolution by Governing Body of Applicant for the Addition of a Fourth Raw Water Pump at Kings Bluff Raw Water Pump Station
- C9** - Resolution by Governing Body of Applicant for the Addition of a New Standby Generator and a New Generator Building at Kings Bluff Raw Water Pump Station

OLD BUSINESS

- OB1** - Resolution Requesting Funding of a 10 Mile Parallel Line for the Lower Cape Fear Water and Sewer Authority

NEW BUSINESS

- NB1** – Replacement of office lighting fixtures throughout LCFWASA
- NB2 A** – Resolution of Lower Cape Fear Water & Sewer Authority Exempting Lower Cape Fear Water & Sewer Authority from The Provisions of N.C.G.S. §143-64.31 for Professional Consulting Engineering Services for the NC Division of Water Infrastructure State Revolving Fund Planning Study Grant Application Preparation for Rate Study
- NB2 B** – Resolution for Professional Consulting Engineering Services for the NC Division of Water Infrastructure State Revolving Fund Planning Study Grant Application Preparation for Rate Study

ENGINEER'S COMMENTS

ATTORNEY COMMENTS

EXECUTIVE DIRECTOR REPORT

EDR1—Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date
Ending February 28, 2022

EDR2—Operating Budget Status, Ending January 31, 2022.

EDR3—Summary of Activities

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

PUBLIC COMMENT

ADJOURNMENT

The next board meeting of the Lower Cape Fear Water & Sewer Authority is scheduled for Monday, April 11th at 9:00 a.m. in the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina.

AGENDA ITEM

To: CHAIRMAN RIVENBARK AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: March 14, 2022

Re: Consent Agenda

Reviewed and approved as to form: MATTHEW A. NICHOLS, AUTHORITY ATTORNEY

Please find enclosed the items of a routine nature for consideration and approval by the Board of Directors with one motion. However, that does not preclude a board member from selecting an item to be voted on individually, if so desired.

- C1-** Minutes of February 14, 2022, Regular Board Meeting
- C2-** Minutes of December 13, 2021, Long Range Planning Committee Meeting
- C3-** Kings Bluff Monthly Operations and Maintenance Report
- C4-** Bladen Bluffs Monthly Operations and Maintenance Report
- C5-** Budget Amendment #1
- C6-** Final Master Planning Document
- C7-** Resolution by Governing Body of Applicant for Replacement of the Walkway and Air Backwash Building at Kings Bluff Raw Water Pump Station
- C8-** Resolution by Governing Body of Applicant for the Addition of a Fourth Raw Water Pump at Kings Bluff Raw Water Pump Station
- C9-** Resolution by Governing Body of Applicant for the Addition of a New Standby Generator and a New Generator Building at Kings Bluff Raw Water Pump Station

Action Requested: Motion to approve/disapprove Consent Agenda.

Lower Cape Fear Water & Sewer Authority
Regular Board Meeting Minutes
February 14th, 2022

Chairman Rivenbark called to order the Authority meeting scheduled on February 14th, 2022, at 9:00 a.m. and welcomed everyone present. The meeting was held at the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina. Director Leonard gave the invocation.

Roll Call by Chairman Rivenbark:

Present: Norwood Blanchard, Patrick DeVane, Wayne Edge, Harry Knight, Al Leonard, Jackie Newton, Phil Norris, Scott Phillips, Charlie Rivenbark, Chris Smith, and Bill Sue

Present by Virtual Attendance: Jackie Newton, Phil Norris, Bill Saffo, Frank Williams, and Rob Zapple

Absent: None

Staff: Tim H. Holloman, Executive Director; Matthew Nichols, General Counsel; Tony Boahn P.E., McKim & Creed, Patrick Flanagan, COG; and Danielle Hertzog, Financial Administration Assistant

Guests Present: Ken Waldroup Cape Fear Public Utility Authority Executive Director; Sean Kenyon P.E., McKim & Creed; Glenn Walker, Brunswick County Water Resources Manager, and Kenny Keel Pender County Public Utilities Director

Guests Virtual Attendance: Tom Hendrick, Pender County Utilities; John Nichols, Brunswick County Public Utilities Director; John Malone, Cape Fear Public Utility Authority Water Resources Manager; Heidi Cox, NC DEQ Regional Engineering Supervisor, Division of Water Infrastructure and Joshua Trouton, Computer Warriors

PLEDGE OF ALLEGIANCE: Chairman Rivenbark led the Pledge of Allegiance.

APPROVAL OF CONSENT AGENDA

C1 - Minutes of January 10, 2022, Regular Board Meeting

C2 - Kings Bluff Monthly Operations and Maintenance Reports

C3 - Bladen Bluffs Monthly Operations and Maintenance Reports

C4 - Line-Item Adjustment for January 31, 2022

Motion: Director Leonard **MOVED**; seconded by Director DeVane, approval of the Consent Agenda Items as presented. Upon vote, the **MOTION CARRIED UNANIMOUSLY**.

	<u>For</u>	<u>Against</u>	<u>Abstained</u>	<u>Absent</u>
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo	X			
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	14	0	0	0

OLD BUSINESS

OB1 – Resolution for a Letter of Response to Financial Performance Areas of Concern for LGC

Executive Director Holloman advised the letter was requested to be sent to the Local Government Commission as recommended by Auditors.

Motion: Director Leonard **MOVED**; seconded by Director Knight. Upon vote, the **MOTION CARRIED UNANIMOUSLY.**

	For	Against	Abstained	Absent
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo	X			
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	14	0	0	0

NEW BUSINESS

NB1 – Resolution Awarding Annual Audit Contract for Fiscal Year Ending June 30, 2022, to Thompson, Price, Scott, Adams & Co. P.A in the amount of \$8,000.00

Executive Director Holloman advised that the audit firm had new staff work on the previous year's audit. After four years, we will go out for an RFP for another auditor.

Motion: Director Sue **MOVED**; seconded by Director Edge, approval of the Resolution to Award Annual Audit Contract to Thompson, Price, Scott, Adams & Co. P.A. Upon vote, the **MOTION CARRIED UNANIMOUSLY.**

	For	Against	Abstained	Absent
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo	X			
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	14	0	0	0

NB2 – Draft Master Plan for 25 Year Planning Period FY 2022-2046 Presentation by Sean Kenyon with McKim & Creed

Sean Kenyon met with Long Range Planning Committee back in December of 2021. McKim & Creed was tasked with creating a 25-year outlook for projects that needed to be completed within that period. The projects were identified with categories that included capacity, renewal and rehabilitation, efficiency, and any maintenance over those 25 years. Each project was assigned a criticality score of one, two, or three. We always strived to ensure that we have enough water to drive to the system and convey to all our customers. The lifecycle of items also had to be looked at in the planning criticality. The current master plan is in today's dollar; however, since the master plan will be reviewed annually, the cost will increase to reflect the market. One of the main projects that have been updated is the parallel raw water main coming from the ground storage tank to CFPWA. This project was originally scheduled

beyond 2046, but with the recent leak, this project has been moved up to 2023. KB 9 Right of Way Acquisitions has been moved up a couple of years due to direction from the board. KB 11 Intermediate Booster Pump Station Shelter was also a board member's concern, but after reviewing all projects and criticality, this project will remain as is. Two new projects have been added, KB17, which is the pigging of the 48-inch water main from the ground storage tank down to CFPWA. This is because there was a lot of sand found in the pipe during the break in the line. This pigging cost is higher because the necessary infrastructure will need to be installed first and then the pigging completed. The second new project is now KB15 48-inch parallel raw water US 421 will be a long parallel line from the ground storage down to the CFPWA meter vault. Director Zapple had a concern about the projections for Pender County since they were completed back in 2018, and Pender County is continually growing in population. Kenny Keel advised he feels comfortable with the predictions and states they are accurate. He also advised Pender County will have additional sources that will help meet the demand.

Motion: Director Williams **MOVED**; seconded by Director Sue, approval of NB3 Draft Master Planning Document. Upon vote, the **MOTION CARRIED UNANIMOUSLY**.

	For	Against	Abstained	Absent
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo	X			
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	14	0	0	0

NB3 A) Resolution of Lower Cape Fear Water & Sewer Authority Exempting Lower Cape Fear Water & Sewer Authority from The Provisions of N.C.G.S. §143-64.31 for Professional Consulting Engineering Services for Kings Bluff Air Backwash and Walkway System Alternative Evaluation.

Under North Carolina law, when a public entity such as the Authority solicits bids from engineers, surveyors, and architects, they must go through a request for proposal process where the applicants' qualifications are considered without consideration of price. However, if the projected cost of the service is less than \$50,000.00, the entity has the right to exempt itself from that process. Approval of the presented resolution waives this requirement for a proposal submitted by McKim & Creed per proposal 220407 in the fixed amount of \$7,000.00 for Professional Consulting Engineering Services for Kings Bluff Air Backwash and Walkway System Alternative Evaluation.

Motion: Director Leonard **MOVED**; seconded by Director Sue, approval Exempting LCFWASA from the Provisions of N.C.G.S. §143-64.31. Upon vote, the **MOTION CARRIED UNANIMOUSLY**.

	<u>For</u>	<u>Against</u>	<u>Abstained</u>	<u>Absent</u>
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo	X			
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	14	0	0	0

NB3 B – Resolution for Professional Consulting Engineering Services for Kings Bluff Air Backwash and Walkway System Alternative Evaluation

Tony Boahn advised this is one of our CIP projects to replace the old air backwash system and walkway at Kings Bluff. The project was estimated to be around one million to one and half million. The project would replace the approximately 1,000 feet of walkway and two wooden buildings that hold the air tanks. These air tanks are used to blow air back through the screen to remove the silt off the screens. Mr. Boahn has been working with the screen manufacturers to see if the air tanks could be moved onto the banks to eliminate a thousand feet of walkway. The manufacturers have given preliminary indications that it is technically feasible. This is for a top-level evaluation to generate an approximate cost. Tony advised we have an application to prepare and submit to Drinking Water SPF for the walkway.

Motion: Director Blanchard **MOVED**; seconded by Director Edge, approval of NB3 B Resolution for Professional Consulting Engineering Services for Kings Bluff Air Backwash and Walkway System Alternative Evaluation. Upon vote, the **MOTION CARRIED UNANIMOUSLY**.

	<u>For</u>	<u>Against</u>	<u>Abstained</u>	<u>Absent</u>
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo				X
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	13	0	0	1

NB4 A) Resolution of Lower Cape Fear Water & Sewer Authority Exempting Lower Cape Fear Water & Sewer Authority from The Provisions of N.C.G.S. §143-64.31 for Professional Consulting Engineering Services for Existing 48" Aerial Crossing at Livingston Creek Structural Design for Access Platform.

Under North Carolina law, when a public entity such as the Authority solicits bids from engineers, surveyors, and architects, they must go through a request for proposal process where the applicants' qualifications are considered without consideration of price. However, if the projected cost of the service is less than \$50,000.00, the entity has the right to exempt itself from that process. Approval of the presented resolution waives this requirement for a proposal

submitted by McKim & Creed per proposal M&C 220423 in the fixed amount of \$9,800.00 Professional Consulting Engineering Services for Existing 48" Aerial Crossing at Livingston Creek Structural Design for Access Platform.

Motion: Director Leonard **MOVED**; seconded by Director Sue, approval Exempting LCFWASA from the Provisions of N.C.G.S. §143-64.31. Upon vote, the **MOTION CARRIED UNANIMOUSLY**.

	For	Against	Abstained	Absent
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo				X
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple	X			
	13	0	0	1

NB4 B – Resolution for Professional Consulting Engineering Services for Existing 48" Aerial Crossing at Livingston Creek Structural Design for Access Platform

Motion: Director DeVane **MOVED**; seconded by Director Williams, approval of NB4 B Resolution for Professional Consulting Engineering Services for Existing 48" Aerial Crossing at Livingston Creek Structural Design for Access Platform. Upon vote, the **MOTION CARRIED UNANIMOUSLY**.

	For	Against	Abstained	Absent
Norwood Blanchard	X			
Wayne Edge	X			
Patrick DeVane	X			
Harry Knight	X			
Al Leonard	X			
Jackie Newton	X			
Phil Norris	X			
Scott Phillips	X			
Charlie Rivenbark	X			
Bill Saffo				X
Chris Smith	X			
Bill Sue	X			
Frank Williams	X			
Rob Zapple				X
	12	0	0	2

NB5 – Presentations by Tony Boahn regarding the 10-Mile Parallel Raw Water Main Preliminary Cost Estimates

Tony Boahn advised this presentation is regarding the second ten miles of the pipeline where the leak occurred. Option one is to continue the current 48-inch pipeline with the same 48-inch parallel raw water main with a price of 54.3 million. Then we have option two, which utilizes a 36-inch parallel raw water main with a price of 47.3 million. Based on a pure capacity standpoint, Mr. Boahn advised he feels the 36-inch pipeline is a real possibility. The cost estimates were sixty million in the CIP, so both are within those numbers. Both assessments have been quoted with directional drilling under the Cape Fear River. That is an expensive endeavor being around a thousand dollars per foot. A detailed engineering study will need to be performed on this parallel raw water main just like we did on the 54-inch parallel raw water main. We looked at different sizes, materials, energy costs, and every piece and part to

make the best decision on that pipe size and material. There is a possibility we can open cut the river, and there are many environmental issues. You must work with the Corps of Engineers, CAMA, and the State of North Carolina.

ENGINEER'S COMMENTS

Tony Boahn gave an update on the 54-inch parallel raw water main. The interconnections are still scheduled to be completed by April 26, 2022, with the original schedule being May 2022; therefore, the contractor is still one month ahead of schedule. There is a small leak at one of the ground tanks near a valve, this is not a significant leak, and Brunswick County is digging down to locate the leak today, February 14, 2022.

Tony Boahn advised that the leak in the 48" pipeline located at the southwest side of the Cape Fear River just behind the former DAK site has had 200 feet of restrained joint pipe replaced. The line stops and bypass was disengaged on January 19, 2022. The line ran for several days to make sure there were no issues. On January 24, a minor leak was discovered at a valve, and it was a minor repair. Operational testing has been completed, and the line stops, and bypass has been removed. The final cleanup is underway now.

ATTORNEY COMMENTS

No comments

EXECUTIVE DIRECTOR REPORT

EDR1 – Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending January 31, 2022

Executive Director Holloman reported that during the month of January 2022, Pender County was above projections. Brunswick County and CFPWA were below projections. Monthly revenue was down last month.

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

Director Leonard wants an update on the Lock and Dam. No new updates. It was confirmed that the Army Corps of Engineers have six million dollars for maintenance. It has been estimated that twenty-four million would be needed for all three lock systems.

PUBLIC COMMENT

No comments

ADJOURNMENT

There being no further business, Chairman Rivenbark adjourned the meeting at 10:02 a.m.

Respectfully Submitted:

Harry Knight, Secretary

Lower Cape Fear Water & Sewer Authority

Long Range Committee Meeting Minutes

December 13, 2021

Chairman Leonard called to order the Long-Range Planning Committee Meeting on December 13, 2021, at 8:00 a.m. The meeting was held at the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina.

Present: Norwood Blanchard, Patrick DeVane, Harry Knight, Al Leonard, Al Milliken, Charlie Rivenbark, and Frank Williams

Present Non-Board Members: John Nichols, Brunswick County Public Utilities Director; Ken Waldroup Cape Fear Public Utility Authority Executive Director

Present by Internet/Telephone: Kenny Keel, Pender County Public Utilities Director

Absent: None

Staff: Tim H. Holloman, Executive Director; Matthew Nichols, General Counsel; Tony Boahn P.E., McKim & Creed, Sam Shore, COG, and Danielle Hertzog, Financial Administration Assistant Temp

Guest: Matt Hourihan, Cape Fear Public Utility Authority Assistant Operations Director; Tom Hendrick, Pender County Utilities; Sean Kenyon P.E., McKim & Creed

Presentation: Master Plan Review (Capital Improvement Plan) review by Sean Kenyon

Sean Kenyon presented the current draft Capital Improvement Plan (CIP) from 2022 through 2046, including Kings Bluff, Raw Water facilities, and Bladen Bluff water treatment facilities. The CIP had several factors including category of need, capacity issue, does it need to be replaced or rehabilitated, and is there a maintenance efficiency or redundancy issue. They assigned each CIP a criticality score as far as whether it's a high priority, low priority, also looked at no consequence if no action. There are three primary drivers: demand and capacity, life cycle, redundancy, and resiliency. The criticality is scored one, two, or three. One being the lowest and three being the highest need. The preliminary design memorandum is based on a demand table for projected usage from the different entities with a future demand of 96 million gallons per day in 2062.

Sean Kenyon listed sixteen projects for Kings Bluff. KB1 New 4th Pump at Kings Bluff has a criticality of three because current pumps will meet projected demands by 2035. The fourth pump will be standby/backup and add to pump rotation to reduce hours per pump. KB2 Rebuild/Refurbish existing 1600 hp vertical turbine has a criticality of three due to water pumps originally installed in 2009 and mechanical wear. Rebuilding of the pumps will extend the service life of the pumps. KB3 New generators have a criticality of three due to the need to upgrade due to the future increased load associated with auxiliary pump motor HP and larger quantities pump. Executive Director Tim Holloman advised the dates for the generators have been pushed due to the low hours currently on the generators. KB4 Pig 48" pipe from Kings Bluff pump station to 3 MG ground tank has a criticality of one because pigging will maintain a clean pipeline free of sediment, silt, and debris cleaned. It will also improve the efficiency of pumps by reducing the frictional characteristics of the pipeline. John Nichols wanted to know since the last pigging of the 48" pipeline was from the pump station to the raw water tank, has any thought been given to pigging the pipeline section from the raw water main to the CFPWA vault. Sean advised additional infrastructure would be needed and, it is a matter that needs to be discussed. Tony Boahn advised that the last time an additional catcher was installed, the cost was around one million, including pigging of the line. Tony agreed this would be a good item to add to the CIP due to the current leak and one to two feet of sand found in the pipeline. Chairman Leonard wanted to know what sediment had been seen in the tanks. Tony Boahn advised the tanks haven't been cleaned out in a few years, but there was one foot of sand when it was completed. KB5 Pig future 54" pipe from 3MG ground tank to US 421 has a criticality of one sighting the same reason as pigging the 48" pipeline. KB6 Walkway and air backwash building replacement have a criticality of

two because the walkway is in serviceable condition and will need to be replaced by 2024 due to rotting wood and overall weathering of the walkway. The cost can be significantly increased if this project is completed during the wet season. Director Milliken wanted to know if the cost was composite or concrete materials. Sean Kenyon advised it is for a concrete material replacement. Tony Boahn advised he is discussing a design with the technical department regarding to move the backwash system to the bank. KB7 Replacing raw water pumps 1,4 and 5 has a criticality of three due to age and mechanical wear. This project is more of a placeholder, and so we can budget and plan for replacement. The pumps have been in operation since 2009. They were each installed around the same time, so they might need to be replaced one after the other. KB8 New surge tank at Kings Bluff has a criticality of two because as the demand increases, surges in the system will likely increase, and this needs to be installed before the fifth pump comes online. KB9 5 ROW acquisitions rated a criticality of two. Director Blanchard feels we need to move this project up because the cost of land continues to increase. KB10 Walkway to access 48" raw water main at Livingston Creek has a criticality of one. The pipe and appurtenances at the aerial crossing are currently inaccessible to operations staff for routine inspection, maintenance, and repairs. KB11 Intermediate booster pump station shelter has a criticality of three due to needing to protect existing pumps, and equipment from elements. The shelter will also provide improved maintenance access during inclement weather. Director Blanchard and Rivenbark are concerned KB11 should be sooner because the booster pump station will need repaired/replaced sooner if left exposed. KB12 Intermediate booster pump station upgrade has a criticality of three because US 421 area demands will exceed current 29MGD capacity in approximately 2037. KB13 New fifth pump at Kings Bluff raw water pump station has a criticality of three because decreasing load and run times of existing pumps will extend the life and improve all pumps' reliability. KB14 20 MG ground tank has a criticality of two for increasing the available system storage and providing a more consistent supply for the safe and efficient operation of the adjacent interim booster pump station. KB15 Parallel raw water main from 3 MG ground tank to US 421 service area has a criticality of one to provide additional system capacity. KB16 100MGD Reservoir has a criticality of one due to increasing availability system for water storage, allows for temporary redundancy of supply in the case of an emergency (line break, power outage, hurricane). Director DeVane wanted to know if the reservoir would be lined, and Sean advised yes, the cost is with it being lined. Director Knight wanted to know if the budget is accounting for inflation. Sean stated the budget is in today's dollars.

Executive Director Tim Holloman advised this is just a draft CIP and would like to meet again in January, but this committee might have to meet outside of the formal board meeting.

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

No comments.

FUTURE MEETINGS

The next meeting will be before the January 10th Board meeting at 8:00 a.m.

ADJOURNMENT

There being no further business, Chairman Leonard adjourned the meeting at 8:52 a.m.

Respectfully Submitted:

Norwood Blanchard, Secretary

COUNTY OF BRUNSWICK
PUBLIC UTILITIES DEPARTMENT
Kings Bluff Pump Station



246 Private Road
Riegelwood, NC 28456
(910) 655-4799 Office
(910) 655-4798 FAX

TO: Tim Holloman

FROM: Jack Hogan

DATE: 3/1/2022

SUBJECT: Monthly maintenance report for February 2022

Mr. Holloman,

The Maintenance and Operations of the king's bluff facility for the month of February were performed as prescribed in the station SOP'S and other items are as follows.

The diesel drive booster pumps along with the standby SCADA generator located at the raw tank and the SCADA generator located at INVISTA / CFPUA vaults off HWY 421 were run and tested weekly and verified standby ready.

KB personnel completed all locates issued by the 811 system.

KB personnel installed locks on PRAX and INVISTA vaults.

KB personnel working with Garney, McKim & Creed on 48" line leak located at the raw tank.

KB personnel removed the Motorized Operating Valve off its pad.

KB personnel along with BC personnel removed the MOV pad and walls to clear the area for excavation.

KB personnel are currently excavating the 48" valve at John Reigel Rd. due to some issue with the operator number count being off.

Mudd Trax was delivered to KBPS on 2/24/22.

Contractors:

NEWCOMB replaced the freon circulation solenoid valve on # 3 air handling unit located at the VFD building.

Thank you,
Jack Hogan



To: Tim Holloman - LCFWASA

From: James Kern – Bladen Bluffs SWTP ORC

Date: 3/1/22

Subject: February 2022 Operations

During the month of February, Bladen Bluffs SWTP operated a total of 20 days, treating 46.34 million gallons of water.

We used:

36,642 lbs. of aluminum sulfate (Alum)

9,475 lbs. of sodium hydroxide (Caustic)

835 lbs. of sodium hypochlorite (1,677 gallons of 6% Chlorine Bleach)

James Kern
Water Treatment Plant
Supervisor

(910) 862-3114
(910) 862-3146
(910) 733-0016 mobile
jkern@smithfield.com

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Plant
17014 Highway 87 West
Tar Heel, NC 28392
www.smithfieldfoods.com

Bladen Bluffs SWTP Maintenance Report

Date: 3/1/2022

ISSUE:

PLAN OF ACTION:

Air on finished water line (from GAC)	Installed trial valves – testing next week
Running spare cl2 lines to settled/finished	Quote approved – scheduling work
Sump pump check valve needs replacement	Scheduled repair
All PLC need updated	Getting quotes
Ordering backup drives for all pumps	Ordered
Valve broken on eyewash	FIXED
NPDES lagoon #1 need mud cleaned out	COMPLETE
Settle basins need cleaned	COMPLETE
BW flow meter instrument clogged	FIXED
Transformer on Blower Bad	Part Ordered
Found small leak in lagoon liner	Gave info to engineer (Stacey Magnus)
State recommended filter media inspection	Passed info along to engineer (Stacey Magnus)

Monthly Operating Reports (MORs) Summary

(No user data entry – all values are auto-populated.)

Year: 2022 PWS Name: Bladen Bluffs Water System PWSID#: NC5009012
 Month: February Facility Name: Bladen Bluff

Combined Filter Effluent (CFE) Turbidity

Samples exceeding 1 NTU (count):	<u>0</u>	Number of samples required:	<u>104</u>
Samples exceeding .3 NTU (count):	<u>0</u>	Number of samples taken:	<u>105</u>
Samples exceeding .3 NTU (pct):	<u>0.0%</u>	Highest single turbidity reading NTU:	<u>0.173</u>
		Monthly average turbidity NTU:	<u>0.086</u>

Individual Filter Effluent (IFE) Turbidity

1)	Was each filter <u>continuously</u> monitored for turbidity?	Yes	<u>X</u>	No	<u></u>
2)	Was each filter's monitoring results <u>recorded every 15 minutes</u> ?	Yes	<u>X</u>	No	<u></u>
3)	Was there a failure of the continuous turbidity monitoring equipment?	Yes	<u></u>	No	<u>X</u>
4)	Was any individual filter turbidity level > 1.0 NTU in two consecutive measurements ?	Yes	<u></u>	No	<u>X</u>
5)	Was any individual filter turbidity level > 0.5 NTU in two consecutive measurements at the end of 4 hours of operation after the filter has been backwashed or otherwise taken offline ?	Yes	<u></u>	No	<u>X</u>
6)	Was any individual filter turbidity level > 1.0 NTU in two consecutive measurements in each 3 consecutive months ?	Yes	<u></u>	No	<u>X</u>
7)	Was any individual filter turbidity level > 2.0 NTU in two consecutive measurements in 2 consecutive months ?	Yes	<u></u>	No	<u>X</u>

Entry Point Residual Disinfectant Concentration (EPRD)

Disinfectant Used	<u>Chlorine</u>	Number of samples required	<u>104</u>
Minimum EPRD concentration	<u>0.9000</u>	Number of samples taken	<u>105</u>

Distribution Residual Disinfectant Concentration

Number of samples under 0.010 mg/L (without any detectable) excluding where HPC is ≤ 500/mL	<u>0</u>
---	----------

Contact Time (CT) Ratio

Lowest CT ratio reading	<u>13.46</u>	Number of CT ratios required	<u>20</u>
Number of CT ratios below 1.0	<u>0</u>	Number of CT ratios calculated	<u>20</u>

Remarks From General Info Worksheet

☒ By checking this box, the ORC certifies that the requirements of 15A NCAC 18C .1301 "General Requirements", .1302 "Tests, Forms, and Reporting", and .1303 "Facility Oversight" have been met for the month of February, 2022 and that records documenting compliance with this rule are maintained on the premises and available for inspection upon request.



Lower Cape Fear Water & Sewer Authority
Leland, North Carolina

BUDGET AMENDMENT #1

Fiscal Year 2021 - 2022

BE IT ORDAINED by the Board of Directors of the Lower Cape Fear Water & Sewer Authority that the following amendments are made to the FY 2021-2022 Annual Budget Ordinances as follows:

Section 1: To amend the **Operating Revenue** the appropriations are to be changed as follows:

Bladen Bluffs Revenue:

	Increase
3006-01 – 01 Bladen Bluffs Revenue	\$ 250,000
3007-01 – Sales Tax Refund Revenue	\$ 20,000

Section 2: To amend the **Operating Expenses** the appropriations are to be changed as follows:

Operating Fund:

	Increase
4510-01 – Bladen Bluffs Expenses	\$ 250,000
4501-00 – Sales Tax Expense - Other	\$ 20,000

Section 3: Copies of this Budget Amendment shall be furnished to the Budget Officer for direction in the carrying out of his duties.

Approved as to the availability of funds:

 Tim H. Holloman, Finance Officer

This Budget Amendment adopted this 14th day of March 2022.

 Charlie Rivenbark, Chairman

ATTEST:

 Harry Knight, Secretary



FINAL MASTER PLANNING DOCUMENT

25 Year Planning Period

FY 2022-2046

February 2022



Prepared for:

Lower Cape Fear Water & Sewer Authority
1107 New Pointe Blvd., Ste. 17
Leland, NC 28451

Prepared by:

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243 N. Front St.
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M&C Project No. 01675-0042
License F-1222



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5. **Bladen Bluffs Regional Surface Water Facility Annual Fiscal Year Budget Breakdown**
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Executive Summary

I. Kings Bluff Raw Water Facilities

The Authority's proposed 25-year (2022-2046) Capital Project budget for the Kings Bluff Raw Water Facilities is estimated at approximately \$149M. This includes a 48-inch parallel raw water main from the existing 3 MG ground tank to the US 421 service area that may be required in the future to meet the capacity needs of the US 421 area customers and CFPUA. The cost of this parallel main is estimated at \$60M and is subject to grant funding.

The following summarizes the primary drivers for the 25-year Capital Improvement Plan:

- Increase overall system capacity via new infrastructure and/or parts to meet long term raw water demands.
- Rehabilitate and replace infrastructure as needed to maintain system functionality of raw water pipeline.
- Plan and design system capacity in order to balance the supply with the demands and meet the needs of any potential customers.
- Design and construct maintenance system for pipeline in order to periodically clean pipeline and maintain station capacity.

The largest capital initiatives (over \$1 M) anticipated over the next twenty-five fiscal years is summarized as follows:

- New generators at King's Bluff Raw Water Pumping Station
- Walkway and Air Backwash Building Replacement
- Pig 48" existing water main from King's Bluff Pumping Station to 3 MG ground tank
- Pig future 54" water main from King's Bluff Pumping Station to 3 MG ground tank
- 20 MG Ground Tank
- 100 MG Reservoir
- Install 4th pump at King's Bluff Pumping Station
- Replace existing pumps at King's Bluff Pumping Station
- Install 48" parallel raw water main from 3 MG ground tank to US 421
- Intermediate Booster Pump Station Upgrade
- New 5th Pump at King's Bluff Pumping Station

In addition to these large capital initiatives, there are a several projects that are estimated at less than \$1 M, which include:

- Refurbish/rebuild existing pumps
- Installation of a new surge tank at the King's Bluff Pumping Station

- 5 ROW Acquisitions
- Intermediate Booster Pump Station Shelter
- Walkway to access 48" raw water main at Livingston Creek

II. Bladen Bluffs Regional Surface Water Facility

The Authority's proposed 25-year (2022-2046) Capital Project budget for the Bladen Bluffs Regional Surface Water Facility is estimated at approximately \$7.3M. However, it is noted that Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. All capital improvements and/or maintenance requirements listed in this document are for recommendation only and are the sole responsibility of SFC. LCFWSA would only be responsible for the recommended projects should LCFWSA assume full operation of the facility from SFC.

The following summarizes the primary drivers for the 25-year Capital Improvement Plan:

- Replace aging infrastructure and parts to meet long term demand.
- Plan and design to maintain system capacity to meet current and potential future customer demands

The largest capital initiatives (over \$1 M) anticipated over the next twenty-five fiscal years is summarized as follows:

- New 1 MG Capacity Clearwell
- New High Service Pumping Station

In addition to these large capital initiatives, there are a few projects that are estimated at less than \$1 M, which include:

- Replace Pumps at Raw Water Pumping Station
- Replace Pumps at Recycle Pumping Station
- Replace Pumps at Transfer Pumping Station
- Replace Blower in Blower Building
- Replace On-Site Generators

The proposed CIP budget over the next 25 years has been compiled based on these initiatives. It is recommended that each project be periodically reevaluated, which provides an opportunity to reassess the budget and need for each. This will allow the Authority to adjust priorities and budgets based on meeting customer needs.

III. Capital Projects Evaluations

Each project identified in the CIP was evaluated for the following factors:

1) Category of Need

- Capacity – *the project is needed to either maintain current capacity or increase capacity to meet future need.*
- Renewal/Rehabilitation - *the project is needed to replace or rehabilitate existing infrastructure to maintain capacity and operational readiness.*
- Efficiency- *the project is needed to increase or maintain the efficiency of the facilities and/or to maintain operations.*
- Maintenance – *the project is required for a general maintenance need to maintain equipment and/or facilities in operational condition.*

2) Criticality Score: 1 (Lowest) to 5 (Highest)

The criticality score was developed to for each project to provide a summary assessment of impact to operations as a driver for project implementation. Note that criticality levels provided in this document are specific to the fiscal year for which they have been identified.

Criticality Scoring Scale

1	2	3
The need for the project is low and does not fundamentally impact operational readiness	The project has a moderate impact on operations and may provide limited improvement to the facilities	The project is of critical need and will greatly impact operations if not completed.

3) Consequence of No-Action

In addition to the identification of the category and criticality assessment, a “Consequence of No-Action” statement has been included for each project. The intent of this statement is to clarify the impacts to operations, capacity, facility maintenance, etc. that would result if the project were not implemented.

4) Project Raw Water Demands

For capacity related improvements, updated customer projections were taken from the May 2018 Preliminary Design Memorandum for the Lower Cape Fear Water & Sewer Authority Parallel Raw Water Main report. A summary of the projected demands is provided as follows:

LCFWSA Projected Raw Water Demands

Customer	2015 Demands (MGD)	2025 Demands (MGD)	2035 Demands (MGD)	2045 Demands (MGD)	2055 Demands (MGD)	2062 Demands (MGD)
CFPUA	10.4	13.5	20.5	28.6	34.3	38.2
Brunswick County	19.7	25.1	30.6	36.67	43.89	49.8
US 421 Industries	2.0	2.0	2.0	2.0	2.0	2.0
Pender County	1.1	2.4	4.8	6.0	6.0	6.0
Totals	33.2	43.01	57.9	73.27	87.55	96.0

**Kings Bluff Raw Water Facilities
Capital Improvements
LCFWSA Projects
FY 2022-2046**

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	New 4 th Pump at King's Bluff Raw Water Pump Station	KB 1
CATEGORY:	Capacity/Efficiency	
Summary: <ul style="list-style-type: none">Provide a fourth raw water pump at King's Bluff Pumping Station to meet projected demands. (See #2 on legend in graphic below) Projected demands will exceed station firm capacity by 2037.		
Justification: <ul style="list-style-type: none">Increase station capacity to meet long term raw water demand.Firm capacity of station will require 3 pumps by 2037. Fourth pump will be standby/backup and added to pump rotation to reduce hours per pump.		
Consequence of No Action: <ul style="list-style-type: none">The projected demands at the station will exceed the firm capacity and the station will not be able to serve the project customer demand.		
Criticality:		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2026	
TOTAL ESTIMATED COST	\$3,600,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2024	\$800,000	
2025	\$2,000,000	
2026	\$800,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Rebuild/Refurbish Existing 1600 HP Vertical Turbine Raw Water Pumps	KB 2
CATEGORY:	Renewal/Rehabilitation	
Summary: <ul style="list-style-type: none">Rebuild and/or refurbishment of an existing 1600 HP vertical turbine raw water pumps originally installed in 2009 and a proposed 1600 HP vertical turbine raw water pump that will be installed in 2020.		
Justification: <ul style="list-style-type: none">Due to age and mechanical wear, it is anticipated that a rebuild of one of the raw water pumps will be required.Rebuilding of pumps will extend the service life of the pumps		
Consequence of No Action: <ul style="list-style-type: none">The likelihood of failure of the pumps increases due to age and wear of the existing pump.		
Criticality:		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	48	
REQUIRED COMPLETION	2023, 2025, 2027, 2044	
TOTAL ESTIMATED COST	\$1,000,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2023	\$250,000	
2025	\$250,000	
2027	\$250,000	
2044	\$250,000	



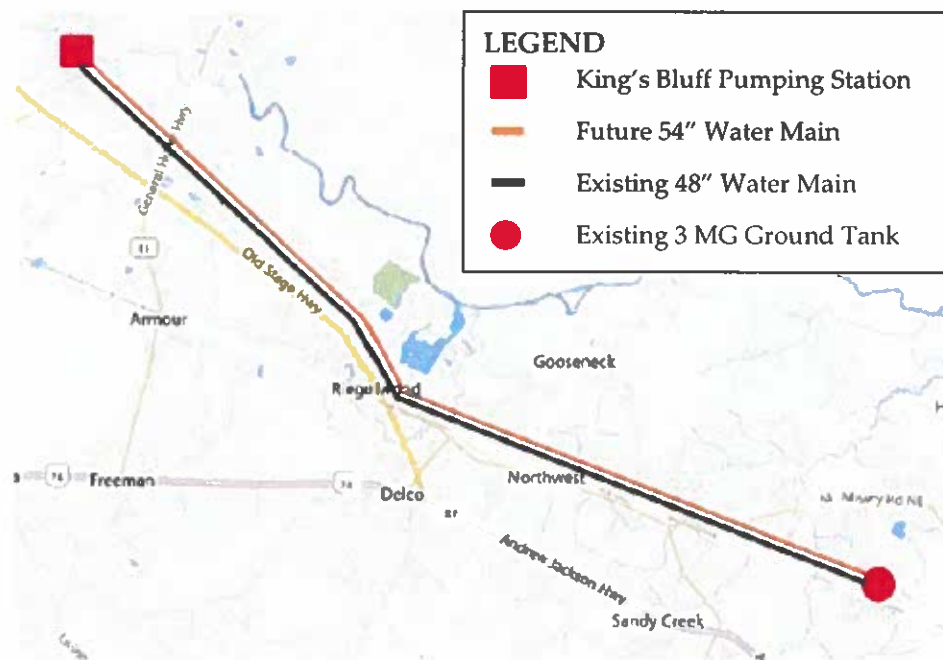
KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Generators at King’s Bluff Raw Water Pump Station	KB 3
CATEGORY:	Capacity, Efficiency, Maintenance	
Summary: <ul style="list-style-type: none">Provide new standby generator(s) and a new generator building at the pump station.		
Justification: <ul style="list-style-type: none">Requires upgrade due to future increased load associated with additional pump motor HP as well as larger quantity of pumps.A new building will be needed to house the new generators.		
Consequence of No Action: <ul style="list-style-type: none">The current generators are undersized to accommodate long term demandsThe existing generators are anticipated to become cost prohibitive to maintain		
Criticality: <div><div>▼</div><div><div>1</div><div>2</div><div>3</div></div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2031	
TOTAL ESTIMATED COST	\$9,200,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2023	\$1,000,000	
2024	\$8,200,000	



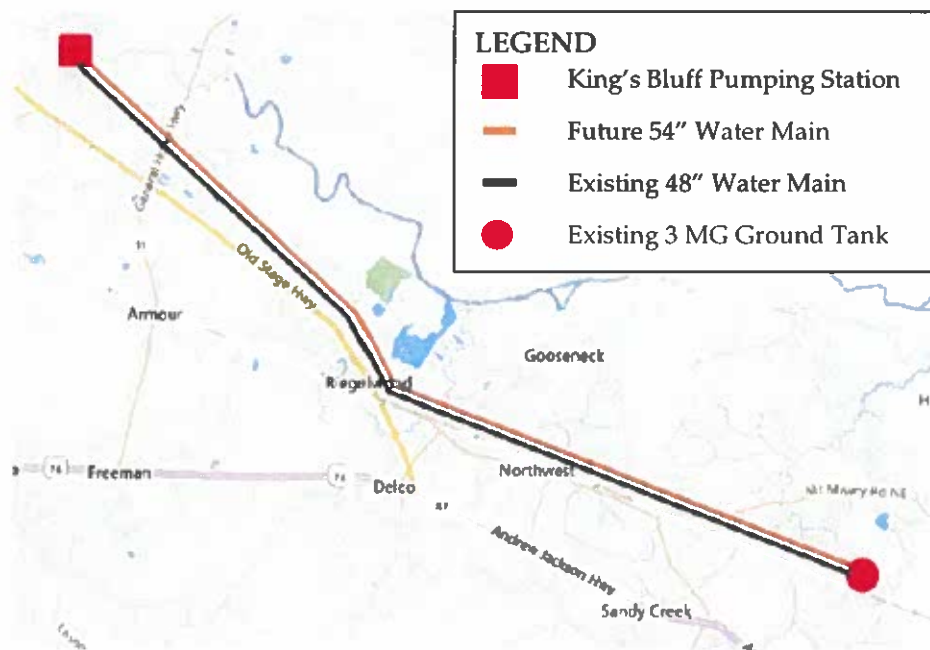
KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Pig 48" Pipe from King's Bluff Pump Station to 3 MG Ground Tank	KB 4
CATEGORY:	Renewal/Rehabilitation, Efficiency	
Summary: <ul style="list-style-type: none">Pig 48" pipeline from King's Bluff to 3 MG ground tank. Repair and/or replace air release valves and blow-offs.		
Justification: <ul style="list-style-type: none">Pigging will maintain a clean pipeline free of sediment, silt, and debris cleaned or emptied in the case of an emergency.Improves efficiency of pumps by reducing frictional characteristics of the pipeline		
Consequence of No Action: <ul style="list-style-type: none">Potential for loss of capacity and/or clogging due to sediment buildup.Loss of efficiency and higher electrical costs		
Criticality: <div><div></div></div>		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2040	
TOTAL ESTIMATED COST	\$1,000,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2040	\$1,000,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Pig Future 54" Pipe from 3 MG Ground Tank to US 421	KB 5
CATEGORY:	Renewal/Rehabilitation, Efficiency	
Summary: <ul style="list-style-type: none">Pig Future 54" pipeline from King's Bluff to 3 MG ground tank. Repair and/or replace air release valves and blow-offs.		
Justification: <ul style="list-style-type: none">Pigging will maintain a clean pipeline free of sediment, silt, and debris cleaned or emptied in the case of an emergency.Improves efficiency of pumps by reducing frictional characteristics of the pipeline		
Consequence of No Action: <ul style="list-style-type: none">Potential for loss of capacity and/or clogging due to sediment buildup.Loss of efficiency and higher electrical costs		
Criticality: <div><div></div><div>123</div></div>		
DURATION (MONTHS)		12
REQUIRED COMPLETION		2040
TOTAL ESTIMATED COST		\$1,000,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2034	\$1,000,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Walkway and Air Backwash Building Replacement	KB 6
CATEGORY:	Renewal/Rehabilitation/Maintenance	
Summary: <ul style="list-style-type: none">Funding for replacement of existing walkway from the King’s Bluff Pumping Station to the Air Backwash buildings with a new concrete walkway.Upgrade/replace existing air backwash building. (See number 1 on legend below).		
Justification: <ul style="list-style-type: none">Walkway going from pumping station to air backwash buildings is currently in serviceable condition and will need to be replaced by 2024 due to rotting wood and overall weathering of walkway.During Hurricane Florence the walkway was nearing submergenceExisting, original air backwash building needs significant improvements due to a loss of structural integrity caused by the general degradation of original building materials.		
Consequence of No Action: <ul style="list-style-type: none">Deterioration of the walkway could limit access to the air backwash buildings and raw water intakes.The air backwash facility will continue to deteriorate and create potential issues with protection of equipment and access for operations and maintenance.		
Criticality: <div>▼</div> <div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2024	
TOTAL ESTIMATED COST	\$1,500,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2023	\$150,000	
2024	\$1,350,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Replace Raw Water Pumps 1, 4, 5	KB 7
CATEGORY:	Renewal/Rehabilitation	
Summary: <ul style="list-style-type: none">Replace 1600 HP vertical turbine raw water pumps 1, 4, 5 originally installed in 2009.		
Justification: <ul style="list-style-type: none">Due to age and mechanical wear, it is anticipated that replacement of raw water pumps 1, 4, and 5 will be required.		
Consequence of No Action: <ul style="list-style-type: none">The likelihood of failure of the pumps increases due to age and wear of the existing pump. The service life of the existing pumps will be expended.		
Criticality:		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	36	
REQUIRED COMPLETION	2041, 2042, 2043	
TOTAL ESTIMATED COST	\$10,800,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2041	\$3,600,000	
2042	\$3,600,000	
2043	\$3,600,000	



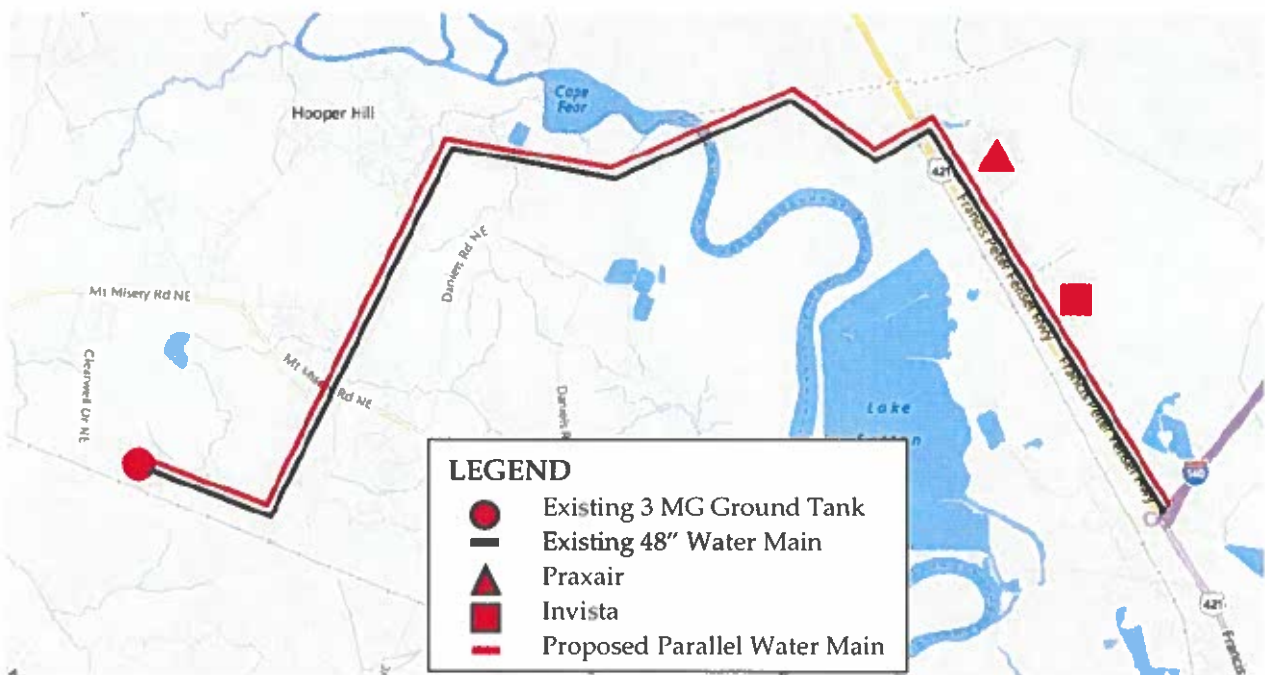
KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	New Surge Tank at King's Bluff	KB 8
CATEGORY:	Capacity	
Summary: <ul style="list-style-type: none">Addition of a 4th surge tank at King's Bluff Pumping Station		
Justification: <ul style="list-style-type: none">As demand increases, surges in the system will likely increase. The 4th surge tank will serve to mitigate system surges and protect the pumps, piping and miscellaneous equipment from surges and water hammer.		
Consequence of No Action: <ul style="list-style-type: none">Existing pump station and piping infrastructure would be put at risk for damage due to system surges and could potentially create failures in the pipeline.		
Criticality: <div><div>▼</div><div><div>1</div><div>2</div><div>3</div></div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2043	
TOTAL ESTIMATED COST	\$500,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2043	\$500,000	



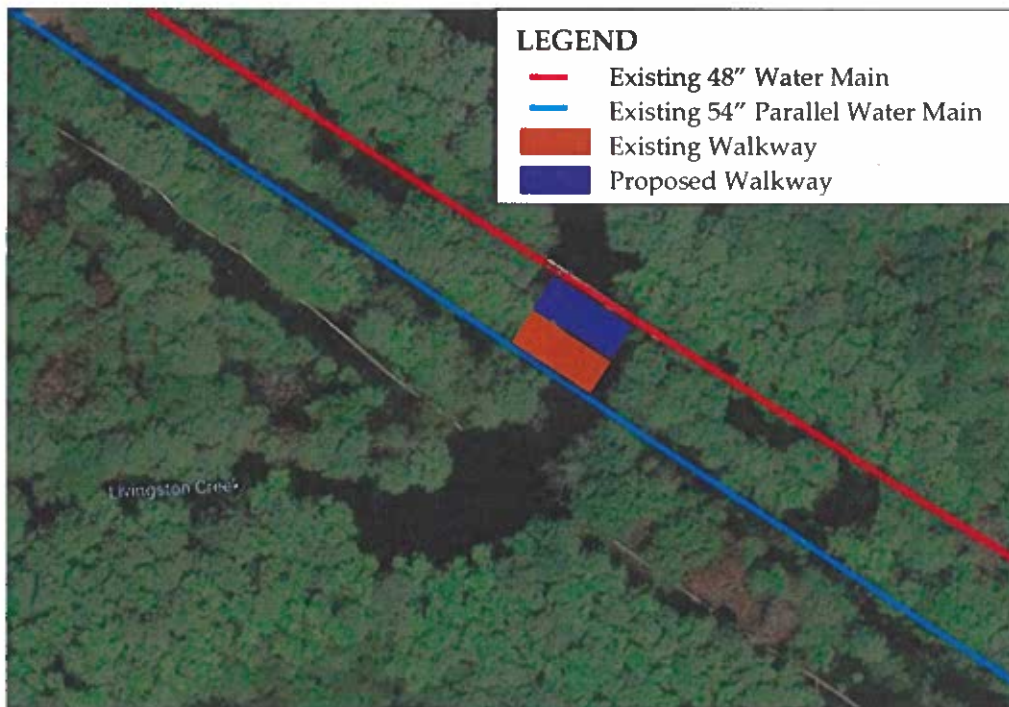
KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	5 ROW Acquisitions	KB 9
CATEGORY:	Capacity	
Summary:	<ul style="list-style-type: none"> Right-of-Way acquisitions along the existing 48" Raw Water Main from the 3 MGD ground tank to the US421 service area. 	
Justification:	<ul style="list-style-type: none"> Required to install the proposed 48" parallel raw water main 	
Consequence of No Action:	<ul style="list-style-type: none"> Future supply to the US421 service area will be limited to the capacity of the existing 48" main. 	
Criticality:	<div style="text-align: center;">▼</div> <div style="display: flex; justify-content: space-around; background-color: #f0f0f0; padding: 5px;"> 1 2 3 </div>	
DURATION (MONTHS)	36	
REQUIRED COMPLETION	2025	
TOTAL ESTIMATED COST	\$300,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2023	\$100,000	
2024	\$100,000	
2025	\$100,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Walkway to Access 48" Raw Water Main at Livingston Creek	KB 10
CATEGORY:	Maintenance	
Summary: <ul style="list-style-type: none">Walkway installation running parallel to the aerial crossing of the 48" raw water main at Livingston Creek and connecting to the existing walkway recently installed for the 54" parallel raw water main.		
Justification: <ul style="list-style-type: none">Pipe and appurtenances at aerial crossing are currently inaccessible to operations staff for routine inspection, maintenance, and repairs.		
Consequence of No Action: <ul style="list-style-type: none">Limited access to aerial crossing of 48" main for repairs and routine maintenance.		
Criticality: <div><div></div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2024	
TOTAL ESTIMATED COST	\$250,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2024	\$250,000	

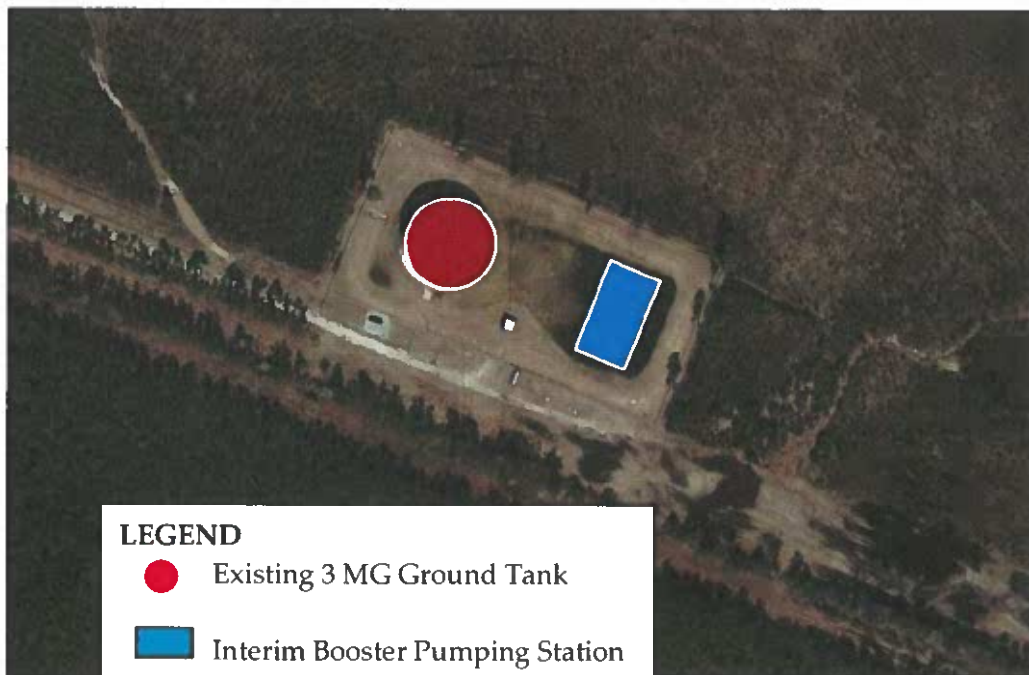


KING'S BLUFF RAW WATER FACILITIES

**Kings Bluff Raw Water Facilities
Capital Improvements
Cost Sharing Projects
FY 2022-2046**

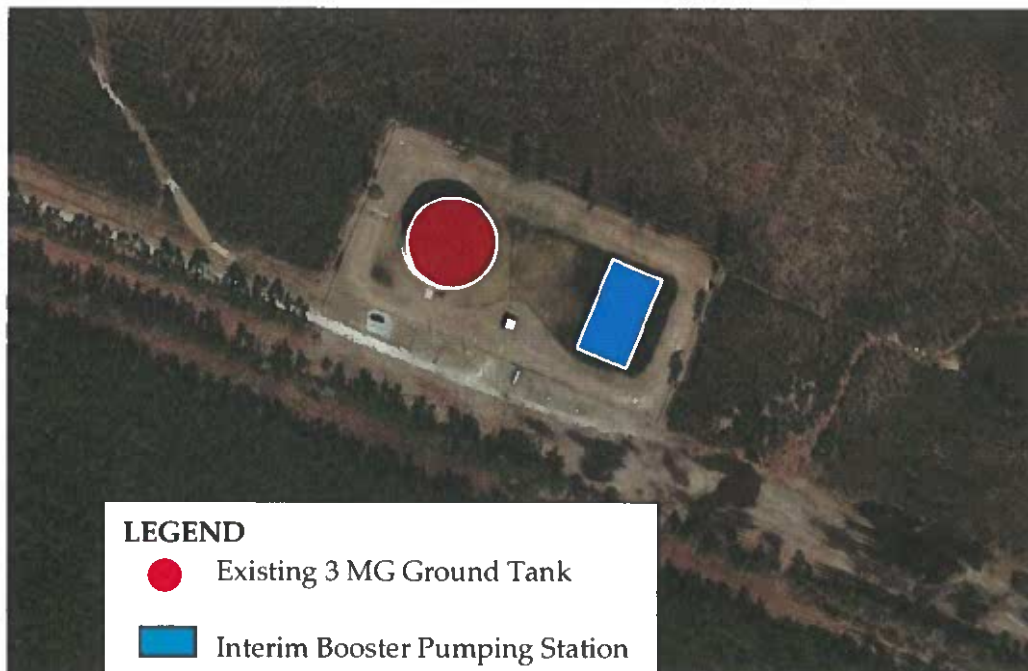
KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Intermediate Booster Pump Station Shelter	KB 11
CATEGORY:	Maintenance/Efficiency	
Summary: <ul style="list-style-type: none">Addition of protective shelter at the Intermediate Booster PS		
Justification: <ul style="list-style-type: none">Required to protect existing pumps, equipment, gear from elementsProvides improved maintenance access during inclement weather		
Consequence of No Action: <ul style="list-style-type: none">Equipment potentially suffers degradation due to exposure to the elements to include freezing conditions, and sun damage.		
Criticality:		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2025	
TOTAL ESTIMATED COST	\$700,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2025	\$700,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Intermediate Booster Pump Station Upgrade	KB 12
CATEGORY:	Capacity	
Summary: <ul style="list-style-type: none">Infrastructure upgrades to the existing booster pump station. Diesel pumps to be replaced with new, larger capacity pumps.		
Justification: <ul style="list-style-type: none">US 421 area demands will exceed current 29 MGD capacity in approximately 2037.Recommend upgrade to 37 MGD capacity.		
Consequence of No Action: <ul style="list-style-type: none">Booster Pump Station will not be able to fully serve the projected demands and system pressure for the US 421 area.		
Criticality: <div><div></div><div>▼</div></div>		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2034	
TOTAL ESTIMATED COST	\$7,000,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2033	\$1,000,000	
2034	\$6,000,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	New 5 th Pump at King's Bluff Raw Water Pump Station	KB 13
CATEGORY:	Capacity	
Summary: <ul style="list-style-type: none">Provide a fifth raw water pump at King's Bluff Pumping Station to meet projected demands. (See #2 on legend in graphic below) Projected demands will exceed station firm capacity by 2062		
Justification: <ul style="list-style-type: none">Decrease load and run times on existing pumps to extend life and improve reliability.		
Consequence of No Action: <ul style="list-style-type: none">The projected demands at the station will exceed the firm capacity and the station will not be able to serve the project customer demand.		
Criticality:		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2046	
TOTAL ESTIMATED COST	\$3,600,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2044	\$800,000	
2045	\$2,000,000	
2046	\$800,000	



KING'S BLUFF RAW WATER FACILITIES

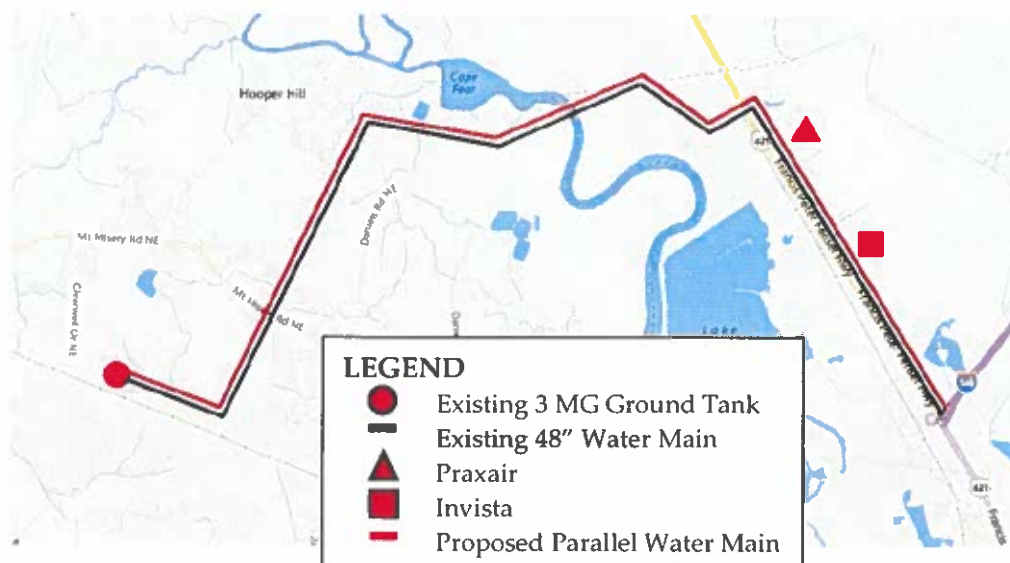
PROJECT TITLE	20 MG Ground Tank	KB 14
CATEGORY:	Capacity/Efficiency	
Summary:		
<ul style="list-style-type: none">Design & construction of a new 20 MG ground tank in close proximity to the existing 3 MG ground tank with sufficient acreage to construct a future 20 MG ground tank.		
Justification:		
<ul style="list-style-type: none">Increase in available system storage.Provide a more consistent supply for safe and efficient operation of the adjacent interim booster pump station.		
Consequence of No Action:		
<ul style="list-style-type: none">Minimal system storage as system demands continue to increaseIncreased cycling of pumps at the intermediate booster pump station.		
Criticality:		
<div><div>▼</div><div><div>1</div><div>2</div><div>3</div></div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2037	
TOTAL ESTIMATED COST	\$ 12,000,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2036	\$3,000,000	
2037	\$9,000,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Parallel Raw Water Main from 3 MG Ground Tank to US 421 Service Area	KB 15
CATEGORY:	Capacity	
Summary: <ul style="list-style-type: none">Design and construction of approximate 10-mile 48-inch raw water main from 3 MG ground tank to US 421 service area. Pipe would parallel the existing 48-inch raw water main in this area.		
Justification: <ul style="list-style-type: none">Provides additional system capacityReduces reliance on intermediate booster pump station.Improves reliability with a parallel main to serve major customers.		
Consequence of No Action: <ul style="list-style-type: none">The system may not have capability to meet long-term customer demands.The existing 48-inch main is a single point of failure from the 3 MGD ground tank to the US 421 service area.		
Criticality: <div><div></div></div>		
<div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	42	
REQUIRED COMPLETION	2025*	
TOTAL ESTIMATED COST	\$60,000,000*	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2023	\$10,000,000	
2024	\$15,000,000	
2025	\$17,500,000	
2026	\$17,500,000	

*Note: Subject to grant funding.



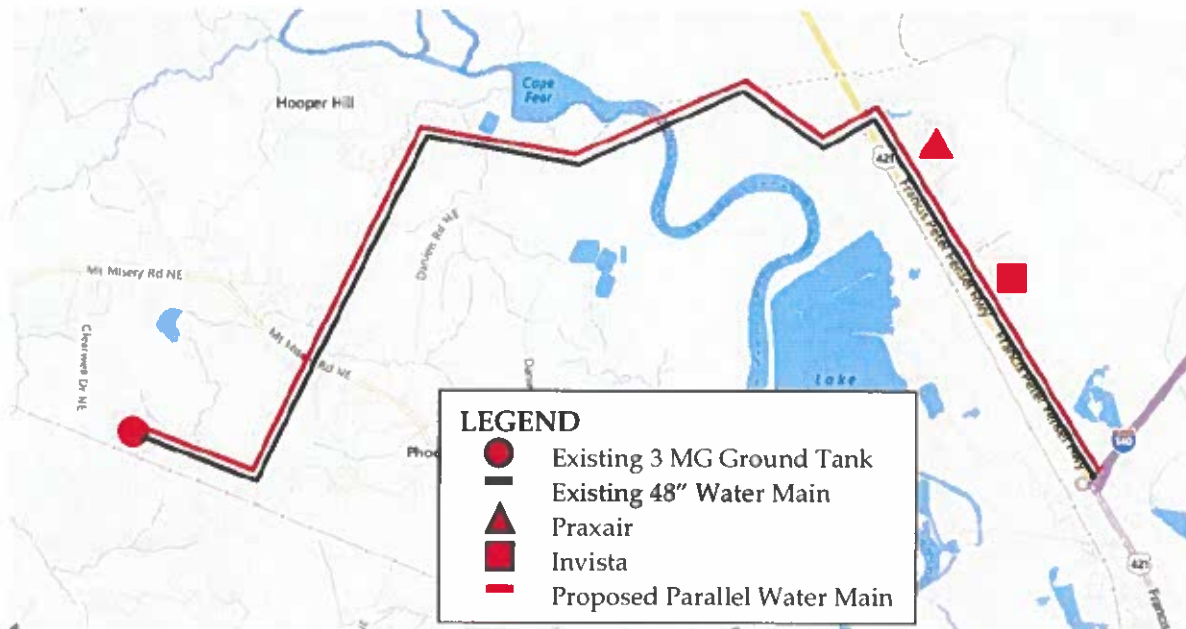
KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	100 MGD Reservoir	KB 16
CATEGORY:	Efficiency	
Summary: <ul style="list-style-type: none">Design & construction of a new 100 MG reservoir. Optimal location and operation of the reservoir to be determined by future engineering study.		
Justification: <ul style="list-style-type: none">Increase in available system storage.Allows for temporary redundancy of supply in the case of an emergency (line break, power outage, etc.).		
Consequence of No Action: <ul style="list-style-type: none">Minimal system storage as system demands continue to increase.Loss of regular supply under emergency conditions.		
Criticality: <div>▼</div> <div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2032	
TOTAL ESTIMATED COST	\$35,000,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2031	\$5,000,000	
2032	\$30,000,000	



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Pig 48" Pipe from 3 MG Ground Tank to CFPWA WTP	KB 17
CATEGORY:	Renewal/Rehabilitation, Efficiency	
Summary: <ul style="list-style-type: none">Pig 48" pipeline from 3 MG ground tank to CFPWA's Water Treatment Plant including installation of pig launcher/retrieval system. Repair and/or replace air release valves and blow-offs.		
Justification: <ul style="list-style-type: none">Recent evaluation indicated build -up of sediment in the 48" line. Pigging will maintain a clean pipeline free of sediment, silt, and debris.Improves efficiency of pumps by reducing frictional characteristics of the pipeline		
Consequence of No Action: <ul style="list-style-type: none">Current loss of capacity and/or clogging due to sediment buildup.Loss of efficiency and higher electrical costs		
Criticality: <div><div></div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2026	
TOTAL ESTIMATED COST	\$2,000,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2033	\$2,000,000	



KING'S BLUFF RAW WATER FACILITIES

Annual Fiscal Year Budget Breakdown – Capital Projects (In Millions of Dollars)

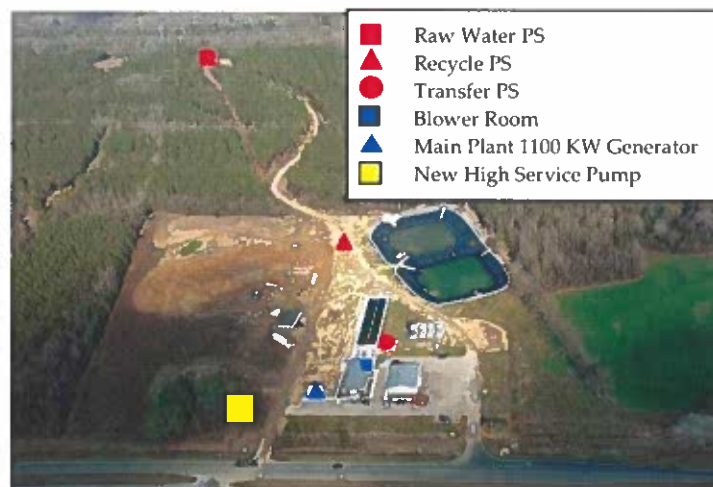
Project No.	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	Totals
Lower Cape Fear Water and Sewer Authority Projects																											
KB 1	New 4th Pump at King's Bluff (KBPS)			\$0.80	\$2.00	\$0.80																					\$3.60
KB 2	Rebuild High Service Pump Motors		\$0.25		\$0.25		\$0.25																	\$0.25			\$1.00
KB 3	New Generators									\$1.00	\$8.20																\$9.20
KB 4	Pig 48" Water Main (KBPS to 3 MG Tank)																			\$1.00							\$1.00
KB 5	Pig Future 54" Water Main																			\$1.00							\$1.00
KB 6	Walkway and Air Backwash Building Replacement			\$0.15	\$1.35																						\$1.50
KB 7	Replace Raw Water Pumps 1, 4, 5																				\$3.60	\$3.60					\$10.80
KB 8	New Surge Tank at KBPS																					\$0.50					\$0.50
KB 9	5 ROW Acquisitions		\$0.10	\$0.10	\$0.10																						\$0.30
KB 10	Walkway to Access 48" RWM at Livingston Creek			\$0.25																							\$0.25
Cost Sharing Projects																											
KB 11	Intermediate Booster Pump Station Shelter			\$0.70																							\$0.70
KB 12	Intermediate Booster Pump Station Upgrade												\$1.00	\$6.00													\$7.00
KB 13	New 5 th Pump at King's Bluff																							\$0.80	\$2.00	\$0.80	\$3.60
KB 14	20 MG Ground Tank															\$3.00	\$9.00										\$12.00
KB 15	48" Parallel Raw Water Main US 421	\$10.0	\$15.0	\$17.5	\$17.5																						\$60.00
KB 16	100 MGD Reservoir										\$5.00	\$30.00															\$35.00
KB 17	Pig 48" Water Main (3 MG Tank to CFPUA)					\$2.00																					\$2.00
Total Fiscal Year Expenditure		\$10.00	\$15.35	\$18.80	\$21.90	\$2.80	\$0.25	\$0.00	\$0.00	\$1.00	\$13.20	\$30.00	\$1.00	\$6.00	\$0.00	\$3.00	\$9.00	\$0.00	\$0.00	\$2.00	\$3.60	\$4.10	\$1.05	\$2.00	\$0.80	\$0.80	\$149.45

BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

**Bladen Bluffs Regional
Surface Water Treatment Facility
Capital Improvements Projects
FY 2022-2046**

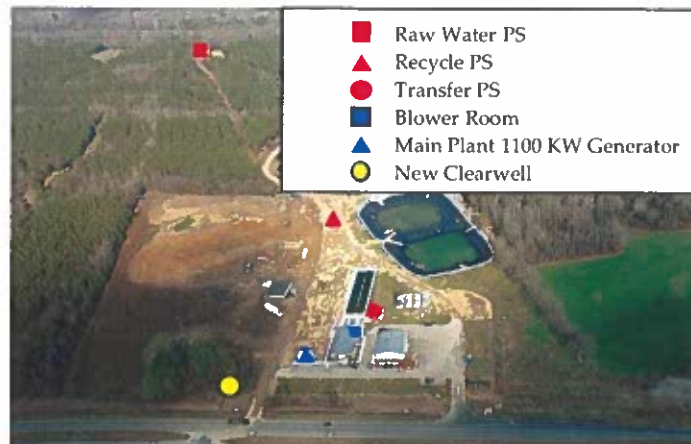
BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	New High Service Pump Station	BB 1
CATEGORY:	Capacity	
Summary: <ul style="list-style-type: none">Construct a new high service pumping station to increase capacity. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>		
Justification: <ul style="list-style-type: none">Required to serve new customers.Construction of new high service pump station would only be required when additional customers are identified to be served by the Bladen Bluffs Regional Surface Water Treatment Facility.		
Consequence of No Action: <ul style="list-style-type: none">The system will not have the required capacity to meet new customer demands.		
Criticality: <div>▼</div> <div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2029	
TOTAL ESTIMATED COST	\$3,500,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2028	\$500,000	
2029	\$3,000,000	



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Construct New 1 MG Capacity Clearwell	BB 2
CATEGORY:	Capacity	
Summary: <ul style="list-style-type: none">Construct clearwell to meet future customer finished water storage capacity. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>		
Justification: <ul style="list-style-type: none">Required to serve new customers.Clearwell would only be required when additional customers are identified to be served by the Bladen Bluffs Regional Surface Water Treatment Facility.		
Consequence of No Action: <ul style="list-style-type: none">The system will not have the required capacity to meet new customer demands.		
Criticality: <div><div></div><div>123</div></div>		
DURATION (MONTHS)	24	
REQUIRED COMPLETION	2029	
TOTAL ESTIMATED COST	\$2,500,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2028	\$500,000	
2029	\$2,000,000	



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Three (3) Pumps at the Raw Water Pump Station	BB 3
CATEGORY:	Renewal/Rehabilitation	
Summary: <ul style="list-style-type: none">Routine replacement of three (3) aging pumps at Raw Water Pumping Station. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>		
Justification: <ul style="list-style-type: none">Pumps will be approximately 20 years old by 2032 and approaching end of useful service life.		
Consequence of No Action: <ul style="list-style-type: none">The likelihood of failure of the pumps increases due to age and wear of the existing pump.		
Criticality: <div><div></div><div>123</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2032	
TOTAL ESTIMATED COST	\$250,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2032	\$250,000	



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Blower in the Blower Building	BB 4			
CATEGORY:	Renewal/Rehabilitation				
Summary: <ul style="list-style-type: none">Routine replacement of aging blower in blower building. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>					
Justification: <ul style="list-style-type: none">Blower will be approximately 25 years old by 2032 and approaching end of useful service life.					
Consequence of No Action: <ul style="list-style-type: none">The likelihood of failure of the blower increases due to age and wear of the existing blower.					
Criticality: <div>▼</div> <table><tr><td>1</td><td>2</td><td>3</td></tr></table>			1	2	3
1	2	3			
DURATION (MONTHS)	12				
REQUIRED COMPLETION	2032				
TOTAL ESTIMATED COST	\$100,000				
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE				
2032	\$100,000				



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Three (3) Pumps at the Recycle Pump Station	BB 5			
CATEGORY:	Renewal/Rehabilitation				
Summary: <ul style="list-style-type: none">Routine replacement of three (3) aging pumps at the Recycle Pumping Station. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>					
Justification: <ul style="list-style-type: none">Pumps will be approximately 20 years old by 2032 and approaching end of useful service life.					
Consequence of No Action: <ul style="list-style-type: none">The likelihood of failure of the pumps increases due to age and wear of the existing pump.					
Criticality: <div>▼</div> <table><tr><td>1</td><td>2</td><td>3</td></tr></table>			1	2	3
1	2	3			
DURATION (MONTHS)	12				
REQUIRED COMPLETION	2032				
TOTAL ESTIMATED COST	\$150,000				
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE				
2032	\$150,000				



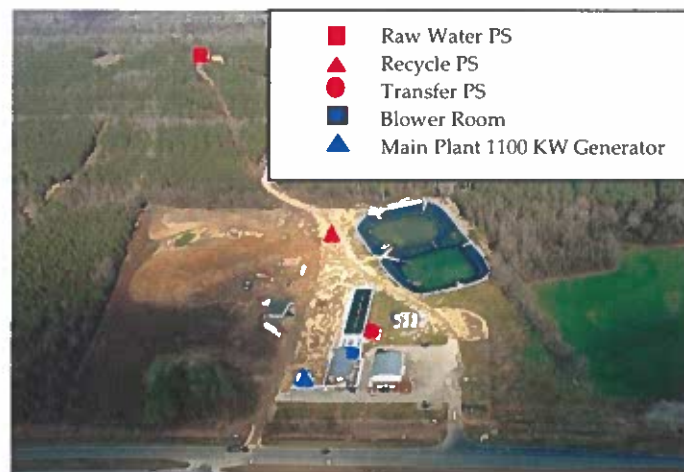
BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Three (3) Pumps at the Transfer Pump Station	BB 6
CATEGORY:	Renewal/Rehabilitation	
Summary: <ul style="list-style-type: none">Routine replacement of three (3) aging pumps at the Transfer Pumping Station. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>		
Justification: <ul style="list-style-type: none">Pumps will be approximately 20 years old by 2032 and approaching end of useful service life.		
Consequence of No Action: <ul style="list-style-type: none">The likelihood of failure of the pumps increases due to age and wear of the existing pump.		
Criticality: <div>▼</div> <div><div>1</div><div>2</div><div>3</div></div>		
DURATION (MONTHS)	12	
REQUIRED COMPLETION	2032	
TOTAL ESTIMATED COST	\$250,000	
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE	
2032	\$250,000	



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Two (2) Generators at the Site	BB 7			
CATEGORY:	Renewal/Rehabilitation				
Summary: <ul style="list-style-type: none">Routine replacement of two (2) aging on-site generators. <p><i>Note: Currently Smithfield Farmland Company (SFC) provides all operation and maintenance of the Bladen Bluffs Regional Surface Water Treatment Facility. The CIP project described on this sheet would only be required if the LCFWSA assumed full operation of the facility from SFC. Until such time all capital improvements and/or maintenance requirements are solely the responsibility of SFC.</i></p>					
Justification: <ul style="list-style-type: none">Facility currently has two (2) generators on-site. Generators will be approximately 25 years old by 2037 and approaching end of service life.					
Consequence of No Action: <ul style="list-style-type: none">The current generators are undersized to accommodate long term demands.The existing generators are anticipated to become cost prohibitive to maintain.					
Criticality: <div>▼</div> <table><tr><td>1</td><td>2</td><td>3</td></tr></table>			1	2	3
1	2	3			
DURATION (MONTHS)	24				
REQUIRED COMPLETION	2037				
TOTAL ESTIMATED COST	\$700,000				
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE				
2036	\$200,000				
2037	\$500,000				



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

Annual Fiscal Year Budget Breakdown (In Millions of Dollars)

Project No.	Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	Totals
BB 1	New High Service Pump Station							\$0.50	\$3.00																		\$3.50
BB 2	Construct New 1 MG Capacity Clearwell							\$0.50	\$2.00																		\$2.50
BB 3	Replace (3) Pumps at Raw Water Pump Station											\$0.25															\$0.20
BB 4	Replace Blower in Blower Building											\$0.10															\$0.10
BB 5	Replace (3) Pumps at the Recycle Pump Station														\$0.15												\$0.10
BB 6	Replace (3) Pumps at the Transfer Pump Station														\$0.25												\$0.25
BB 7	Replace (2) Generators at the Site															\$0.20	\$0.50										\$0.70
Total Fiscal Year Expenditure								\$1.00	\$5.00			\$0.35			\$0.40	\$0.20	\$0.50										\$7.35

APPENDIX A – OPERATIONS BUDGET

Annual Fiscal Year Budget Breakdown – Operations											
Item	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Totals
Surveying		\$ 80,000									\$ 80,000
ROW Maintenance		\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 495,000
ROW Clearing		\$ 225,000	\$ 225,000								\$ 450,000
SCADA Improvements				\$ 125,000							\$ 125,000
Anti-Vortexing Improvements		\$ 50,000	\$ 50,000	\$ 50,000							\$ 150,000
Meter and Valve Upgrades/Replacements								\$ 125,000			\$ 125,000
VFD Replacements	\$ 250,000	\$ 250,000	\$ 250,000								\$ 750,000
Argo ATV	\$ 60,000										\$ 60,000
RR Trans	\$ 75,000	\$ 48,000	\$ 350,000	\$ 350,000							\$ 823,000
Miscellaneous	\$ 15,000										\$ 15,000
Total Fiscal Year Expenditure	\$ 400,000	\$ 708,000	\$ 930,000	\$ 580,000	\$ 5,000	\$ 55,000	\$ 55,000	\$ 180,000	\$ 55,000	\$ 55,000	\$ 3,073,000

Resolution by Governing Body of Applicant for Replacement of the Walkway and Air Backwash Building at Kings Bluff Raw Water Pump Station

WHEREAS, The Federal Clean Water Act Amendments of 1987 and the North Carolina the Water Infrastructure Act of 2005 (NCGS 159G) have authorized the making of loans and grants to aid eligible units of government in financing the cost of construction and studies drinking water system, and

WHEREAS, The Lower Cape Fear Water & Sewer Authority has need for and intends to construct a drinking water system project described as a replacement of the walkway and air backwash building at King's Bluff Raw Water Pump Station, and,

WHEREAS, The Lower Cape Fear Water & Sewer Authority intends to request State loan and/or grant assistance for the project,

NOW THEREFORE BE IT RESOLVED, BY THE BOARD OF COMMISSIONERS OF THE LOWER CAPE FEAR WATER AND SEWER AUTHORITY:

That Lower Cape Fear Water & Sewer Authority, the Applicant, will arrange financing for all remaining costs of the project, if approved for a State loan and/or grant award.

That the Applicant will adopt and place into effect on or before completion of the project a schedule of fees and charges and other available funds which will provide adequate funds for proper operation, maintenance, and administration of the system and the repayment of all principal and interest on the debt.

That the governing body of the Applicant agrees to include in the loan agreement a provision authorizing the State Treasurer, upon failure of the Lower Cape Fear Water & Sewer Authority to make scheduled repayment of the loan, to withhold from the Lower Cape Fear Water & Sewer Authority any State funds that would otherwise be distributed to the local government unit in an amount sufficient to pay all sums then due and payable to the State as a repayment of the loan.

That the Applicant will provide for efficient operation and maintenance of the project on completion of construction thereof.

That Tim Holloman, Executive Director, the Authorized Official, and successors so titled, is hereby authorized to execute and file an application on behalf of the Applicant with the State of North Carolina for a loan and/or grant to aid in the study of or construction of the project described above.

That the Authorized Official, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.

That the Applicant has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants and loans pertaining thereto.

THEREFORE, BE IT FURTHER RESOLVED, that a copy of this resolution be recorded in the permanent minutes of this Board.

Adopted this 14th day of March 2022.

Charlie Rivenbark, Chairman

Harry Knight, Secretary

Resolution by Governing Body of Applicant for the Addition of a Fourth Raw Water Pump at Kings Bluff Raw Water Pump Station

WHEREAS, The Federal Clean Water Act Amendments of 1987 and the North Carolina the Water Infrastructure Act of 2005 (NCGS 159G) have authorized the making of loans and grants to aid eligible units of government in financing the cost of construction and studies drinking water system, and

WHEREAS, The Lower Cape Fear Water & Sewer Authority has need for and intends to construct a drinking water system project described as the addition of a fourth raw water pump at King's Bluff Raw Water Pump Station, and

WHEREAS, The Lower Cape Fear Water & Sewer Authority intends to request State loan and/or grant assistance for the project,

NOW THEREFORE BE IT RESOLVED, BY THE BOARD OF COMMISSIONERS OF THE LOWER CAPE FEAR WATER AND SEWER AUTHORITY:

That Lower Cape Fear Water & Sewer Authority, the Applicant, will arrange financing for all remaining costs of the project, if approved for a State loan and/or grant award.

That the Applicant will adopt and place into effect on or before completion of the project a schedule of fees and charges and other available funds which will provide adequate funds for proper operation, maintenance, and administration of the system and the repayment of all principal and interest on the debt.

That the governing body of the Applicant agrees to include in the loan agreement a provision authorizing the State Treasurer, upon failure of the Lower Cape Fear Water & Sewer Authority to make scheduled repayment of the loan, to withhold from the Lower Cape Fear Water & Sewer Authority any State funds that would otherwise be distributed to the local government unit in an amount sufficient to pay all sums then due and payable to the State as a repayment of the loan.

That the Applicant will provide for efficient operation and maintenance of the project on completion of construction thereof.

That Tim Holloman, Executive Director, the Authorized Official, and successors so titled, is hereby authorized to execute and file an application on behalf of the Applicant with the State of North Carolina for a loan and/or grant to aid in the study of or construction of the project described above.

That the Authorized Official, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.

That the Applicant has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants and loans pertaining thereto.

THEREFORE, BE IT FURTHER RESOLVED, that a copy of this resolution be recorded in the permanent minutes of this Board.

Adopted this 14th day of March 2022.

Charlie Rivenbark, Chairman

Harry Knight, Secretary

Resolution by Governing Body of Applicant for the Addition of a New Standby Generator and a New Generator Building at Kings Bluff Raw Water Pump Station

WHEREAS, The Federal Clean Water Act Amendments of 1987 and the North Carolina the Water Infrastructure Act of 2005 (NCGS 159G) have authorized the making of loans and grants to aid eligible units of government in financing the cost of construction and studies drinking water system, and

WHEREAS, The Lower Cape Fear Water & Sewer Authority has need for and intends to construct a drinking water system project described as the addition of a new standby generator and a new generator building at King's Bluff Raw Water Pump Station, and

WHEREAS, The Lower Cape Fear Water & Sewer Authority intends to request State loan and/or grant assistance for the project,

NOW THEREFORE BE IT RESOLVED, BY THE BOARD OF COMMISSIONERS OF THE LOWER CAPE FEAR WATER AND SEWER AUTHORITY:

That Lower Cape Fear Water & Sewer Authority, the Applicant, will arrange financing for all remaining costs of the project, if approved for a State loan and/or grant award.

That the Applicant will adopt and place into effect on or before completion of the project a schedule of fees and charges and other available funds which will provide adequate funds for proper operation, maintenance, and administration of the system and the repayment of all principal and interest on the debt.

That the governing body of the Applicant agrees to include in the loan agreement a provision authorizing the State Treasurer, upon failure of the Lower Cape Fear Water & Sewer Authority to make scheduled repayment of the loan, to withhold from the Lower Cape Fear Water & Sewer Authority any State funds that would otherwise be distributed to the local government unit in an amount sufficient to pay all sums then due and payable to the State as a repayment of the loan.

That the Applicant will provide for efficient operation and maintenance of the project on completion of construction thereof.

That Tim Holloman, Executive Director, the Authorized Official, and successors so titled, is hereby authorized to execute and file an application on behalf of the Applicant with the State of North Carolina for a loan and/or grant to aid in the study of or construction of the project described above.

That the Authorized Official, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.

That the Applicant has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants and loans pertaining thereto.

THEREFORE, BE IT FURTHER RESOLVED, that a copy of this resolution be recorded in the permanent minutes of this Board.

Adopted this 14th day of March 2022.

Charlie Rivenbark, Chairman

Harry Knight, Secretary

NEW BUSINESS (OB-1)

Lower Cape Fear Water & Sewer Authority

AGENDA ITEM

To: CHAIRMAN RIVENBARK AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: March 14, 2022

Re: Resolution Requesting funding of a 10 Mile Parallel Line for the Lower Cape Fear Water and Sewer Authority

Reviewed and approved as to form: MATTHEW A. NICHOLS, AUTHORITY ATTORNEY

Background: The Lower Cape Fear Water & Sewer Authority (Authority) is evaluating the feasibility of paralleling the 10-mile, 48-inch raw water main that supplies Pender County, CFPWA, and several industries on US 421. The route of the existing pipeline begins at the 3-million-gallon ground reservoir located near the Brunswick County Northwest Water Plant and traverses north and east through Brunswick, Pender, and New Hanover Counties to US Highway 421. The main then runs southward along US 421 and terminates at the CFPWA meter vault adjacent to the Stepan facility (formerly Invista).

Action Requested: Motion to approve/disapprove

**Resolution Requesting funding of a 10 Mile Parallel Line
For the Lower Cape Fear Water and Sewer Authority**

WHEREAS, the Lower Cape Fear Water and Sewer Authority (Authority) serves Brunswick, Bladen, Pender, New Hanover, Columbus Counties, and the City of Wilmington with a Board of Directors representing those local governments; and

WHEREAS, the Authority, as the largest regional water system in Eastern North Carolina, has the primary role of providing raw water from the Cape Fear to supply treatment facilities that serve 550,000 customers in three separate counties: and,

WHEREAS, the Board of Directors for the Authority wish to ensure reliable availability and redundancy; and

WHEREAS, this past November, the Authority experienced a major leak on a segment of line without redundancy; and

WHEREAS, should this same type of leak have occurred during the peak seasonal months, the potable water needs of the Authority's wholesale customers, to include the State Port, ten regional medical facilities, the Sunny Point Military Terminal, the rail terminal in Leland and the Port terminal in Boiling Springs Lakes, and numerous other essential operating businesses and facilities would be at risk, forcing those users to take extreme conservation measures during a worst-case crisis scenario; and

WHEREAS, the current estimated cost for a 48" parallel line to resolve this risk is projected to be \$54 million; and

WHEREAS, should the Authority bear the costs for this project alone, the practical impact would cause our utility to double the rates and charges to our customers, from .33 per 1,000 gallons to .66 per 1,000 gallons; and

WHEREAS, such funding burden would endanger or preclude funding for routine maintenance or other critical projects for the foreseeable future; and

WHEREAS, the Authority's Board of Directors calls upon the legislators to assist in funding this critical regional infrastructure for eastern North Carolina.

NOW, THEREFORE, BE IT RESOLVED, by the Chairman and the Board of Directors for the Lower Cape Fear Water & Sewer Authority request members of the North Carolina Legislature to allocate funding for a ten-mile parallel line for the purposes of redundancy, reliability, and emergency management.

THEREFORE, BE IT FURTHER RESOLVED, that a copy of this resolution be recorded in the permanent minutes of this Board.

Adopted this 14th day of March 2022.

Charlie Rivenbark, Chairman

Harry Knight, Secretary

AGENDA ITEM

To: CHAIRMAN LEONARD AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: March 14, 2022

Re: Office lighting fixtures replacement

Reviewed and approved as to form: MATTHEW A. NICHOLS, AUTHORITY ATTORNEY

Background: We have replaced the four foyer lights with LED lighting that is more energy-efficient and provide better lighting.

The cost to replace the remaining can lights and tube lighting is \$6,000.00. There are available funds in this year's budget to cover this work.

Action Requested: Motion to approve/disapprove

Attachment: Quote



North Brunswick Electrical Contractors, Inc.

1618 Leland School Road
 Post Office Box 119
 Leland, North Carolina 28451
 Phone: (910) 371-3369 • Fax: (910) 371-3768
 nbecinc@bellsouth.net

January 20, 2022

Tim Holloman
 Executive Director
 Lower Cape Fear Water & Sewer Authority
 1107 New Pointe Blvd Ste 17
 Leland, NC 28451

We are presenting this quote to remove and replace thirty-eight recessed fluorescent downlight fixtures, twenty-two four-foot fluorescent lamps, and one fluorescent U-tube lamp with high efficiency LED fixtures and lamps in your Leland office areas. Also included in this proposal is the disposal of EPA-regulated mercury-filled fluorescent lamps.

QUOTE

\$6,000.00

If you have any questions regarding this proposal, please do not hesitate to call our office at your convenience.

Respectfully,

Burton W. Vezina II
 President
 North Brunswick Electrical Contractors, Inc.

Confidential document! Only intended for the recipients indicated above. Receipt of this quotation/estimate implies the acceptance of a strict confidentiality agreement between North Brunswick Electrical Contractors, Inc. and the intended recipients. Transmission or dissemination of the contents of this document, by any means is strictly and expressly forbidden, voids this quote/estimate, and is subject to litigation as per applicable North Carolina statutes.

Payment terms: Unless otherwise indicated payment for services rendered shall be at the time the customer accepts/acknowledges that the work is completed.

ELECTRICAL Construction, Maintenance and Troubleshooting • **GENERATOR** Sales, Service & Installation
 Fire Alarm, Security, CCTV, Access Control, Audio and Visual Systems
 Proudly serving Southeastern North Carolina since 1975

AGENDA ITEM

To: CHAIRMAN RIVENBARK AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: February 14, 2022

Re: Resolution of Lower Cape Fear Water and Sewer Authority Exempting Lower Cape Fear Water and Sewer Authority from the Provisions of N.C.G.S. §143-64.31 and Proposal for Professional Consulting Engineering Services NC Division of Water Infrastructure State Revolving Fund Planning Study Grant Application Preparation for Rate Study.

Reviewed and approved as to form: MATTHEW A. NICHOLS, AUTHORITY ATTORNEY

Background: A) Resolution of Lower Cape Fear Water and Sewer Authority Exempting Lower Cape Fear Water and Sewer Authority from the Provisions of N.C.G.S. §143-64.31

B) McKim & Creed will assist the Authority with the funding application process through the NCDEQ Division of Water Infrastructure (DWI) Clean Water State Revolving Fund (CWSRF) under the Pre-Construction Planning Grant category.

Action Requested: Motion to Approve or Disapprove

**A RESOLUTION OF
LOWER CAPE FEAR WATER & SEWER AUTHORITY
EXEMPTING LOWER CAPE FEAR WATER & SEWER AUTHORITY
FROM THE PROVISIONS OF N.C.G.S. §143-64.31**

Whereas, N.C.G.S. §143-64.31 requires Lower Cape Fear Water & Sewer Authority (the "Authority") to conduct an initial selection of firms to provide engineering services without regard to fee; and

Whereas, N.C.G.S. §143-64.32 permits the Authority to exempt projects from the provisions of N.C.G.S. §143-64.31 in the case of proposed projects where the estimated professional fee is less than \$50,000.00; and

Whereas, the Authority proposes to enter into a contract with McKim & Creed, Inc. for engineering services as described hereinafter; and

Whereas, the estimated professional fee for the work to be done by McKim & Creed, Inc. in connection with such project is less than \$50,000.00; and

Whereas, the Authority by its execution of this resolution intends to waive the requirements of N.C.G.S. §143-64.31.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Lower Cape Fear Water & Sewer Authority as follows:

1. McKim & Creed appreciates the opportunity to provide this proposal for professional consulting services for preparation of a funding application via the NC Division of Water Infrastructure State Revolving Fund. McKim & Creed will assist the Authority with the funding application process through the NCDEQ Division of Water Infrastructure (DWI) Clean Water State Revolving Fund (CWSRF) under the Pre-Construction Planning Grant category.
2. This Resolution shall be effective upon passage.

This Resolution adopted this 14th day of March 2022.

Charlie Rivenbark, Chairman

ATTEST:

Harry Knight, Secretary

Resolution Authorizing the Chairman to Execute Proposal for Professional Consulting Engineering Services for the NC Division of Water Infrastructure State Revolving Fund Planning Study Grant Application Preparation for Rate Study

Whereas, Lower Cape Fear Water & Sewer Authority (the Authority) will have McKim & Creed appreciates the opportunity to provide this proposal for professional consulting services for preparation of a funding application via the NC Division of Water Infrastructure State Revolving Fund; and

Whereas, McKim & Creed will assist the Authority with the funding application process through the NCDEQ Division of Water Infrastructure (DWI) Clean Water State Revolving Fund (CWSRF) under the Pre-Construction Planning Grant category. Primary tasks will include the following: prepare the Division of Water Infrastructure application, compile resolutions and certifications, prepare priority rating system form with narrative, compile rate sheets, prepare estimate of rate study fees, and prepare supporting exhibits and documentations; and

Whereas, upon completion of the application package and approval of the Authority, McKim & Creed will submit the application to the Division of Water Infrastructure. Comments received by the Division of Water Infrastructure will be addressed and responses provided; and

Whereas, the detailed proposal will have a fixed fee of \$5,000; and

Whereas, based on McKim & Creeds demonstrated competence and qualification for this type of professional services at a fair and reasonable price, the Authority proposes to enter a contract with McKim & Creed, Inc. for engineering services as described hereinafter.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Lower Cape Fear Water & Sewer Authority as follows:

1. The project consisting of consulting engineering services by McKim & Creed for professional consulting engineering services for the NC Division of Water Infrastructure State Revolving Fund Planning Study Grant Application preparation for rate study. For the lump fee of \$5,000.00.
2. This Resolution shall be effective upon passage.

This Resolution adopted this 14th day of March 2022.

Charlie Rivenbark, Chairman

ATTEST:

Harry Knight, Secretary



ENGINEERS

SURVEYORS

PLANNERS

March 7, 2022

220796

Mr. Tim Holloman, Executive Director
 Lower Cape Fear Water & Sewer Authority
 1107 New Pointe Blvd Suite 17
 Leland, NC 28451

**Re: Proposal for Professional Consulting Engineering Services
 NC Division of Water Infrastructure State Revolving Fund
 Planning Study Grant Application Preparation for Rate Study**

Dear Mr. Holloman:

McKim & Creed appreciates the opportunity to provide this proposal for professional consulting services for preparation of a funding application via the NC Division of Water Infrastructure State Revolving Fund. Our detailed scope of services is provided as follows:

I. Scope of Services

McKim & Creed will assist the Authority with the funding application process through the NCDEQ Division of Water Infrastructure (DWI) Clean Water State Revolving Fund (CWSRF) under the *Pre-Construction Planning Grant* category. Primary tasks will include the following:

- Prepare the Division of Water Infrastructure application
- Compile resolutions and certifications
- Prepare Priority Rating System Form with narrative
- Compile rate sheets
- Prepare Estimate of Rate Study Fees
- Prepare supporting exhibits & documentation

Upon completion of the application package and approval of the Authority, McKim & Creed will submit the application to the Division of Water Infrastructure. Comments received by the Division of Waster Infrastructure will be addressed and responses provided.

243 North Front Street

Wilmington, NC 28401

910.343.1048

Fax 910.251.8282

www.mckimcreed.com

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Mr. Tim Holloman, Executive Director
Lower Cape Fear Water and Sewer Authority
March 7, 2022
Page 2

II. Fee Compensation

McKim & Creed will complete the work detailed in this proposal for the fixed fee of \$5,000.

Miscellaneous Conditions

- 1.5% per month on overdue invoices.
- Either party may terminate with a 30-day notice.

III. Schedule

The Division of Water Infrastructure funding deadline for the Spring of 2022 requires applications to be submitted on or before May 2, 2022. McKim & Creed will work directly with the Authority to prepare the application for submittal by this date.

IV. Additional Services

The Professional Services stated herein above do not include the costs for services identified below. However, these services can be provided if requested for a negotiated fee commensurate with the identified scope of services.

- Preliminary Engineering Reports
- Environmental Assessments
- Design Services
- Permitting Services
- Bid & Award Phase Services
- Survey or Subsurface Utility Engineering Services
- Construction Administration and Construction Observation Services
- Condition assessment of facilities
- Permit or application fees
- Court appearances for expert witness.
- Design of demolition or abandonment of existing facilities
- Environmental Impact Statements, or surveys for endangered species.
- Court appearances for litigation, or preparation for the same

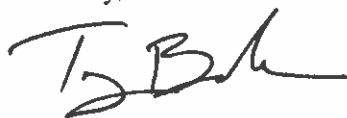
Mr. Tim Holloman, Executive Director
 Lower Cape Fear Water and Sewer Authority
 March 7, 2022
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ACCEPTANCE AND AUTHORIZATION

If this proposal is acceptable, please sign below as indicated and return one executed copy to our office. Upon receipt, McKim & Creed will consider this as the authorization to proceed.

We appreciate the opportunity to provide these services and look forward to our continuing work with the Authority. If you have any questions, please do not hesitate to contact me.

Sincerely,



Tony Boahn, PE

Enclosure: McKim & Creed, Inc. Engineering Division General Conditions
 (01/2011-01)

ACCEPTED BY: LOWER CAPE FEAR WATER & SEWER AUTHORITY

NAME: Charlie Rivenbark

SIGNATURE: _____

TITLE: Chairman, Board of Directors

DATE: _____

E-Verify Requirement. As a condition of payment for services rendered under this agreement, Engineer shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (requirement that employers use E-Verify). Further, if Engineer provides the services to the Client utilizing a subcontractor, Engineer shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes as well. Engineer shall verify by affidavit compliance with the terms of this section upon request of Client.

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act, this the ____ day of _____, 2022

 Finance Officer, Lower Cape Fear Water and Sewer Authority

McKim & Creed, Inc.
Engineering Division
General Conditions
(01/2011-1)

Billing and Payment. Invoices will be submitted by McKim & Creed, Inc. (the "Engineer") to the Client monthly for services performed and expenses incurred pursuant to this Agreement. Payment of each such invoice will be due upon receipt and considered past due if not paid within thirty (30) days of the date of the invoice. Any retainers shall be credited on the final invoice.

a) Interest. A service charge will be added to delinquent accounts at 18 percent per annum (1.5 percent per month).

b) Suspension of Services. If the Client fails to make any payment due the Engineer for services and expenses within thirty (30) days of the invoice date on the project(s) covered by this agreement or any other project(s) being performed by Engineer for Client, the Engineer may suspend services under this Agreement until it has been paid in full for all past due amounts owed by Client for services and expenses. The Engineer shall have no liability whatsoever to the Client for any costs or damages occurring as a result of such suspension caused by any such breach of this Agreement by Client.

c) Collection Costs. In the event legal action is necessary to enforce the payment provisions of this Agreement, the Engineer shall be entitled to collect from the Client any judgment or settlement sums due, reasonable attorneys' fees, court costs.

d) Termination Of Services. The failure of the Client to make payment to the Engineer in accordance with the payment terms set forth herein shall constitute a material breach of this Agreement and shall entitle the Engineer, at its option, to terminate the Agreement. Any material breach of this Agreement by the Client shall, at the Engineer's option and in its sole discretion, constitute a breach of and default under any and/or all other agreements between the Client and Engineer.

Confidentiality. The Engineer agrees to keep confidential and not to disclose to any person or entity, other than the Engineer's employees, sub-consultants and the general contractor and subcontractors, if appropriate, any data and information not previously known to and generated by the Engineer or furnished to the Engineer and marked CONFIDENTIAL by the Client. These provisions shall not apply to information in whatever form that comes into the public domain, nor shall it restrict the Engineer from giving notices required by law or complying with an order to provide information or data when such order is issued by a court, administrative agency or other authority with proper jurisdiction, or if it is reasonably necessary for the Engineer to defend itself from any suit or claim.

~~The Client agrees that the technical methods, techniques and pricing information contained in any proposal submitted by the Engineer pertaining to this project or in this Agreement or any addendum thereto, are to be considered confidential and proprietary, and shall not be released or otherwise made available to any third party without the express written consent of the Engineer.~~

Consequential Damages. Notwithstanding any other provision of the Agreement, neither party shall be liable to the other for any consequential damages incurred due to the fault of the other party, regardless of the nature of the fault or whether it was committed by the Client or the Engineer, their employees, agents, sub-consultants or subcontractors. Consequential damages include, but are not limited to, loss of use and lost profit.

Non-Contingency. The Client acknowledges and agrees that the payment for services rendered and expenses incurred by the Engineer pursuant to this Agreement is not subject to any contingency unless the same is expressly set forth in this Agreement. Payments to the Engineer shall not be withheld, postponed or made contingent on the financing, construction, completion or success of the project or upon receipt by the Client of offsetting reimbursement or credit from other parties causing Additional Services or expenses. No withholdings, deductions or offsets shall be made from the Engineer's compensation for any reason.

Opinions of Cost.

(a) Since the Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over methods of determining prices, or over competitive bidding or market conditions, any and all opinions as to costs rendered hereunder, including but not limited to opinions as to the costs of construction and materials, are estimates only and shall be made on the basis of its experience and qualifications and represent its best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but the Engineer cannot and does not guarantee that proposals, bids or actual costs will not vary from opinions of probable cost prepared by it and the Engineer shall have no liability whatsoever if the actual cost differs from the Engineer's estimate. If at any time the Client wishes greater assurance as to the amount of any cost, Client shall employ an independent cost estimator to make such determination. Engineering services required to bring costs within any limitation established by the Client will be paid for as additional services hereunder by the Client.

Termination. The obligation to provide further services under this Agreement may be terminated by either party upon seven (7) days' written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In the event of any termination, the Engineer shall provide a final statement of charges due and will be paid for all services rendered to the date of termination, all expenses subject to reimbursement hereunder, and other reasonable expenses incurred by the Engineer as a result of such termination. In the event the Engineer's compensation under this Agreement is a fixed fee, upon such termination the amount payable to the Engineer for services rendered will be determined using a proportional amount of the total fee based on a ratio of the amount of the work done, as reasonably determined by the Engineer, to the total amount of work which was to have been performed, less prior partial payments, if any, which have been made.

Reuse of Documents. All documents, including but not limited to drawings and specifications, prepared by the Engineer pursuant to this Agreement are related exclusively to the services described herein. They are not intended or represented to be suitable for reuse by the Client or others on extensions of this project or on any other project. Any reuse without written verification or adaptation by the Engineer for specific purposes intended will be at the Client's sole risk and without liability or legal exposure to the Engineer. The Client releases the Engineer harmless from all claims that the Client may have against the Engineer and arising out of any unauthorized reuse.

McKIM & Creed, Inc.
Engineering Division
General Conditions
(01/2011-1)

Limitation of Liability. In performing its professional services hereunder, the Engineer will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of its profession practicing in the same or similar locality. No other warranty, express or implied, is made or intended by the Engineer's undertaking herein or its performance of services hereunder. THE CLIENT UNDERSTANDS AND AGREES THAT THE ENGINEER HAS NOT MADE AND IS NOT MAKING ANY PROMISE, WARRANTY OR REPRESENTATION EXCEPT THE WARRANTIES EXPRESSLY MADE HEREIN, AND THE ENGINEER EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER IMPLIED WARRANTIES. Under no circumstances shall the Engineer be liable for extra costs or other consequences due to changed conditions or for costs related to the failure of the contractor or material men to install work in accordance with the plans and specifications. The Engineer shall not be liable for ~~errors in judgment or~~ for any loss or damage, which occurs for any reason beyond the control of the Engineer. ~~No action may be instituted hereunder more than one year after the cause of action accrued or should have been discovered by reasonable diligence.~~ The provisions of this paragraph shall survive the termination of this Agreement.

Controlling Law. This Agreement is to be governed by the law of the State of North Carolina. ~~The parties agree that any suit or action related to this Agreement shall be instituted and prosecuted in the courts of the County of Wake, State of North Carolina, and each party waives any right or defense relating to such jurisdiction or venue.~~

Binding Effect. This Agreement shall bind, and the benefits thereof shall inure to the respective parties hereto, their legal representatives, executors, administrators, successors and permitted assigns.

Merger; Amendment. This Agreement constitutes the entire agreement between the Engineer and the Client with respect to its subject matter, and all negotiations and oral understandings between the parties are merged herein. This Agreement can be supplemented and/or amended only by a written document executed by both the Engineer and the Client.

Ownership Of Instruments Of Service. All reports, plans, specifications, field data, notes and other documents, including all documents on electronic media, prepared by the Engineer as instruments of service shall become the property of the Owner. The Owner shall retain all common law, statutory and other reserved rights, including the copyright thereto. If the Owner uses any reports, plans, specification, field data, notes or other documents ("documents") for any project other than the specific project for which the documents were intended, then Owner waives any claims for damages related to these other projects.

Photographs. Photographs of any completed project embodying the services of the Engineer provided hereunder may be made by the Engineer and shall be considered as its property, and may be used by it for publication.

Assignment. Neither party to this Agreement shall transfer, sublet or assign any rights under or interest in this Agreement, including but not limited to fees that are due or fees that may be due, without the prior written consent of the other party.

Archiving of Project Documentation. Engineer shall maintain copies of printed project documentation for a period of three years from substantial completion of Engineer's services. Engineer shall maintain copies of all electronic media related to the project for a period of one year from substantial completion of Engineer's services. Requests for reproduction of project documentation after these periods have expired will be considered additional services and will be invoiced at the Engineer's prevailing hourly rates at the time of the request, plus expenses.

Betterment. If, due to the Engineer's error, any required item or component of the project is omitted from the Engineer's construction documents, the Engineer shall not be responsible for paying the cost to add such item or component to the extent that such item or component would have been otherwise necessary to the project or otherwise adds value or betterment to the project. In no event will the Engineer be responsible for any cost or expense that provides betterment, upgrade or enhancement of the project.

Electronic Files. Because data stored on electronic media can deteriorate undetected or be modified without the Engineer's knowledge, the Client agrees that it will accept responsibility for the completeness, correctness, or readability of any electronic media delivered to the Client after an acceptance period of 30 days after delivery of the electronic files, and that upon the expiration of this acceptance period, Client will release, indemnify and save harmless the Engineer from any and all claims, losses, costs, damages, awards or judgments arising from use of the electronic media files or output generated from them. The Engineer agrees that it is responsible only for the printed and sealed drawings and documents, and if there is a conflict between these printed documents and the electronic media, the sealed documents will govern. Engineer makes no warranties, express or implied, under this agreement or otherwise, in connection with the Engineer's delivery of electronic files.

Certifications, Guarantees and Warranties. The Engineer shall not be required to sign any documents, no matter by whom they may be requested, that would result in the Engineer's having to certify, guarantee or warrant the existence of conditions which the Engineer cannot ascertain. The Client also agrees that it has no right to make the resolution of any dispute with the Engineer or the payment of any amounts due to the Engineer in any way contingent upon the Engineer's signing any such certification.

Corporate Protection. It is intended by the parties to this Agreement that the Engineer's services in connection with the project shall not subject the Engineer's individual employees, officers or directors to any personal legal exposure for the risks associated with this project. Therefore, and notwithstanding anything to the contrary contained herein, the Client agrees that as the Client's sole and exclusive remedy, any claim, demand or suit shall be directed and/or asserted only against the Engineer, a North Carolina corporation, and not against any of the Engineer's employees, shareholders, officers or directors.

Job-Site Safety. Neither the professional activities of the Engineer, nor the presence of the Engineer or its employees and sub-consultants at a construction site, shall relieve the General Contractor and any other entity of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the Work of construction in accordance with the contract documents and any health or safety precautions required by any regulatory

McKIM & Creed, Inc.
Engineering Division
General Conditions
(01/2011-1)

agencies. The Engineer and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions. The Client agrees that the General Contractor is solely responsible for job-site safety, and warrants that this intent shall be made evident in the Client's agreement with the General Contractor. ~~The Client also agrees that the Client, the Engineer and the Engineer's consultants shall be indemnified and shall be made additional insured under the General Contractor's general liability insurance policy.~~ The Client, upon written request of the Engineer, agrees to use its best efforts to add the Engineer as an additional insured on the contractor's general liability and auto liability policies.

Scope of Services. Services not set forth as Basic Services or Additional Services and listed in this Agreement are excluded from the scope of the Engineer's services and the Engineer assumes no responsibility to perform such services.

Severability And Survival. Any provision of this Agreement later held to be unenforceable for any reason shall be deemed void, and all remaining provisions shall continue in full force and effect. All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between the Client and the Engineer shall survive the completion of the services hereunder and the termination of this Agreement.

Shop Drawing Review. If included in the scope of services to be provided, the Engineer shall review and approve Contractor submittals, such as shop drawings, product data, samples and other data, as required by the Engineer, but only for the limited purpose of checking for conformance with the design concept and the information expressed in the contract documents. This review shall not include review of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. The Engineer's review shall be conducted with reasonable promptness while allowing sufficient time in the Engineer's judgment to permit adequate review. Review of a specific item shall not indicate that the Engineer has reviewed the entire assembly of which the item is a component. The Engineer shall not be responsible for any deviations from the contract documents not brought to the attention of the Engineer in writing by the Contractor and approved by the Engineer. The Engineer shall not be required to review partial submissions or those for which submissions of correlated items have not been received.

Specification Of Materials. The Client understands and agrees that products or building materials, which are permissible under current building codes or ordinances may, at some future date, be banned or limited in use in the construction industry because of presently unknown hazardous characteristics. The Client agrees that if the Client directs the Engineer to specify any product or material, after the Engineer has informed the Client that such product or material may not be suitable or may embody characteristics that are suspected of causing or may cause the product or material to be considered a hazardous substance in the future, the Client waives all claims as a result thereof against the Engineer. ~~The Client further agrees that if any product or material specified for this project by the Engineer shall, at any future date be suspected or discovered to be a health or safety hazard, the Client hereby releases the Engineer from any and all~~

~~liabilities and waives all claims against the Engineer relating thereto.~~

Standard Of Care. Services provided by the Engineer under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances in the same geographic area.

Suspension Of Services. If the project is suspended for more than thirty (30) calendar days in the aggregate, the Engineer shall be compensated for services performed and charges incurred prior to such suspension and, upon resumption of services, the Engineer shall be entitled to an equitable adjustment in fees to accommodate the resulting demobilization and re-mobilization costs. In addition, there shall be an equitable adjustment in the project schedule based on the delay caused by the suspension. If the project is suspended for more than ninety (90) calendar days in the aggregate, the Engineer may, at its option, terminate this Agreement upon giving notice in writing to the Client.

Unauthorized Changes To Documents. In the event the Client consents to, allows, authorizes or approves of changes to any plans, specifications, construction documents or electronic media, and these changes are not approved in writing by the Engineer, the Client recognizes that such changes and the results thereof are not the responsibility of the Engineer. Therefore, the Client releases the Engineer from any liability arising from the construction, use or result of such changes. ~~In addition, the Client agrees, to the fullest extent permitted by law, to indemnify and hold the Engineer harmless from any damage, liability or cost (including reasonable attorneys' fees and costs of defense) arising from such changes.~~

Compensation for Additional Services. The undertaking of the Engineer to perform professional services under this Agreement extends only to those services specifically described herein. If upon the request of the Client, the Engineer agrees to perform additional services hereunder, the Client and the Engineer shall negotiate and agree upon an additional fee to be paid to the Engineer for completion of the agreed upon Additional Services. The Engineer will be under no obligation to begin or complete requested Additional Services until the additional fee has been negotiated and agreed upon in writing by the Client and the Engineer.

Hourly Billing Rates. All services to be billed on an hourly basis under this agreement will be billed using the Engineer's prevailing billing rate schedule at the time services are provided. If a specific rate schedule is to be used for this Agreement, it shall expire no later than one year from the date of this Agreement and will be replaced with the prevailing rate schedule in effect at that time.

Priority Over Form Agreements. The parties agree that the provisions of this Agreement shall control and govern over any Work Orders, Purchase Orders or other documents, which the Client may issue to Engineer in regard to the project(s) which is (are) the subject of this Agreement. The Client may issue such documents to Engineer for its convenience for accounting or other purposes, but any such Orders will not alter the terms of this Agreement, regardless of any contrary language appearing therein.

McKim & Creed, Inc.
Engineering Division
General Conditions
(01/2011-1)

Paragraph Headings. The paragraph headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

Third Parties. Nothing in this Agreement shall be construed as giving any person, firm, corporation or other entity other than the parties to this Agreement and their respective successors and permitted assigns, any right, remedy or claim under or in respect of this Agreement or any of its provisions.

Default. The Client shall be in default under this Agreement if (i) it fails to pay in full any invoice from the Engineer on the due date or fails to make any other payment due to the Engineer under this Agreement, (ii) it fails to observe or perform any other term, condition or covenant under this Agreement, (iii) it breaches any warranty or representation made under this Agreement, (iv) it dissolves, terminates or liquidates its business, or its business fails or its legal existence is terminated or suspended, (v) any voluntary or involuntary bankruptcy, reorganization, insolvency, receivership, or other similar proceeding is commenced by or against the Client, or (vi) it becomes insolvent, makes an assignment for the benefit of creditors, or conveys substantially all of its assets.

Design Without Construction Phase Services. If the services to be provided by Engineer hereunder do not include construction observation and/or construction administration services, or if such services are included in Engineers contracted services and Client later decides to perform these services itself or decides to retain other consultants or individuals to perform these services, Engineer assumes no responsibility for interpretations of the Engineer's services or for any construction observation, construction administration and/or supervision performed by Client or other parties and Client waives any and all claims against Engineer for any losses, claims, costs or damages of any kind whatsoever that may be in any way connected thereto.

~~In addition Client agrees, to the fullest extent permitted by law, to indemnify and hold Engineer harmless from any loss, claim, damage or cost, including reasonable attorneys' fees and costs of defense, arising or resulting from the performance of construction observation, construction administration and/or supervision by Client, its employees, agents or consultants, and including any and all claims arising from the modification or adjustment of, or any clarifications or interpretations of, the Engineer's Work by others.~~

~~Unless, in the Engineer's sole opinion, appropriate levels of construction observation and construction administration services are contracted for and performed by Engineer, Engineer will not be responsible to provide any engineering or other certifications related to the construction or installation of any improvements.~~

Reliance on Data Provided by Others. Engineer shall be entitled to reasonably rely on the accuracy of information provided to it by Client or any of Client's other consultants or sub-consultants. Engineer shall not be responsible to extensively review the information provided to insure the accuracy thereof. Client agrees to not hold Engineer responsible for errors or omissions in Engineer's work that are directly attributable to errors or incorrect data provided to Engineer by Client or Client's other consultants. Client further acknowledges that any redesign or corrective efforts required by Engineer resulting from incorrect information provided by Client or Client's other consultants will be paid for by the Client as additional services.

Credit and Financial Obligations. Prior to commencement of the work, Engineer may require that Client provide reasonable credit information and other documentation to confirm that the Client has made financial arrangements to fulfill the Client's payment obligations under this Agreement. Engineer may also require such information at any time during the performance of Engineer's services should the Client fail to make payments per this Agreement, a change in the scope materially changes the contract sum, or Engineer identifies in writing a reasonable concern regarding the Client's ability to make payment when payment is due. The Client may be required to furnish this information prior to further commencement or continuation of services by Engineer and Engineer shall not be responsible for the cost of any delay occurring as a result of such a request.

Markup on Expenses. Unless specified otherwise in our proposal, all sub consultant costs and other project related costs incurred by Engineer will be billed with a 15% markup. Company vehicle mileage and internal reproduction costs will be billed at the Engineer's prevailing rate for those items. Personal vehicle mileage costs incurred on the project by employees of Engineer will be billed at the prevailing IRS mileage rate in effect at the time of travel.

SUE Technical Standards. Quality Level A information obtained by direct exposure of the existing utilities can greatly increase the level of confidence with respect to the location of underground utilities at a particular jobsite. Utility exposure (Quality Level A) permits three-dimensional measurements to be taken on utilities for accurate location at each test hole. The overall level of confidence with respect to the location of site utilities can be raised by increasing the number of test holes examined; however, Engineer provides no guarantee of the location of utilities on the site other than at the locations where test holes have been established.

Quality Level B services include the horizontal, above ground detection, marking and mapping of underground utilities. Geophysical prospecting methods are used to indicate the presence and surface position of buried utilities. Utilities are identified and marked in the field in order to be surveyed and mapped. Quality Level B information should not be used for construction purposes, or where exact horizontal and vertical measurements are required.

The accuracy of Quality Level B designating information and depth of cover readings obtained by utilizing Geophysical and Ground Penetrating Radar equipment and techniques are subject to field and soil conditions beyond our control. Engineer will make reasonable efforts to provide comprehensive and correct positional utility marks to the limits obtainable by the instrumentation used and the existing ground conditions; however, Engineer provides no guarantee that all existing utilities on a particular site will be properly located using these methods.

Utilizing Engineer's SUE services does not relieve any party from their obligation to contact the utility damage prevention system before digging begins. Utility marks placed on the ground by Engineer are not to be used for construction purposes.

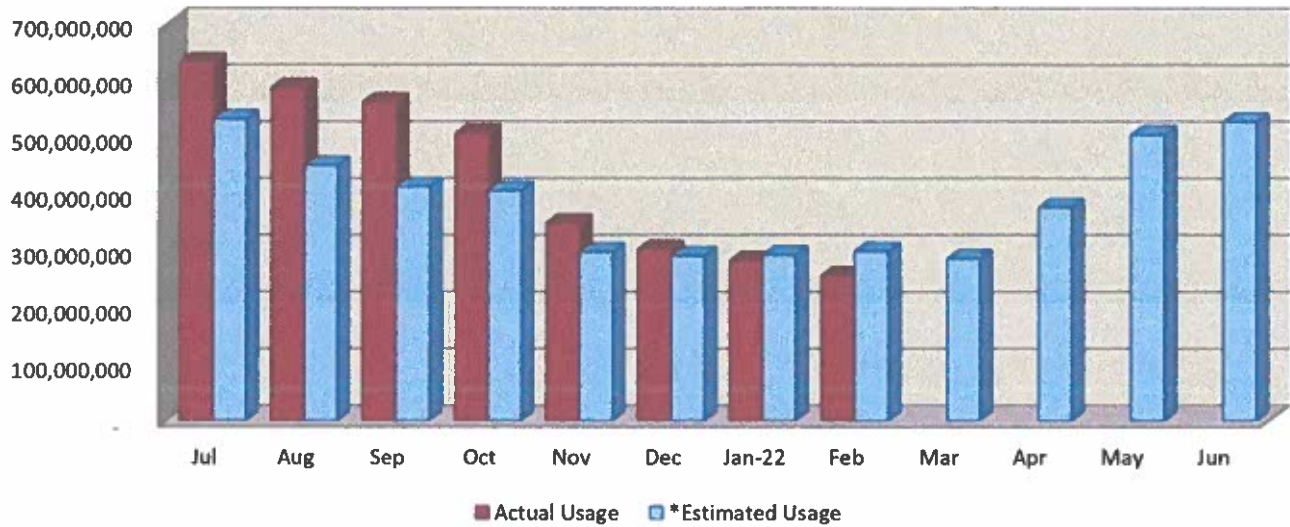
**McKim & Creed, Inc.
Engineering Division
General Conditions
(01/2011-1)**

INSURANCE. Engineer shall take out and maintain during the life of this Contract the following insurance:

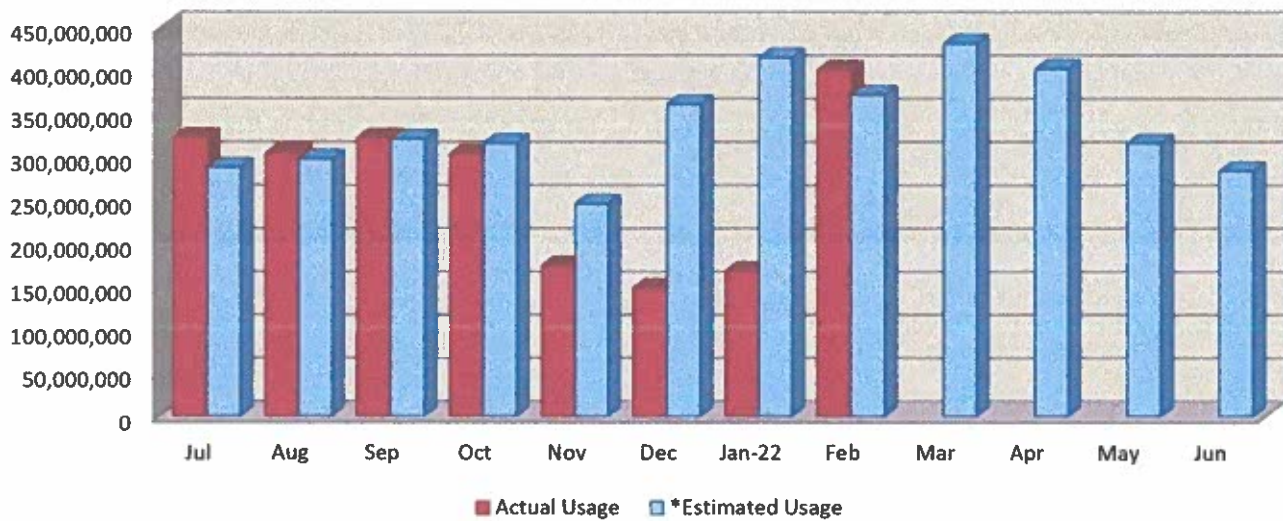
- a. Statutory Workers Compensation insurance;
- b. Comprehensive General Liability insurance in an amount of \$1,000,000.00 for each occurrence and \$2,000,000.00 aggregate;
- c. Automobile Insurance in an amount of \$1,000,000.00

Client shall be named as an additional insured on the Comprehensive General Liability and Automobile insurance policies. Prior to commencing work, Engineer shall provide evidence that the required insurance is in place. Each policy shall provide that Client shall receive not less than thirty days prior written notice of any cancellation, non-renewal or reduction of coverage of any of the policies.

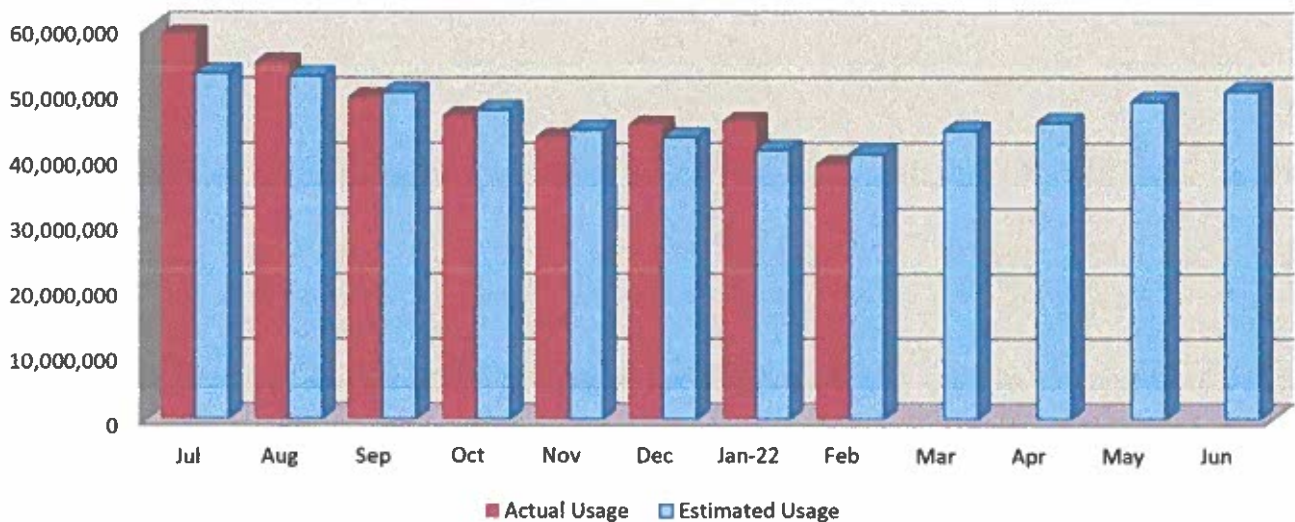
Brunswick County Water Usage FY 21-22



CFPUA Water Usage FY 21-22



Pender County Water Usage FY 21-22



OPERATING FUND BUDGET PERFORMANCE

Jul-1 through Jan-31

	Approved Annual Budget	Adjusted Annual Budget	Jul 1- Jan 31 Kings Bluff	Jul 1- Jan 31 Bladen Bluffs	Jul 1- Jan 31 OF BUDGET	Budget As of 01/31/2022
Income						
3000-01 - OPERATING REVENUE						
3001-01 - 01 Bruns County Public Utility	1,491,553	1,491,553	1,060,960		1,060,960	71%
3002-01 - 01 CFPUA	1,296,405	1,296,405	575,155		575,155	44%
3003-01 - 01 Pender County	179,822	179,822	113,366		113,366	63%
3004-01 - 01 HWY 421 - Invista	40,000	40,000	52,198		52,198	130%
3005-01 - 01 Praxair, Inc	4,314	4,314	1,206		1,206	28%
3006-01 - 01 Bladen Bluffs Revenue	3,194,127	3,194,127		2,379,784	2,379,784	75%
Bladen Admin Reimb	94,302	94,302		74,085	74,085	79%
3007-01 - Sales Tax Refund Revenue	70,000	70,000		55,833	55,833	80%
Total 3000-01 - OPERATING REVENUE	6,370,523	6,370,523	1,802,885	2,509,702	4,312,587	68%
3100-00 - OF NONOPERATING REVENUE						
3120-00 - Revenue-Other						
Interest & Investment Revenue	2,000	2,000	241		241	12%
FEMA Reimbursement	0	0	0		0	
Refunds / Insurance Proceeds/ Other	0	0	600		600	
3156-00 - Rental Income	0	0	9,180		9,180	
3900-01 R&R Fund Appropriated	0	0	0		0	
2900-00 Fund Balance	0	0	0		0	
Total 3100-00 - OF NONOPERATING REVENUE	2,000	2,000	10,021	0	10,021	501%
Total Income	6,372,523	6,372,523	1,812,907	2,509,702	4,322,609	68%
Expense						
4000-01 - ADMINISTRATION EXPENDITURES						
4001-01 - Salary - gross	168,610	168,610	66,073	29,507	95,580	57%
4010-01 - Per Diem+ mileage+per diem pay	62,500	62,500	20,099	10,958	31,057	50%
4012-01 - Vehicle Allowance	5,200	5,200	2,090	910	3,000	58%
4070-02 - Phone Allowance	520	520	209	91	300	58%
4015-01 - Payroll Taxes	17,967	17,967	6,606	3,149	9,755	54%
4029-01 - Retirement Employer's Part	18,379	18,379	7,614	3,216	10,830	59%
4035-01 - 401K Employer PD Contribution	4,758	4,758	1,943	833	2,776	58%
4036-01 - Payroll Processing Exp	2,900	2,900	1,523		1,523	53%
4038-01 - Insurance Group	40,910	40,910	13,582	6,346	19,928	49%
4039-01 - Insurance, Property	87,000	87,000	72,054	15,225	87,279	100%
4046-00 Professional Services General	15,000	15,000	0	0	0	0%
4046-01 - Attorney	30,000	27,900	12,488		12,488	45%
4046-02 - Auditor	9,000	9,000	3,400	2,800	6,200	69%
4046-03 - Engineer	55,000	50,000	11,496	0	11,496	23%
4049-01 Information Technology	10,000	13,800	5,830	0	5,830	42%
4055-01 - Office Maint/Repair	17,000	22,000	7,402		7,402	34%
4058-01 Office Utilities	7,000	3,000	1,124		1,124	37%
4059-01 Office Expense	35,000	26,300	8,460		8,460	32%
4062-01 Office Equipment	0	10,000	5,950		5,950	60%
4064-01 Printing & Advertising	0	2,000	688		688	34%
4065-01 Telephone and Internet	0	3,200	1,246		1,246	39%
4070-01 Travel & Training	17,500	19,300	16,056		16,056	83%
4080-01 Miscellaneous Expenses	15,000	23,000	12,669		12,669	55%
Total 4000-01 - ADMINISTRATION EXPENDITURES	619,244	633,244	278,602	73,035	351,637	56%
4500-01 - OPERATING EXPENDITURES						
4501-00 Sales Tax Expense - Other	70,000	70,000		64,350	64,350	92%
4510-01 - Bladen Bluffs Expenses	1,889,330	1,889,330		1,303,789	1,303,789	69%
4520-01 - Utilities-Energy Pump Station	789,667	775,667	343,207		343,207	44%
4530-01 - Kings Bluff O&M Expenses	453,609	453,609	223,273		223,273	49%
4535-01 Kings Bluff Hurricane Other FEMA			0		0	0%
4543-01 - Series 2012 Bond Principal (ST)	601,443	601,443	0		0	0%
4544-01 - Series 2012 Bond Interest (ST)	11,730	11,730	5,864		5,864	50%
4545-01 - Series 2010 Bond Principal (BB)	850,000	850,000		850,000	850,000	100%
4546-01 - Series 2010 Bond Interest (BB)	297,500	297,500		7,102	7,102	2%
Operating Capital Expense	325,000	325,000	250,000		250,000	77%
4998-05- Transfer to R&R- KB R&R Expense	75,000	75,000		0	0	0%
2041-01- 421 Relocation NHC Loan Principal	390,000	390,000		390,000	390,000	100%
Total 4500-01 - OPERATING EXPENDITURES	5,763,279	5,739,279	572,344	2,615,241	3,437,585	60%
Total Expense	6,372,523	6,372,523	850,947	2,688,276	3,789,223	59%

Executive Director Highlighted Activities:

- Working with McKim and Creed to complete documents and resolutions necessary to complete the spring application deadlines.
- Met with partners to continue planning for the May 20, 2022, dedication.
- Ongoing work with CFPUA and Partners to solicit funding for the next 10-mile section to parallel the existing 48" line leaving the Northwest plant and prepared resolutions for adoption by member entities.
- Receiving monthly reports from our IT provider Computer Warriors and accessing equipment capabilities
- Continue to review and seek funding opportunities for infrastructure.
- Participated with Brunswick County Utilities interviewing for the full time Kings Bluff Facility Operator Position (2nd Full-time Position)
- Work with Kings Bluff staff to clean and renovate the former office area of the original plant sight.