AGENDA
Lower Cape Fear Water & Sewer Authority
1107 New Pointe Boulevard, Suite # 17, Leland, North Carolina
8:30 a.m. – Long Range Planning Committee Meeting
April 8, 2024

MEETING CALL TO ORDER: Chairman Knight

PRESENTATION: PowerPoint with 25 Year Master Plan Review (Capital Improvement Plan) presented by McKim and Creed

DISCUSSION: Directors' Comments and Questions

ACTION/DIRECTION: Consider recommending to the Board for Approval at the May 13, 2024, board meeting.

FUTURE MEETINGS FOR: TBD

ADJOURNMENT

DRAFT MASTER PLANNING DOCUMENT

25 Year Planning Period
FY 2024-2049
Updated March 2024

Prepared for:
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5. **Bladen Bluffs Regional Surface Water Facility Annual Fiscal Year Budget Breakdown**

6. **Appendix**

Executive Summary

I. Kings Bluff Raw Water Facilities

The Authority's proposed 25-year (FY2024-FY2049) Capital Project budget for the Kings Bluff Raw Water Facilities is estimated at approximately $206M. 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 $61M 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
- New 5th Pump at King's Bluff Pumping Station
- Installation of a new surge tank at the King's Bluff Pumping Station
- 48-Inch PCCP Inspection and Pig – Ground Tank to US421
- 1.3 MW Solar Power Installation

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
- 5 ROW Acquisitions
- 48-Inch PCCP Repairs

II. Bladen Bluffs Regional Surface Water Facility

The Authority's proposed 25-year (FY2024-FY2049) Capital Project budget for the Bladen Bluffs Regional Surface Water Facility is estimated at approximately $13.1M. 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 2024-2049

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	New 4th Pump at King's Bluff Raw Water Pump Station	KB 1
CATEGORY:	Capacity/Efficiency	

Summary:

- 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:

- 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.

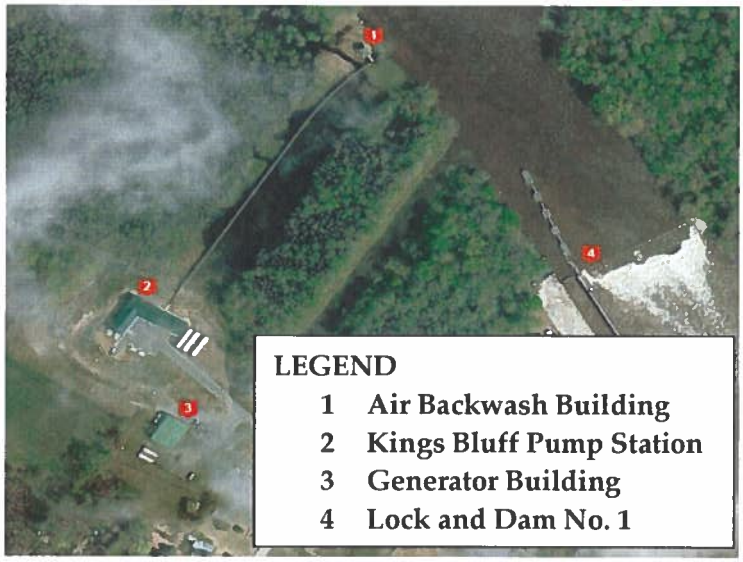
Consequence of No Action:

- 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:

1	2	3 ▼

DURATION (MONTHS)	24
REQUIRED COMPLETION	2029
TOTAL ESTIMATED COST	$5,150,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2027 - 2028	$3,850,000
2028 - 2029	$1,300,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Rebuild/Refurbish Existing 1600 HP Vertical Turbine Raw Water Pump	KB 2
CATEGORY:	Renewal/Rehabilitation	

Summary:

- Rebuild and/or refurbishment of an existing 1600 HP vertical turbine raw water pump originally installed in 2009.

Justification:

- Due to age and mechanical wear, it is anticipated that a rebuilding of one of the raw water pumps will be required.
- Rebuilding of pumps will extend the service life of the pumps

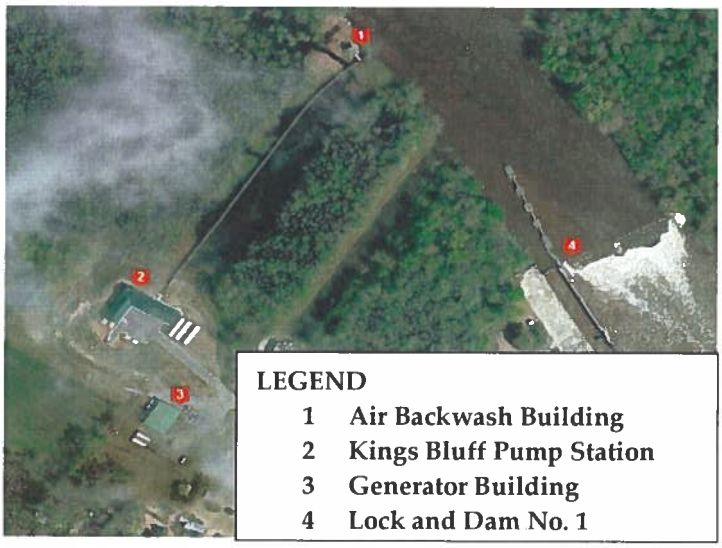
Consequence of No Action:

- The likelihood of failure of the pumps increases due to age and wear of the existing pump.

Criticality:

1	2	▼ 3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2036
TOTAL ESTIMATED COST	$500,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2035 - 2036	$500,000



LEGEND

1 Air Backwash Building
2 Kings Bluff Pump Station
3 Generator Building
4 Lock and Dam No. 1

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Generators at King's Bluff Raw Water Pump Station	KB 3
CATEGORY:	Capacity, Efficiency, Maintenance	

Summary:

- Provide new standby generator(s) and a new generator building at the pump station.

Justification:

- 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:

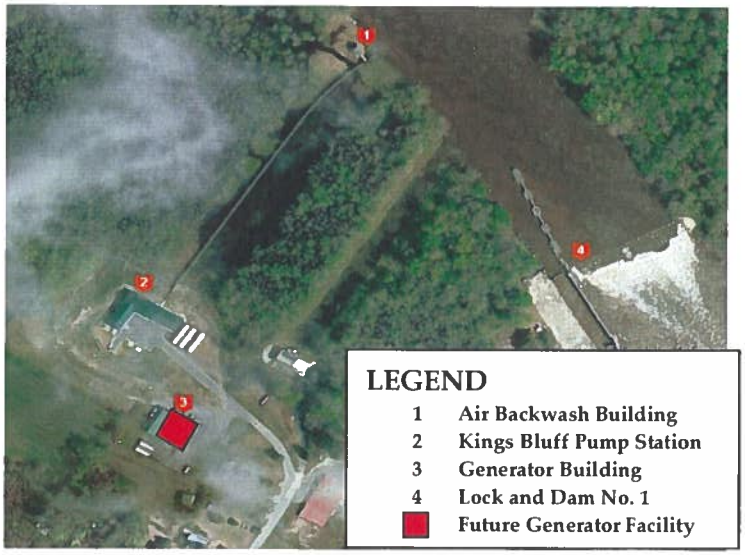
- The current generators are undersized to accommodate long term demands.
- The existing generators are anticipated to become cost prohibitive to maintain.

Criticality:

▼

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2036
TOTAL ESTIMATED COST	$21,500,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2034 - 2035	$2,200,000
2035 - 2036	$19,300,000



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:

- Pig 48" pipeline from King's Bluff to 3 MG ground tank. Repair and/or replace air release valves and blow-offs.

Justification:

- 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

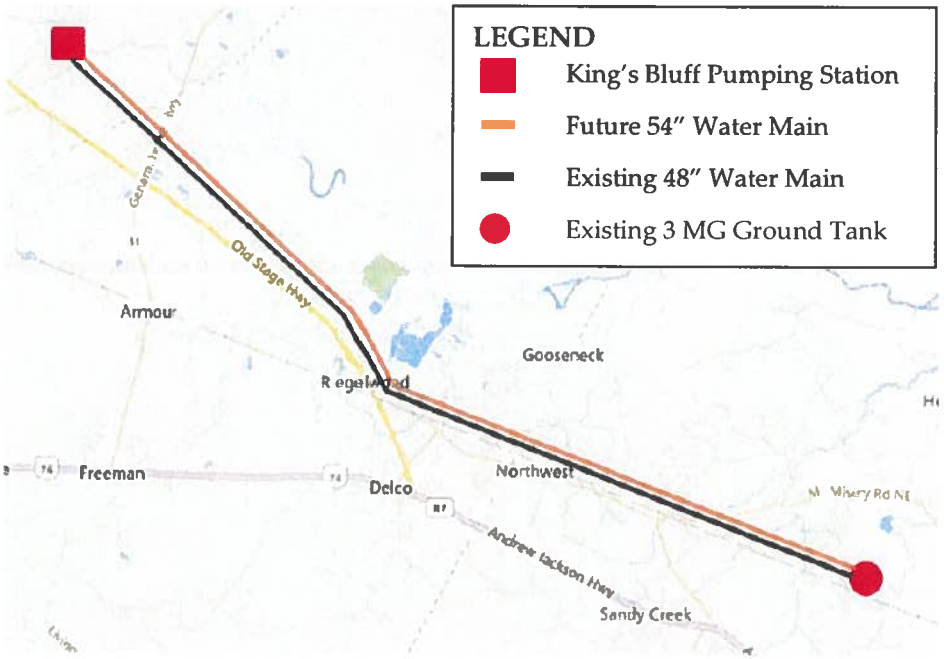
Consequence of No Action:

- Potential for loss of capacity and/or clogging due to sediment buildup.
- Loss of efficiency and higher electrical costs

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2041
TOTAL ESTIMATED COST	$2,100,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2040 - 2041	$2,100,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Pig 54" Pipe from 3 MG Ground Tank to US 421	KB 5
CATEGORY:	Renewal/Rehabilitation, Efficiency	

Summary:

- Pig 54" pipeline from King's Bluff to 3 MG ground tank. Repair and/or replace air release valves and blow-offs.

Justification:

- 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

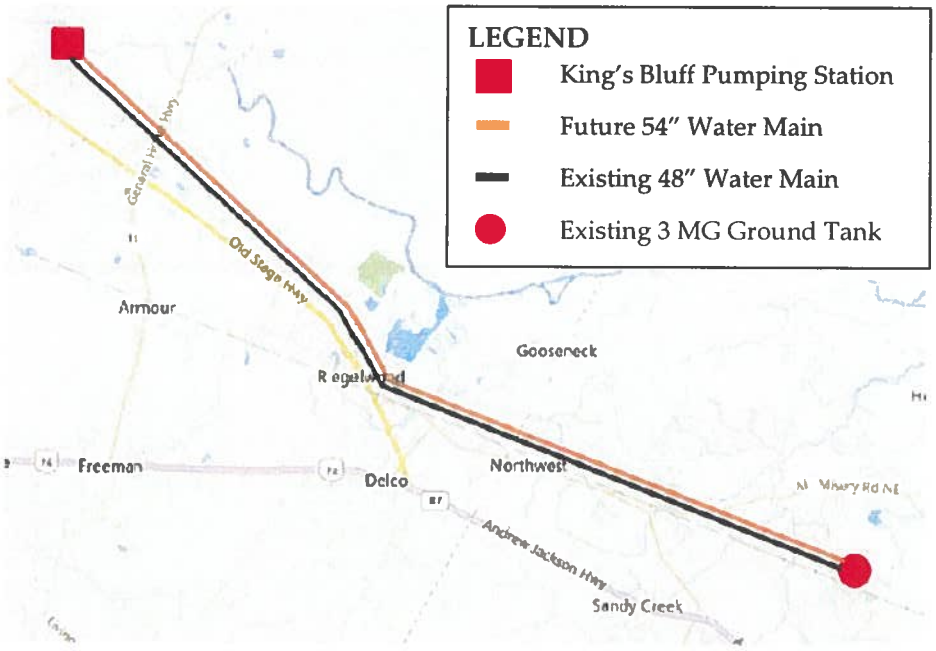
Consequence of No Action:

- Potential for loss of capacity and/or clogging due to sediment buildup.
- Loss of efficiency and higher electrical costs

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2035
TOTAL ESTIMATED COST	$1,800,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2034-2035	$1,800,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Walkway and Air Backwash Building Replacement	KB 6
CATEGORY:	Renewal/Rehabilitation/Maintenance	

Summary:

- 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:

- Walkway going from pumping station to air backwash buildings is currently in serviceable condition and will need to be replaced by 2025 due to rotting wood and overall weathering of walkway.
- During Hurricane Florence the walkway was nearing submergence
- Existing, 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:

- 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:

▼

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2025
TOTAL ESTIMATED COST	$2,400,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2024 - 2025	$2,400,000

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	Replace Raw Water Pumps 1, 4, 5	KB 7
CATEGORY:	Renewal/Rehabilitation	

Summary:

- Replace 1600 HP vertical turbine raw water pumps 1, 4, 5 originally installed in 2009.

Justification:

- 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:

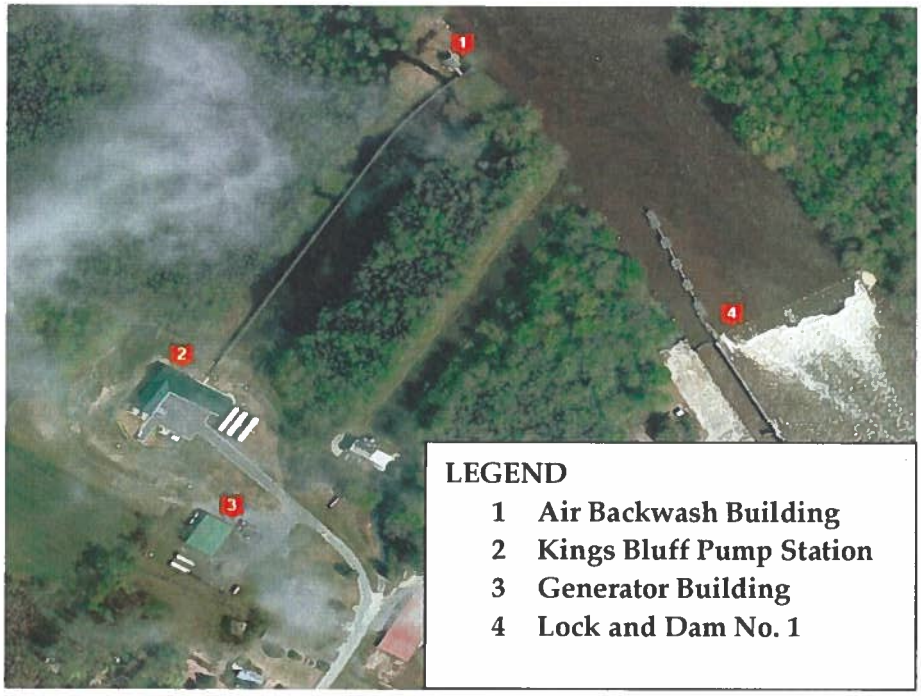
- The likelihood of failure of the pumps increases due to age and wear of the existing pump. The service life of the existing pumps will be expended.

Criticality:

1	2	3 ▼

DURATION (MONTHS)	36
REQUIRED COMPLETION	2030, 2035, 2038
TOTAL ESTIMATED COST	$15,700,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2029 - 2030	$4,600,000
2034 - 2035	$5,300,000
2037 - 2038	$5,800,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	New Surge Tank at King's Bluff	KB 8
CATEGORY:	Capacity	

Summary:

- Addition of a 4th surge tank at King's Bluff Pumping Station

Justification:

- 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:

- 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:

1	2 ▼	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2044
TOTAL ESTIMATED COST	$1,300,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2043 - 2044	$1,300,000

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	5 ROW Acquisitions	KB 9
CATEGORY:	Capacity	

Summary:

- Right-of-Way acquisitions along the existing 48" Raw Water Main from the 3 MGD ground tank to the US421 service area.

Justification:

- Required to install the proposed 48" parallel raw water main

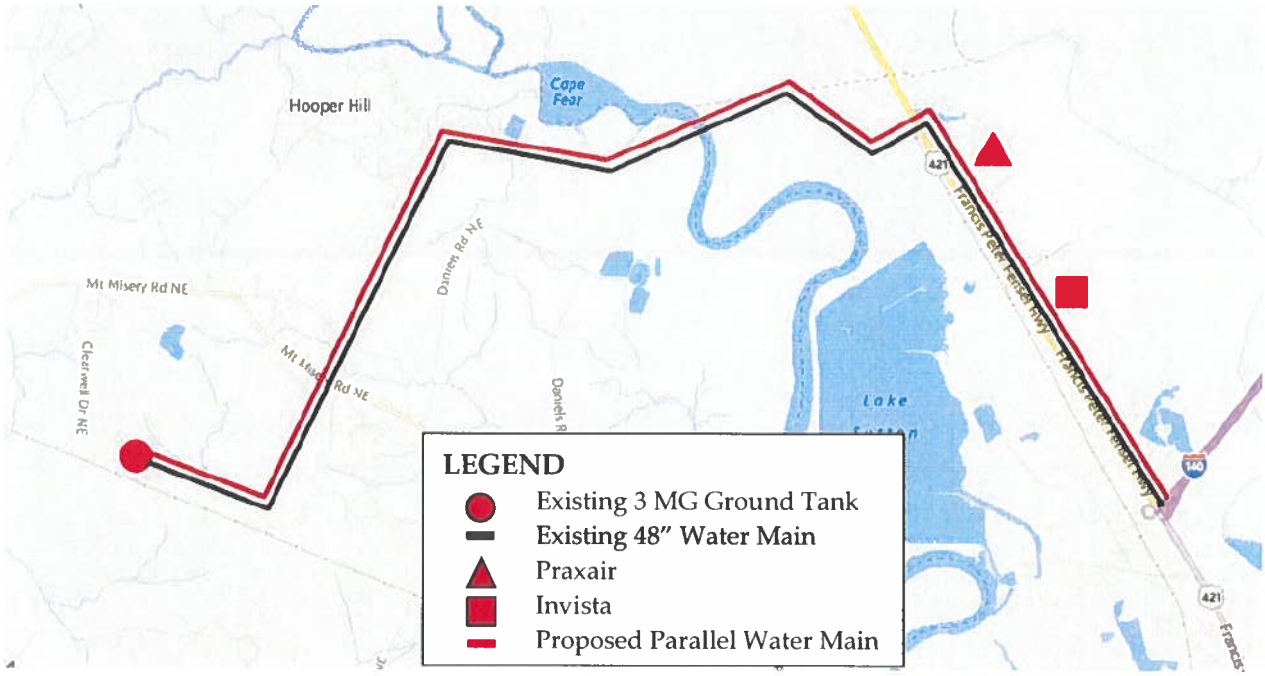
Consequence of No Action:

- Future supply to the US421 service area will be limited to the capacity of the existing 48" main.

Criticality:

1	2	3

DURATION (MONTHS)	36
REQUIRED COMPLETION	2026
TOTAL ESTIMATED COST	$310,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2023 - 2024	$100,000
2024 - 2025	$100,000
2025 - 2026	$110,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	48-Inch PCCP Inspection and Pig-Ground Tank to US-421	KB 10
CATEGORY:	**Renewal/Rehabilitation, Efficiency**	

Summary:

- Pig 48" pipeline from 3 MG ground tank to CFPUA's Water Treatment Plant including installation of pig launcher/retrieval system. Repair and/or replace air release valves and blow-offs.
- Inspection to existing 48-inch PCCP pipe from the existing 3 MG ground tank to US-421.

Justification:

- Pipe and appurtenances require routine inspection, maintenance, and repairs.
- 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:

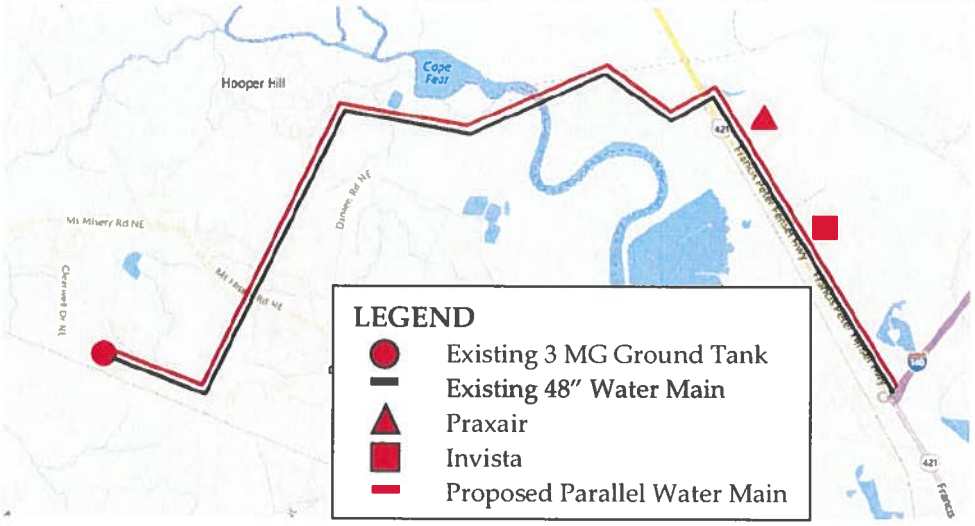
- Current loss of capacity and/or clogging due to sediment buildup.
- Loss of efficiency and higher electrical costs

Criticality:

1	2	3

DURATION (MONTHS)	15
REQUIRED COMPLETION	2028
TOTAL ESTIMATED COST	$2,810,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2026 - 2027	$2,600,000
2027 - 2028	$210,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	48-Inch PCCP Repairs	KB 11
CATEGORY:	Renewal/Rehabilitation/Maintenance	

Summary:

- Repair existing 48" raw water main based on findings from KB 11 – 48-Inch PCCP Inspection from the 3 MG ground tank to US-421

Justification:

- Pipe requires routine maintenance, inspection, and repairs.

Consequence of No Action:

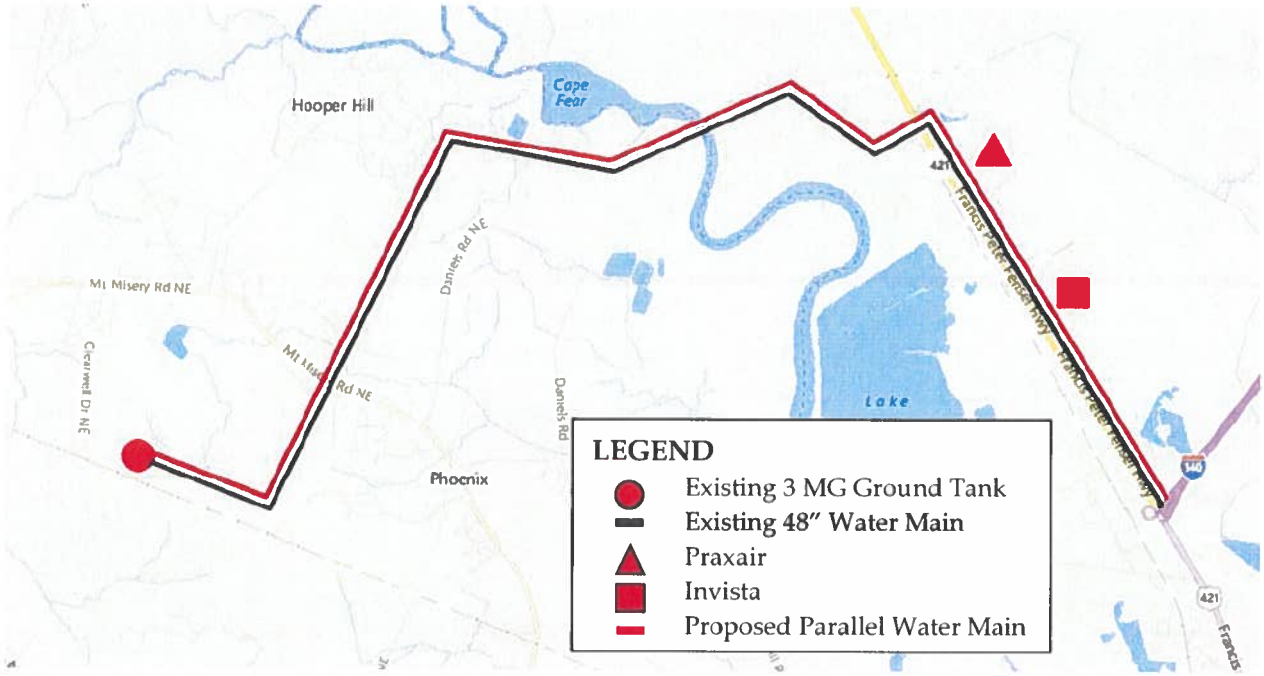
- Increased risk for pipeline break.

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2027
TOTAL ESTIMATED COST	$300,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2026 - 2027	$300,000



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	1.3 MW Solar Power Installation	KB 12
CATEGORY:	Efficiency/Redundancy	

Summary:

- Installation of solar panels to provide an additional power source at the pump station

Justification:

- Improves reliability and efficiency of the station by providing a redundant power source

Consequence of No Action:

- Increased risk for power failure during emergency scenarios

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2031
TOTAL ESTIMATED COST	$2,500,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2030-2031	$2,500,000

KING'S BLUFF RAW WATER FACILITIES

Kings Bluff Raw Water Facilities
Capital Improvements
Cost Sharing Projects
FY 2024-2049

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	New 5th Pump at King's Bluff Raw Water Pump Station	CS 3
CATEGORY:	Capacity	

Summary:

- 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:

- Decrease load and run times on existing pumps to extend life and improve reliability.

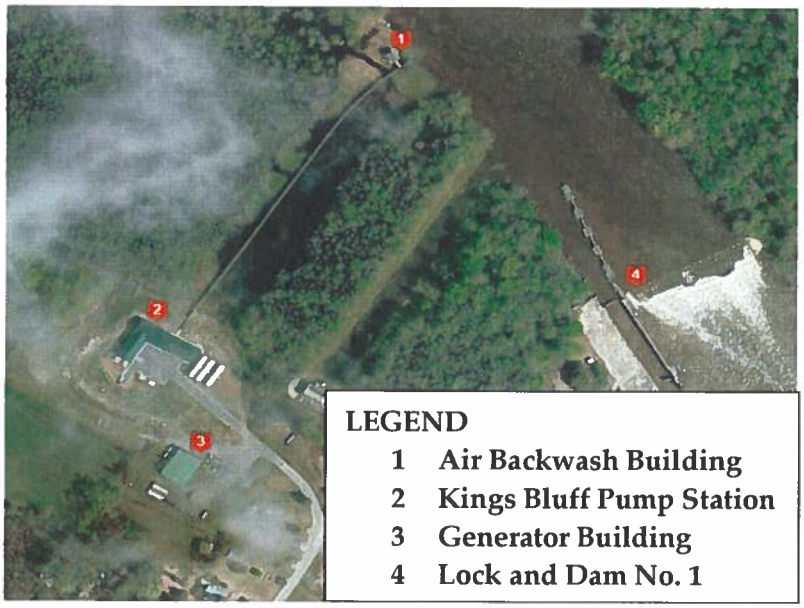
Consequence of No Action:

- 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:

1	2	3 ▼

DURATION (MONTHS)	24
REQUIRED COMPLETION	2047
TOTAL ESTIMATED COST	$9,400,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2044 - 2045	$2,000,000
2045 - 2046	$5,100,000
2046 - 2047	$2,300,000



LEGEND

1 Air Backwash Building
2 Kings Bluff Pump Station
3 Generator Building
4 Lock and Dam No. 1

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	20 MG Ground Tank	CS 4
CATEGORY:	Capacity/Efficiency	

Summary:

- 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:

- 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:

- Minimal system storage as system demands continue to increase
- Increased cycling of pumps at the intermediate booster pump station.

Criticality:

1	2 ▼	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2038
TOTAL ESTIMATED COST	$ 23,700,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2036 - 2037	$5,500,000
2037 - 2038	$18,200,000

KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	7-Mile Parallel Raw Water Main from 3 MG Ground Tank to Pender Vault	CS 5
CATEGORY:	Capacity	

Summary:

- Design and construction of approximately 7-miles of 48-inch raw water main from 3 MG ground tank to Pender County vault. Pipe would parallel the existing 48-inch raw water main in this area.

Justification:

- Provides additional system capacity.
- Reduces reliance on intermediate booster pump station.
- Improves reliability with a parallel main to serve major customers.

Consequence of No Action:

- The system may not have the 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 Pender County vault.

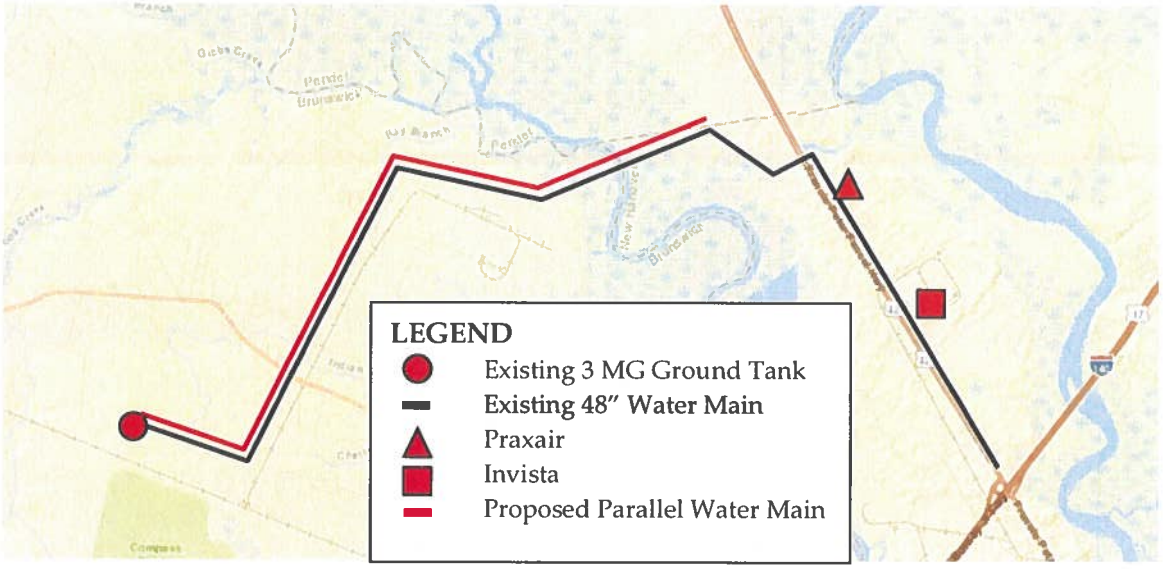
Criticality:

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2026
TOTAL ESTIMATED COST	$35,600,000*

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2024 - 2025	$15,000,000
2025 - 2026	$20,600,000

*Note: Subject to grant funding.



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	3-Mile Parallel Raw Water Main from 3 MG Pender Vault to CFPUA Vault	CS 6
CATEGORY:	Capacity	

Summary:

- Design and construction of approximately 3-miles of 48-inch raw water main from the Pender County vault to the CFPUA vault. Pipe would parallel the existing 48-inch raw water main in this area.

Justification:

- Provides additional system capacity.
- Reduces reliance on intermediate booster pump station.
- Improves reliability with a parallel main to serve major customers.

Consequence of No Action:

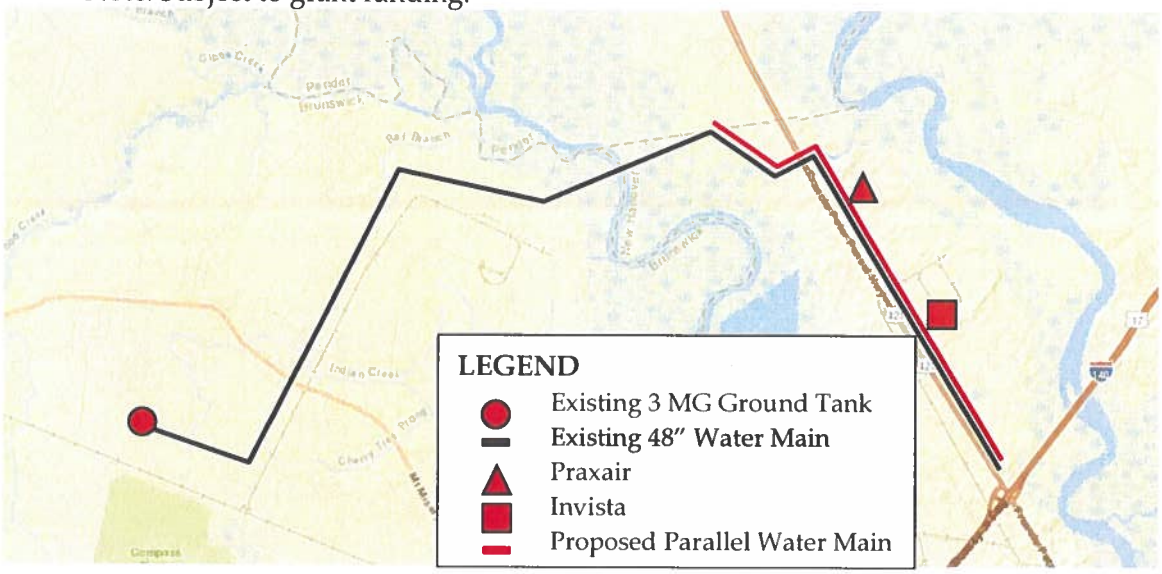
- The system may not have the capability to meet long-term customer demands.
- The existing 48-inch main is a single point of failure from the 3 MGD ground tank to the US 421 service area.

Criticality:

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2027
TOTAL ESTIMATED COST	$25,250,000*
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2025 - 2026	$6,500,000
2026 - 2027	$18,750,000

*Note: Subject to grant funding.



KING'S BLUFF RAW WATER FACILITIES

PROJECT TITLE	100 MGD Reservoir	CS 7
CATEGORY:	Efficiency	

Summary:

- Design & construction of a new 100 MG reservoir. Optimal location and operation of the reservoir to be determined by future engineering study.

Justification:

- 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:

- Minimal system storage as system demands continue to increase.
- Loss of regular supply under emergency conditions.

Criticality:

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2033
TOTAL ESTIMATED COST	$55,549,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2023 - 2024	$49,000
2031 - 2032	$8,100,000
2032 - 2033	$47,400,000

KING'S BLUFF RAW WATER FACILITIES

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

Project No.	Description	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	FY 2047	FY 2048	FY 2049	Totals
KB 1	New 4th Pump at King's Bluff (KBPS)					$3.85	$1.30																					$5.15
KB 2	Rebuild High Service Pump Motor													$0.50														$0.50
KB 3	New Generators												$2.20	$19.30														$21.50
KB 4	Pig 48" Water Main (KBPS to 3 MG Tank)																		$2.10									$2.10
KB 5	Pig 54" Water Main												$1.80															$1.80
KB 6	Walkway and Air Backwash Building Replacement		$2.40																									$2.40
KB 7	Replace Raw Water Pumps 1, 4, 5							$4.60					$5.30			$5.80												$15.70
KB 8	New Surge Tank at KBPS																					$1.30						$1.30
KB 9	5 ROW Acquisitions	$0.10	$0.10	$0.11																								$0.31
KB 10	48-Inch PCCP Inspection and Pig – Ground Tank to US 421				$2.60	$0.21																						$2.81
KB 11	48-Inch PCCP Repairs				$0.30																							$0.30
KB 12	1.3 MW Solar Power Installation								$2.50																			$2.50
	Cost Sharing Projects																											
~~CS 1~~	~~Intermediate Booster Pump Station Shelter*~~																											
~~CS 2~~	~~Intermediate Booster Pump Station Upgrade*~~																											
CS 3	New 5th Pump at King's Bluff																						$2.00	$5.10	$2.30			$9.40
CS 4	20 MG Ground Tank														$5.50	$18.20												$23.70
CS 5	7-Mile 48" Parallel Raw Water Main		$15.00	$20.60																								$35.60
CS 6	3-Mile 48" Parallel Raw Water Main			$6.50	$18.75																							$25.25
CS 7	100 MGD Reservoir	$0.05								$8.10	$47.40																	$55.50
Total Fiscal Year Expenditure		**$0.15**	**$17.50**	**$27.21**	**$21.65**	**$4.06**	**$1.30**	**$4.60**	**$2.50**	**$8.10**	**$47.40**	**$0.00**	**$9.30**	**$19.80**	**$5.50**	**$24.00**	**$0.00**	**$0.00**	**$2.10**	**$0.00**	**$0.00**	**$1.30**	**$2.00**	**$5.10**	**$2.30**	**$0.00**	**$0.00**	**$205.82**

*** Projects are no longer required due to expedited schedules of CS5 & CS6**

BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

Bladen Bluffs Regional Surface Water Treatment Facility Capital Improvements Projects FY 2024-2049

BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	New High Service Pump Station	BB 1
CATEGORY:	Capacity	

Summary:

- Construct a new high service pumping station to increase capacity.

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.

Justification:

- 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.

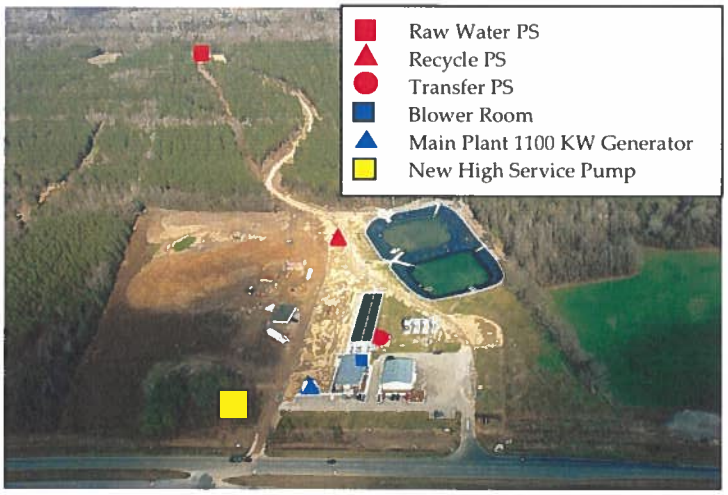
Consequence of No Action:

- The system will not have the required capacity to meet new customer demands.

Criticality:

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2029
TOTAL ESTIMATED COST	$5,740,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2027-2028	$790,000
2028-2029	$4,950,000



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Construct New 1 MG Capacity Clearwell	BB 2
CATEGORY:	Capacity	

Summary:

- Construct clearwell to meet future customer finished water storage capacity.

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.

Justification:

- 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:

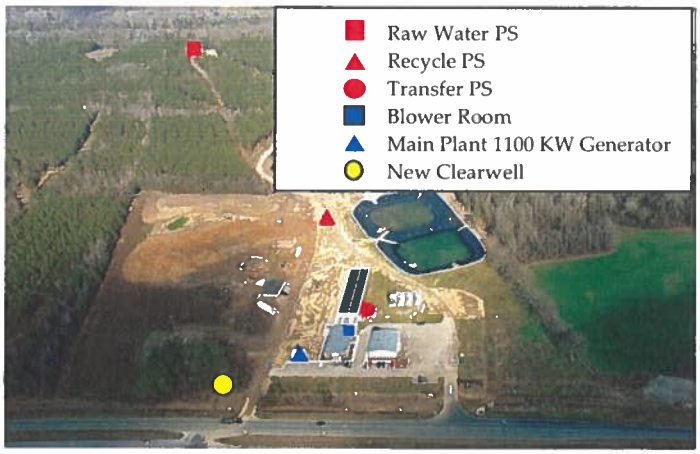
- The system will not have the required capacity to meet new customer demands.

Criticality:

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2029
TOTAL ESTIMATED COST	$4,090,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2027-2028	$790,000
2028-2029	$3,300,000



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Three (3) Pumps at the Raw Water Pump Station	BB 3
CATEGORY:	Renewal/Rehabilitation	

Summary:

- Routine replacement of three (3) aging pumps at Raw Water Pumping Station.

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.

Justification:

- Pumps will be approximately 20 years old by 2032 and approaching end of useful service life.

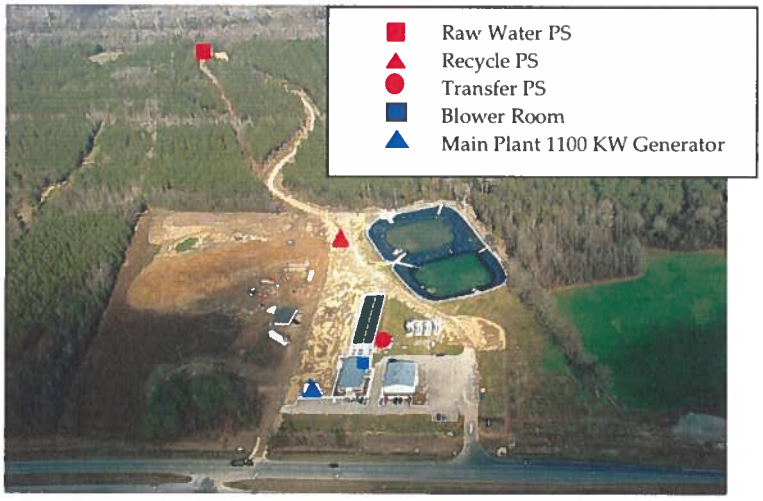
Consequence of No Action:

- The likelihood of failure of the pumps increases due to age and wear of the existing pump.

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2032
TOTAL ESTIMATED COST	$480,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2031-2032	$480,000



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Blower in the Blower Building	BB 4
CATEGORY:	**Renewal/Rehabilitation**	

Summary:

- Routine replacement of aging blower in blower building.

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.

Justification:

- Blower will be approximately 25 years old by 2032 and approaching end of useful service life.

Consequence of No Action:

- The likelihood of failure of the blower increases due to age and wear of the existing blower.

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2032
TOTAL ESTIMATED COST	$190,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2031-2032	$190,000

BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Three (3) Pumps at the Recycle Pump Station	BB 5
CATEGORY:	**Renewal/Rehabilitation**	

Summary:

- Routine replacement of three (3) aging pumps at the Recycle Pumping Station.

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.

Justification:

- Pumps will be approximately 20 years old by 2032 and approaching end of useful service life.

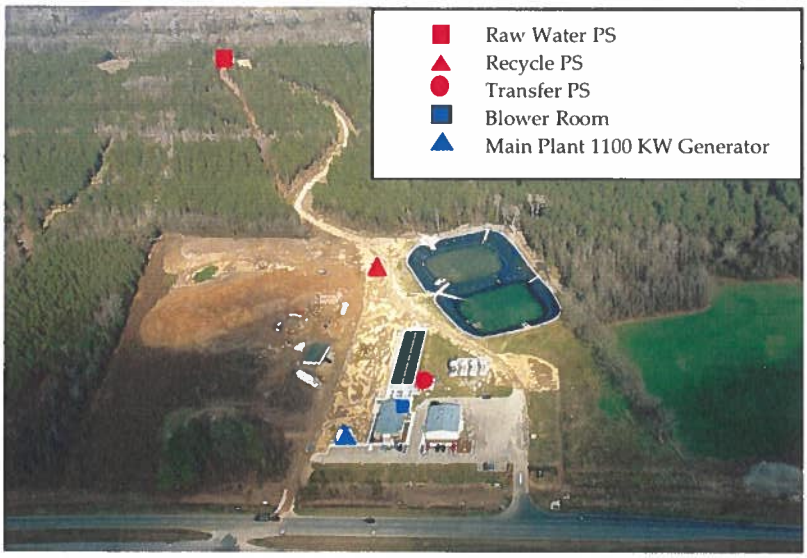
Consequence of No Action:

- The likelihood of failure of the pumps increases due to age and wear of the existing pump.

Criticality:

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2035
TOTAL ESTIMATED COST	$330,000
FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2034-2035	$330,000



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Three (3) Pumps at the Transfer Pump Station	BB 6
CATEGORY:	**Renewal/Rehabilitation**	

Summary:

- Routine replacement of three (3) aging pumps at the Transfer Pumping Station.

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.

Justification:

- Pumps will be approximately 20 years old by 2032 and approaching end of useful service life.

Consequence of No Action:

- The likelihood of failure of the pumps increases due to age and wear of the existing pump.

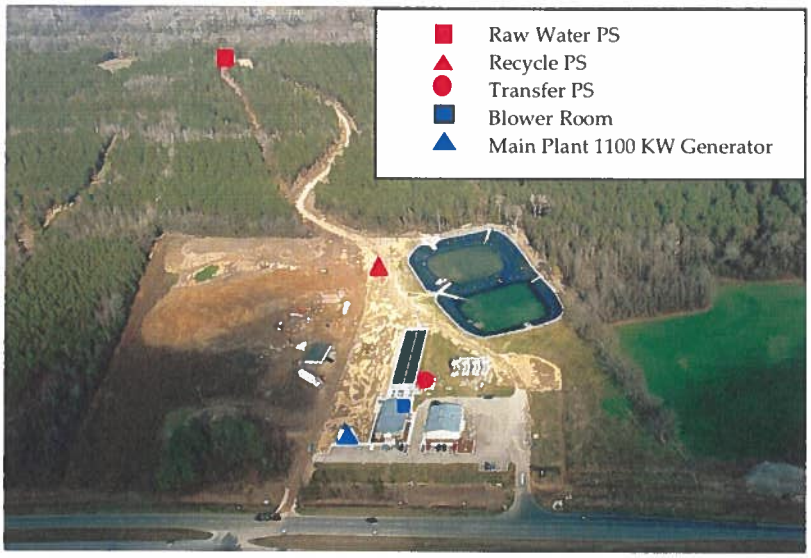
Criticality:

▼

1	2	3

DURATION (MONTHS)	12
REQUIRED COMPLETION	2035
TOTAL ESTIMATED COST	$550,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2034-2035	$550,000



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

PROJECT TITLE	Replace Two (2) Generators at the Site	BB 7
CATEGORY:	**Renewal/Rehabilitation**	

Summary:

- Routine replacement of two (2) aging on-site generators.

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.

Justification:

- 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:

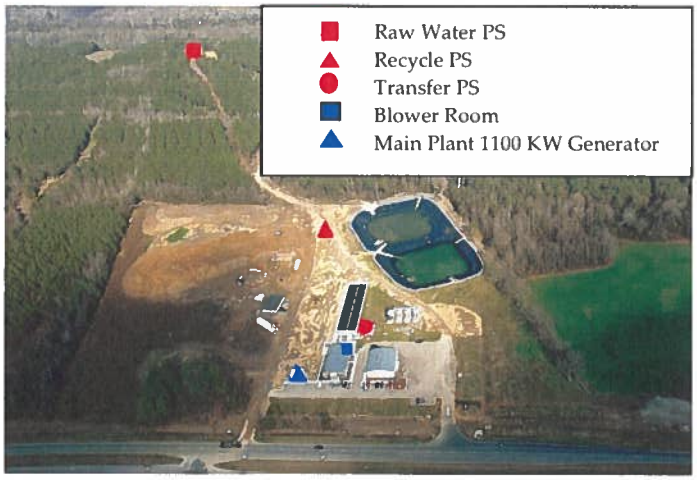
- The current generators are undersized to accommodate long term demands.
- The existing generators are anticipated to become cost prohibitive to maintain.

Criticality:

1	2	3

DURATION (MONTHS)	24
REQUIRED COMPLETION	2037
TOTAL ESTIMATED COST	$1,680,000

FISCAL YEAR	ANTICIPATED FISCAL YEAR EXPENDITURE
2035-2036	$460,000
2036-2037	$1,220,000



BLADEN BLUFFS REGIONAL SURFACE WATER FACILITY

Annual Fiscal Year Budget Breakdown (In Millions of Dollars)

Project No.	Description	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	FY 2047	FY 2048	FY 2049	Totals
BB 1	New High Service Pump Station					$0.79	$4.95																					$5.74
BB 2	Construct New 1 MG Capacity Clearwell					$0.79	$3.30																					$4.09
BB 3	Replace (3) Pumps at Raw Water Pump Station									$0.48																		$0.48
BB 4	Replace Blower in Blower Building									$0.19																		$0.19
BB 5	Replace (3) Pumps at the Recycle Pump Station												$0.33															$0.33
BB 6	Replace (3) Pumps at the Transfer Pump Station												$0.55															$0.55
BB 7	Replace (2) Generators at the Site													$0.46	$1.22													$1.68
Total Fiscal Year Expenditure						**$1.58**	**$8.25**			**$0.67**			**$0.88**	**$0,46**	**$1.22**													**$13.06**

APPENDIX A – TOTAL ANNUAL FISCAL YEAR BUDGET

Total Annual Fiscal Year Budget Breakdown											
Item	*FY 2024*	*FY 2025*	*FY 2026*	*FY 2027*	*FY 2028*	*FY 2029*	*FY 2030*	*FY 2031*	*FY 2032*	*FY 2033*	*Totals*
OPERATION PROJECTS BUDGET											
Surveying											$0
ROW Maintenance	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$65,000	$650,000
ROW Clearing	$225,000										$225,000
SCADA Improvements		$125,000									$125,000
Anti-Vortexing Improvements	$50,000	$50,000									$100,000
Meter and Valve Upgrades/Replacements						$125,000					$125,000
VFD Replacements	$250,000										$250,000
Argo ATV											$0
RR Trans	$350,000	$350,000									$700,000
Miscellaneous	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$300,000
Total Operations Annual Fiscal Year Expenditure	**$970,000**	**$620,000**	**$95,000**	**$95,000**	**$95,000**	**$220,000**	**$95,000**	**$95,000**	**$95,000**	**$95,000**	**$2,475,000**
CAPITAL PROJECTS BUDGET											
KB1 - New 4th Pump at King's Bluff (KBPS)					$3,850,000	$1,300,000					$5,150,000
KB6 - Walkway and Air Backwash Building Replacement		$2,400,000									$2,400,000
KB7 - Replace Raw Water Pumps 1, 4, 5							$4,600,000				$4,600,000
KB9 - ROW Acquisitions	$100,000	$100,000	$110,000								$310,000
KB10 - 48-Inch PCCP Inspection and Pig - Ground Tank to US421				$2,600,000	$210,000						$2,810,000
KB11 - 48-Inch PCCP Repairs				$300,000							$300,000
KB12 - 1.3 MW Solar Power Installation								$2,500,000			$2,500,000
CS5 - 7-Mile 48" Parallel Raw Water Main		$15,000,000	$20,600,000								$35,600,000
CS6 - 3-Mile 48" Parallel Raw Water Main			$6,500,000	$18,750,000							$25,250,000
CS7 - 100 MGD Reservoir	$49,000								$8,100,000	$47,400,000	$55,549,000
Total Capital Annual Fiscal Year Expenditure	**$149,000**	**$17,500,000**	**$27,210,000**	**$21,650,000**	**$4,060,000**	**$1,300,000**	**$4,600,000**	**$2,500,000**	**$8,100,000**	**$47,400,000**	**$134,469,000**
Total Annual Fiscal Year Expenditure	**$1,119,000**	**$18,120,000**	**$27,305,000**	**$21,745,000**	**$4,155,000**	**$1,520,000**	**$4,695,000**	**$2,595,000**	**$8,195,000**	**$47,495,000**	**$136,944,000**

AGENDA
Lower Cape Fear Water & Sewer Authority
1107 New Pointe Boulevard, Suite # 17, Leland, North Carolina
9:00 a.m. – Regular Monthly Board Meeting
April 8, 2024

MEETING CALL TO ORDER: Chairman Knight

INVOCATION

PLEDGE OF ALLEGIANCE

APPROVAL OF CONSENT AGENDA

C1 – Minutes of March 11, 2024, Regular Board Meeting
C2 – Minutes of March 11, 2024, Finance Committee Meeting
C3 – Kings Bluff Monthly Operations and Maintenance Report
C4 - Resolution Adopting the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for Kings Bluff Raw Water Pump Station, PWSID 50-09-013, for calendar year 2023.
C5 - Resolution Adopting the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for Bladen Bluff's Regional Surface Water System, PWSID 50-09-013, for calendar year 2023.
C6 – Line-Item Adjustment for February 29, 2029

OLD BUSINESS

OB1 – Resolution of Lower Cape Fear Water and Sewer Authority Board of Directors Awarding Contract for Partial Replacement of Existing Roof at the Kings Bluff Pump Station

NEW BUSINESS

NB1 – Resolution Recognizing National Drinking Water Week

ENGINEER'S COMMENTS

ATTORNEY COMMENTS

EXECUTIVE DIRECTOR REPORT

EDR1 – Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending March 31, 2024
EDR2 – Operating Budget Status, Ending February 29, 2024
EDR3 – Summary of Activities

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

PUBLIC COMMENT

CLOSED SESSION

CS1 – Closed Session in accordance with N.C.G.S. §143-318.11(a)(3) and (6) to preserve Authority's Attorney-Client Privilege and for Personnel Matters respectively.

ADJOURNMENT

The next board meeting of the Lower Cape Fear Water & Sewer Authority is scheduled for Monday, May 13th at 9:00 a.m. in the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina.

Consent Agenda (CA)	Lower Cape Fear Water & Sewer Authority

AGENDA ITEM

To: CHAIRMAN KNIGHT AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: April 8, 2024

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 March 11, 2024, Regular Board Meeting
C2- Minutes of March 11, 2024, Finance Committee Meeting
C3- Kings Bluff Monthly Operations and Maintenance Report
C4- Resolution Adopting the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for Kings Bluff Raw Water Pump Station, PWSID 50-09-013, for calendar year 2023.
C5- Resolution Adopting the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for Bladen Bluff's Regional Surface Water System, PWSID 50-09-013, for calendar year 2023.
C6 – Line-Item Adjustment for February 29, 2029

Action Requested: Motion to approve/disapprove Consent Agenda.

Lower Cape Fear Water & Sewer Authority
Regular Board Meeting Minutes
March 11, 2024

Chairman Knight called to order the Authority meeting scheduled on March 11th, 2024, 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 DeVane gave the invocation.

Roll Call by Chairman Knight:

Present: Norwood Blanchard, Patrick DeVane, Wayne Edge, Harry Knight, Al Leonard, Scott Phillips, Charlie Rivenbark, Chris Smith, Phil Tripp, Frank Williams, and Rob Zapple

Present by Virtual Attendance: Jackie Newton

Absent: Bill Saffo and Bill Sue

Staff: Tim H. Holloman, Executive Director; Matthew Nichols, General Counsel; Sam Boswell, COG; Jess Powell P.E., McKim & Creed; and Danielle Hertzog, Financial Administration Assistant

Guests Present: Glenn Walker, Brunswick County Water Resources Manager; Jorgen Holmberg, Computer Warriors; Anthony Colon, Pender County Utilities Director of Utilities; James Proctor, Pender County Utilities Deputy Director of Utilities; and Krysden Burden, Brunswick County Public Utilities

Guests Virtual Attendance: Tom Hendrick, Pender County Utilities Water Treatment Plant Superintendent; Benjamin Kearns, Cape Fear Public Utility Authority Water Resources Manager Water Treatment; Craig Wilson, Cape Fear Public Utility Authority Engineering Manager; and Ken Waldroup, Cape Fear Public Utility Authority Executive Director

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

APPROVAL OF CONSENT AGENDA

C1 – Minutes of February 12, 2024, Regular Board Meeting
C2 – Minutes of February 12, 2024, Finance Committee Meeting
C3 – Minutes of February 12, 2024, Personnel Committee Meeting
C4 – Kings Bluff Monthly Operations and Maintenance Report
C5 – Bladen Bluffs Monthly Operations and Maintenance Reports

Motion: Director Rivenbark **MOVED**; seconded by Director Zapple, approval of the Consent Agenda Items C1-C5. Upon voting, the **MOTION CARRIED UNANIMOUSLY.**

OLD BUSINESS

OB1- Resolution of Lower Cape Fear Water and Sewer Authority Board of Directors Rejecting Sole Bid Submitted for Partial Replacement of Existing Roof at the Kings Bluff Pump Station

Executive Director Holloman advised the bid came in higher than anticipated. Mr. Holloman recommended rejecting the bid and authorizing LCFWASA and McKim & Creed to solicit informal bids from vendors.

Motion: Director Williams **MOVED**; seconded by Director Rivenbark, approval of the Resolution of Lower Cape Fear Water and Sewer Authority Board of Directors Rejecting Sole Bid Submitted for Partial Replacement of Existing Roof at the Kings Bluff Pump Station. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

NEW BUSINESS

NB1- Budget Amendment #2

Executive Director Holloman stated that this is to move funds from Operating Checking to R&R to help us reach our goal of 5 million.

Motion: Director Edge **MOVED**; seconded by Director Rivenbark, to approve Budget Amendment #2. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

NB2- Resolution Awarding Contract for Financial Advisory Services for the Lower Cape Fear Water and Sewer Authority

Executive Director Holloman advised the Finance Committee reviewed and interviewed the submissions from the RFQ for the Financial Advisor. The Finance Committee voted to bring the Resolution Awarding Contract for Financial Advisory Services for the Lower Cape Fear Water and Sewer Authority.

Motion: Director Blanchard **MOVED**; seconded by Director Williams, to approve Resolution Awarding Contract for Financial Advisory Services for the Lower Cape Fear Water and Sewer Authority. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

PRESENTATION: Source Water Protection Regional Plan by Krysden Burden with Brunswick County Public Utilities

The presentation will be attached to the minutes.

ENGINEER'S COMMENTS

Jess Powell wanted to update the board on the Kings Bluff Phase 2 pipeline. Mr. Powell advised that the project was on schedule and would meet all deadlines.

ATTORNEY COMMENTS

No comments

EXECUTIVE DIRECTOR REPORT

EDR1 – Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending February 29, 2024

Executive Director Holloman reported that during February 2024, Brunswick County and Cape Fear Public Utilities Authority were above projections.

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

No comments

PUBLIC COMMENT

No comments

CLOSED SESSION

Chairman Knight requested a motion to go into a closed session in accordance with NCGS §143-318.11(a)(3) to consult with attorney to preserve the attorney-client privilege:

Motion: Director Leonard **MOVED**; seconded by Director Williams, to go into closed session in accordance with NCGS §143-318.11(a)(3) to consult with attorney to preserve the attorney-client privilege. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

At 9:49 a.m., the board went into closed session. Director Zapple stepped out due to a request by Matthew Nichols, LCFWASA General Counsel. At 10:15a.m., the board returned to open session. Discussion only; no action taken.

ADJOURNMENT

There being no further business, Chairman Knight adjourned the meeting at 10:16 a.m.

Respectfully Submitted:

_____

Scott Phillips, Secretary

Lower Cape Fear Regional Source Water Protection Plan

LCFWASA Board Meeting- March 11, 2024

By: Glenn Walker and Krysden Burden

What is source water protection?

The NC DEQ defines source water as "untreated water from streams, rivers, lakes, or groundwater aquifers that are sources of public drinking water."[1]

Surface water source- Cape Fear River

Groundwater sources- Castle Hayne and PeeDee aquifers

Source water protection is the act of protecting drinking water sources from pollution and contamination.

Some ways of doing so include the North Carolina Surface Water Protection Program and Wellhead Protection Program.

1. https://www.deq.nc.gov/about/divisions/water-resources/drinking-water/drinking-water-protection-program

History

2014: North Carolina HB 894, "An Act to Improve Source Water Protection Planning"

Required public water suppliers to complete a source water protection plan

2018: Federal America's Water Infrastructure Act

Required PWS suppliers to submit a source water risk and resiliency plan

2022: Cape Fear Public Utility Authority (CFPUA) submits a ***voluntary*** surface (source water) protection plan to NCDEQ and forms a source water protection team

2023: NCDEQ approves CFPUA's Source Water Protection Plan in the spring; Brunswick County partners with CFPUA in the fall and takes the lead on developing a regional plan which includes Pender County and LCFWASA

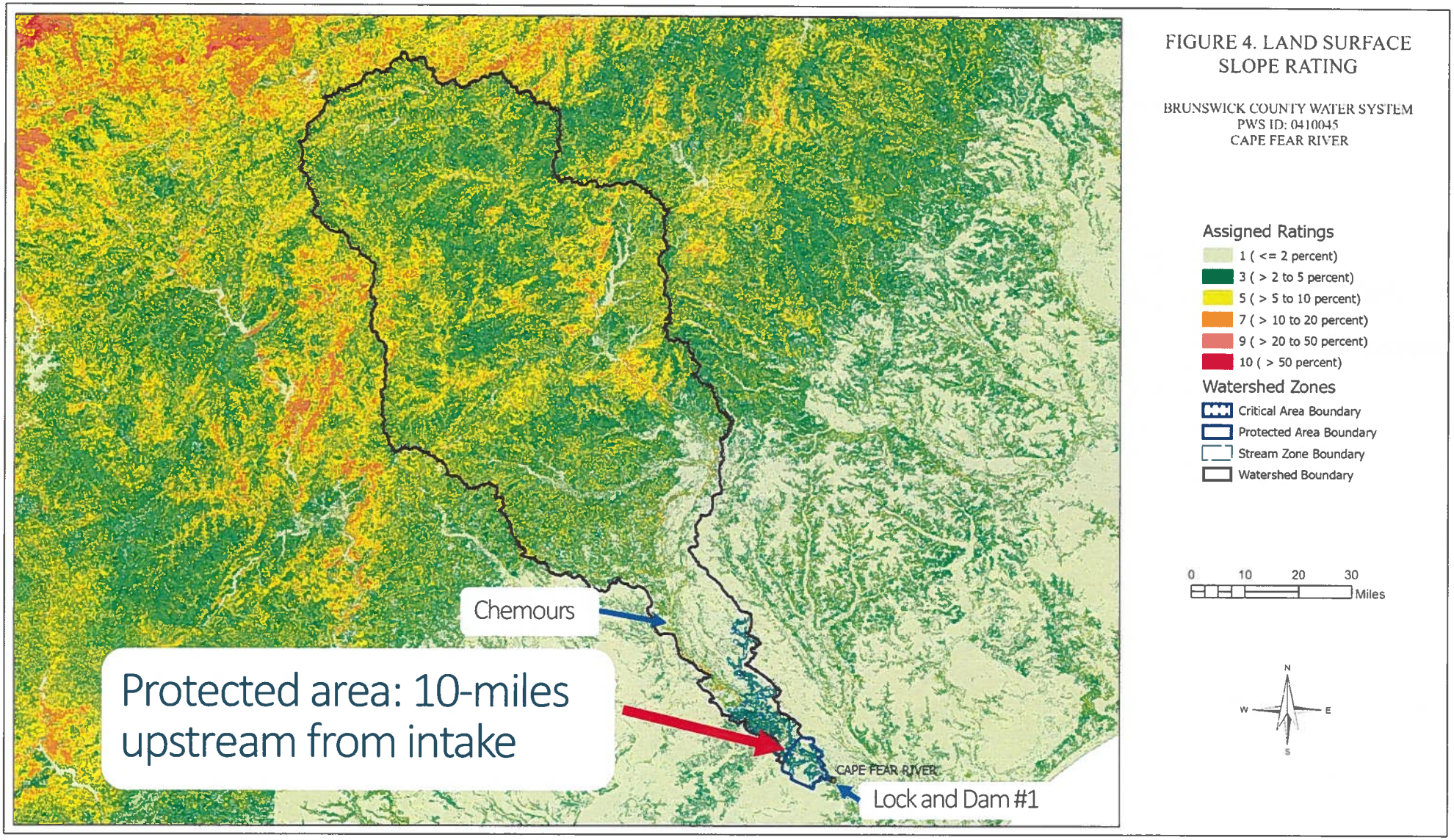


FIGURE 4. LAND SURFACE SLOPE RATING
BRUNSWICK COUNTY WATER SYSTEM
PWS ID: 0410045
CAPE FEAR RIVER
Assigned Ratings
1 (<= 2 percent)
3 (> 2 to 5 percent)
5 (> 5 to 10 percent)
7 (> 10 to 20 percent)
9 (> 20 to 50 percent)
10 (> 50 percent)
Watershed Zones
Critical Area Boundary
Protected Area Boundary
Stream Zone Boundary
Watershed Boundary
0 10 20 30
Miles
N
W
E
S
Chemours
Protected area: 10-miles upstream from intake
CAPE FEAR RIVER
Lock and Dam #1

Brunswick County Goals

1. Facilitate source water protection team discussions on regulatory matters that affect the Cape Fear River Basin

2. Oversee algae monitoring program at the raw water intake (Kings Bluff Station)

3. Develop a robust upstream source water protection outreach program

This is where we need your help

Note:

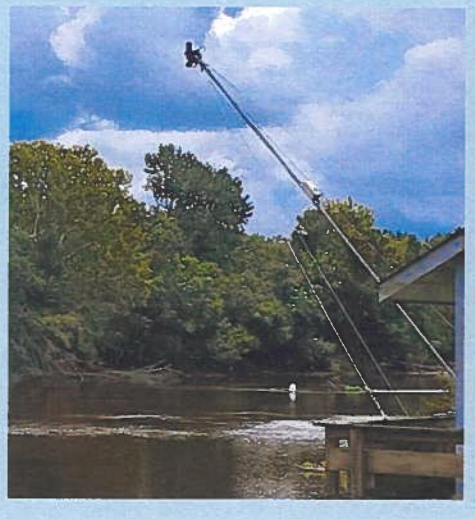
- For details on CFPUA's goals, please refer to their SWPP located in the "Document Center" at www.cfpua.org
- Pender County and LCFWASA have the opportunity to develop their own goals and/or adopt CFPUA's and Brunswick County's goals

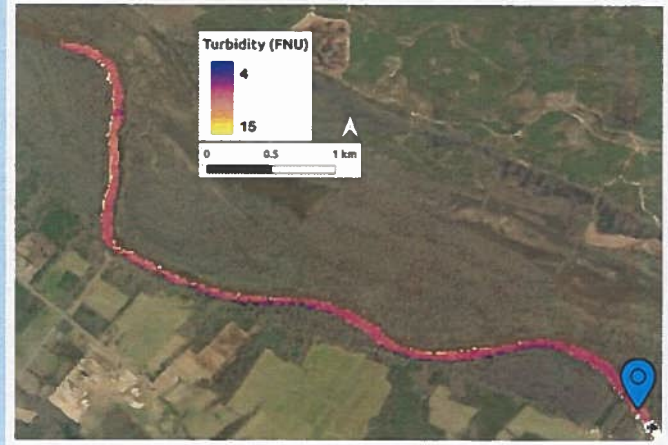
Algae Monitoring

Algae monitoring across the CFR Basin has grown in scope and partners

- Initially BCPU was monitoring at the LCFWASA intake above Lock & Dam #1 and sharing data with the intake partners: CFPUA, BCPU, Pender County, and DEQ

Currently USGS, DEQ, TNC, COE, and LCFWASA are all working together to collect and share data





Connections Upstream

Working on securing funding for educational messaging in the 10-mile protected area

Creating an informational handout that educates the community on source water protection

See handout to the right

Meeting with Bladen County Soil and Water on 3/12

Thoughts on additional contacts/connections?

Upstream Areas of Focus

With FEMA Floodplain Layer

Kings Bluff Station

Kings Bluff Station

Images taken from Bladen County GIS Web Viewer: https://gis.bladenco.org/

LANDOWNER BENEFITS

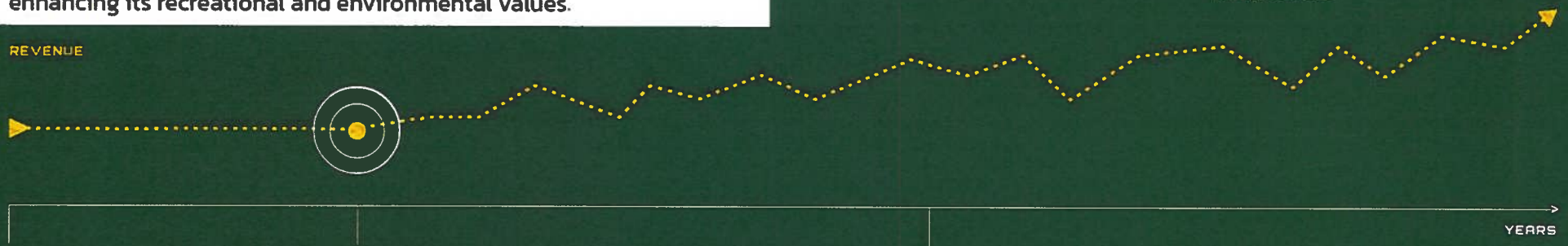
New sources of revenue for landowners

LandYield's offset projects provide access to the growing carbon market for timberland owners with less than 5,000 forested acres of ownership.

By deferring harvests, you allow your forest to store more carbon and generate carbon offsets while enhancing its recreational and environmental values.

Land Preservation: A Potential *(profitable?)* Forestry Option

*The price projection is representative of a fluctuating 3% inflationary growth and is not indicative or a guarantee of any future price or returns.



1-3

Harvest deferral & fixed prices

Landowner revenue over the first three years are set using a fixed offset price.

4-20

Harvest deferral & market-linked earnings

Beginning in the fourth year, your payments are directly tied to current carbon offset market prices. If carbon offset prices rise, your revenue will grow accordingly.

21-40

Limited harvests or continued market-linked offset earnings

In the second 20-year period, you are allowed to begin harvesting your enrolled lands (while maintaining Y20 carbon stocks). Depending on the registry rules then in effect, you may also have the opportunity to commit to a second harvest deferral to continue to receive additional offset revenue. In either case, you can still cut timber for your own personal use and in other specific circumstances.

https://landyield.com/

Potential Agencies to Partner With

North Carolina Land Trust Alliance

https://landtrustalliance.org/land-trusts/gaining-ground/north-carolina

The Nature Conservancy

https://www.nature.org/en-us/about-us/where-we-work/united-states/north-carolina/

Unique Places LLC

https://www.landcan.org/local-resources/Unique-Places-LLC/37456/

North Carolina Coastal Land Trust

https://coastallandtrust.org/

Thank you for your time today

Members of the Source Water Protection Team

Lower Cape Fear Water & Sewer Authority

Finance Committee Meeting Minutes

March 11, 2024

Chairman Knight called to order the Finance Committee Meeting on March 11, 2024, at 8:30 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, Charlie Rivenbark, Chris Smith, and Phil Tripp

Absent: None

Present by Virtual Attendance: None

Staff: Tim H. Holloman, Executive Director; Matthew Nichols, General Counsel; Sam Boswell, COG; and Danielle Hertzog, Financial Administration Assistant

Guests Present: Director Wayne Edge; Jorgen Holmberg, Computer Warriors; Glenn Walker, Brunswick County Water Resources Manager; and Krysden Burden, Brunswick County Public Utilities

Guests Virtual Attendance: None

PowerPoint for Annual Budget Fiscal Year 2024-2025

Executive Director Holloman reviewed essential cost items for the FY 2024-2025 draft budget. Our customers have projected to use 10,207,430 gallons of water for an estimated revenue of 4.4 million. Health insurance will be increasing by 5% to $2010. The property and liability insurance expenses will be in on April 1. The state retirement will increase from 12.85% to 13.6%. LCFWASA will purchase Anti-Vortex Equipment for the cost of $50,000 for the Kings Bluff Plant. Additional engineering and permitting will increase engineering costs by $5,300. We will have Pay-Go for the Air Backwash and Walkway for $1,550,000. Rates will increase by 0.04 to 0.44 from the current .40, as recommended by the rate forecast needed for the Master Plan. The fourth pump addition will need to be pushed back two fiscal years until funds have increased. The FY 2024-2025 budget is a 6% increase from the FY2023-2024 budget due primarily to operating capital expenses, building the R & R Fund, and Bladen Bluffs' increase in operating cost.

Resolution Awarding Contract for Financial Advisory Services for the Lower Cape Fear Water and Sewer Authority

Executive Director Holloman recommended the Finance Committee to vote to award First Tryon the Financial Advisory Agreement.

Motion: Director DeVane **MOVED**; seconded by Director Rivenbark, to recommend to the entire board and to approve the Resolution Awarding Contract for Financial Advisory Services for the Lower Cape Fear Water and Sewer Authority. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

ADJOURNMENT

There being no further business, Chairman Knight adjourned the meeting at 8:43 a.m.

Respectfully Submitted,

_____

Tim Holloman, Executive Director

The next Finance Committee Meeting of the Lower Cape Fear Water & Sewer Authority is scheduled for Monday, May 13, 2024, at 8:30 a.m. in the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina.

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: Greg Lazorchak

DATE: 4/1/2024

SUBJECT: Monthly maintenance report for March 2024

Mr. Holloman,

The Maintenance and Operations of the king's bluff facility for the month of March 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 Boss 811 system.
KB personnel pumped out vaults at The Bluffs and Kings Bluff.
KB personnel painted plates in basement on pump 4 & 5.
KB personnel power washed basement of pump room 4 & 5 & diesel storage tank #2.
KB personnel shoveled and cut in overgrowth on walkway at Raw Tank .
KB personnel cleaned ARV on pump 4 of tuberculation and buildup.
KB personnel cleaned around Brunswick County vault.

Contractors:
Pursuit Cleaning came to Kings Bluff offices for weekly cleaning.
LJ's Cut patch behind gen. building
Ken from Underwood pumps came to look at check valve on pump 5.
Newcomb HVAC changed filters on unit outside.
.

Thank you,
Gregory Lazorchak

Resolution Adopting the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for Kings Bluff Raw Water Pump Station, PWSID 50-09-013, for Calendar Year 2023

Whereas, North Carolina General Statute 143-335 (l) requires that each system that provides public water services or plans to provide such services shall, either individually or together with other systems, prepare and submit a Local Water Supply Plan at least once each five years; and

Whereas, as required by the statute and in the interests of sound local planning, the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for calendar year 2023 for Kings Bluff Raw Water Pump Station, has been developed and submitted to the Board of Directors for approval; and

Whereas, the Board of Directors for the Lower Cape Fear Water & Sewer Authority (Authority) find that the Local Water Supply Plan is in accordance with the provisions of North Carolina General Statute 143-355 (l) and that it will provide appropriate guidance for the future management of water supplies for the Authority, as well as useful information to the Department of Environmental Quality for the development of a state water supply plan as required by statute.

Now, Therefore, Be It Resolved by the Chairman and Board of Directors of the Lower Cape Fear Water & Sewer Authority that the Local Water Supply Plan for calendar year 2023 for Kings Bluff Raw Water Pump Station is approved for submittal to the Department of Environmental Quality, Division of Water Resources (Department); and

Be It Further Resolved that the Board of Directors of the Authority intends that this plan shall be revised to reflect changes in relevant data and projections at least once every five years or as otherwise requested by the Department, in accordance with the statute and sound planning practice.

This Resolution was adopted on the 8th day of April 2024.

_____

Harry Knight, Chairman

ATTEST:

_____

Scott Phillips, Secretary

LCFWSA - Kings Bluff

2023

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Water System Name:	LCFWSA - Kings Bluff	PWSID:	50-09-013
Mailing Address:	1107 New Pointe Blvd., Suite # 17 Leland, NC 28451	Ownership:	Authority
Contact Person:	Tim H Holloman	Title:	Executive Director
Phone:	910-383-1919	Cell/Mobile:	919-333-5933

Provisional

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Other	48	80.00 %
Other	54	20.00 %

What are the estimated total miles of distribution system lines? **38 Miles**
How many feet of distribution lines were replaced during 2023? **0 Feet**
How many feet of new water mains were added during 2023? **0 Feet**
How many meters were replaced in 2023? **0**
How old are the oldest meters in this system? **0 Year(s)**
How many meters for outdoor water use, such as irrigation, are not billed for sewer services? **0**
What is this system's finished water storage capacity? **0.0000 Million Gallons**
Has water pressure been inadequate in any part of the system since last update? *Line breaks that were repaired quickly should not be included.* **No**

Programs

Does this system have a program to work or flush hydrants? **No**
Does this system have a valve exercise program? **Yes, Semi-Annually**
Does this system have a cross-connection program? **No**
Does this system have a program to replace meters? **No**
Does this system have a plumbing retrofit program? **No**
Does this system have an active water conservation public education program? **Yes**
Does this system have a leak detection program? **Yes**

Periodic Inspection of the entire pipeline checking for leaks.

Water Conservation

What type of rate structure is used? **Flat/Fixed**
How much reclaimed water does this system use? **0.0000 MGD** For how many connections? **0**
Does this system have an interconnection with another system capable of providing water in an emergency? **No**

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Cape Fear River (02-3)	100 %	Brunswick	80 %
		New Hanover	19 %
		Pender	1 %

What was the year-round population served in 2023? 550,000

What was the seasonal population and months served in 2023? (if applicable) 440,000 (May Jun Jul Aug Sep)

Has this system acquired another system since last report? No

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	0	0.0000	0	0.0000
Commercial	0	0.0000	0	0.0000
Industrial	0	1.0820	0	0.0000
Institutional	0	0.0000	0	0.0000

How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0000 MGD

Water Sales

Purchaser	PWSID	Average Daily Sold (MGD)	Days Used	Contract MGD	Contract Expiration	Recurring	Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
Brunswick County	04-10-045	17.4000	365	24.0000	2022	Yes	Yes	48,54	Regular
Cape Fear Public Utility Authority	04-65-010	18.0000	365	38.0000	2022	Yes	Yes	48,54	Regular
Pender County	70-71-011	1.6000	365	6.0000	2029	Yes	Yes	48,54	Regular

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	30.0500	34.8300	May	30.4800	42.0800	Sep	28.6600	36.2700
Feb	28.9400	30.0800	Jun	28.4100	35.8600	Oct	26.1800	35.1900
Mar	28.8400	37.7500	Jul	29.0700	39.1300	Nov	21.1600	27.8600
Apr	31.6600	43.5700	Aug	30.4000	38.0300	Dec	23.5500	32.4700

Surface Water Sources

Stream	Reservoir	Average Daily Withdrawal MGD	Average Daily Withdrawal Days Used	Maximum Day Withdrawal (MGD)	Available Raw Water Supply MGD	Available Raw Water Supply * Qualifier	Usable On-Stream Raw Water Supply Storage (MG)
Cape Fear River	Lock and Dam No. 1	39.9800	365	43.5700	96.0000	F	0.0000

* Qualifier: C=Contract Amount, SY20=20-year Safe Yield, SY50=50-year Safe Yield, F=20% of 7Q10 or other instream flow requirement, CUA=Capacity Use Area Permit

Surface Water Sources (continued)

Stream	Reservoir	Drainage Area (sq mi)	Metered?	Sub-Basin	County	Year Offline	Use Type
Cape Fear River	Lock and Dam No. 1	5,255	Yes	Cape Fear River (02-3)	Bladen		Regular

What is this system's off-stream raw water supply storage capacity? **3 Million gallons**

Are surface water sources monitored? **Yes, Daily**

Are you required to maintain minimum flows downstream of its intake or dam? **No**

Does this system anticipate transferring surface water between river basins? **No**

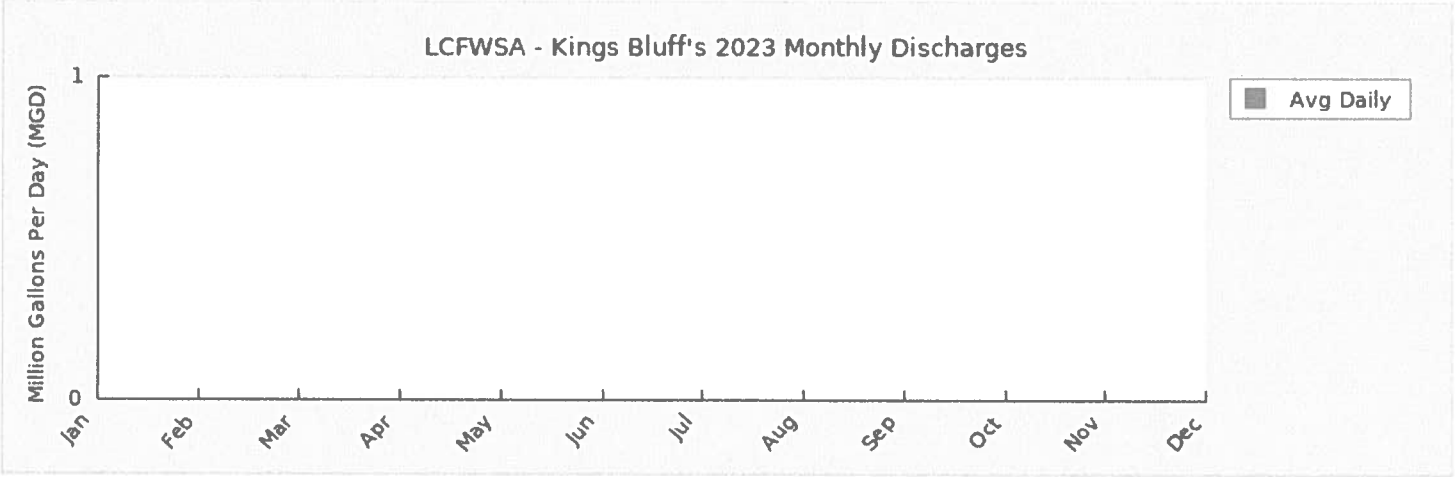
Water Purchases From Other Systems

Seller	PWSID	Average Daily Purchased (MGD)	Days Used	Contract			Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
				MGD	Expiration	Recurring			
Cape Fear Public Utility Authority	04-65-015	0.0000	0	0.0000	2023	Yes	No	24	Emergency

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.0000	May	0.0000	Sep	0.0000
Feb	0.0000	Jun	0.0000	Oct	0.0000
Mar	0.0000	Jul	0.0000	Nov	0.0000
Apr	0.0000	Aug	0.0000	Dec	0.0000



How many sewer connections does this system have? 0

How many water service connections with septic systems does this system have? 0

Are there plans to build or expand wastewater treatment facilities in the next 10 years? No

5. Planning

Projections

	2023	2030	2040	2050	2060	2070
Year-Round Population	550,000	556,000	567,325	567,845	568,381	568,933
Seasonal Population	440,000	453,200	466,796	480,800	495,224	510,081
Residential	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Commercial	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Industrial	1.0820	1.0822	1.2500	1.2500	1.2500	1.2500
Institutional	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
System Process	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unaccounted-for	1.8980	1.9000	1.9000	1.9000	1.9000	1.9000

Future Water Sales

Purchaser	PWSID	MGD	Contract Year Begin	Year End	Pipe Size(s) (Inches)	Use Type
Brunswick County	04-10-045	50.0000	2030	2070	48,54	Regular

Demand v/s Percent of Supply

	2023	2030	2040	2050	2060	2070
Surface Water Supply	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Supplies		0.0000	0.0000	0.0000	0.0000	0.0000
Total Available Supply (MGD)	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000
Service Area Demand	2.9800	2.9822	3.1500	3.1500	3.1500	3.1500
Sales	37.0000	68.0000	68.0000	68.0000	68.0000	68.0000
Future Sales		50.0000	50.0000	50.0000	50.0000	0.0000
Total Demand (MGD)	39.9800	120.9822	121.1500	121.1500	121.1500	71.1500
Demand as Percent of Supply	42%	126%	126%	126%	126%	74%

The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is 0 gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here. **No changes**

Are there other demand management practices you will implement to reduce your future supply needs? **No changes**

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs? **No Changes**

How does the water system intend to implement the demand management and supply planning components above? **No Changes**

Additional Information

Has this system participated in regional water supply or water use planning? **Yes, Yes, McKim and Creed completed an analysis of usage in 2016.**

What major water supply reports or studies were used for planning? **Kings Bluff usage, trends and population projections for regiona growth.**

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues:

Resolution Adopting the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for Bladen Bluffs Regional Surface Water System, PWSID 50-09-012 for Calendar Year 2023

Whereas, North Carolina General Statute 143-335 (l) requires that each system that provides public water services or plans to provide such services shall, either individually or together with other systems, prepare and submit a Local Water Supply Plan at least once each five years; and

Whereas, as required by the statute and in the interests of sound local planning, the Lower Cape Fear Water & Sewer Authority's Local Water Supply Plan for calendar year 2023 for Bladen Bluffs Regional Surface Water System, has been developed and submitted to the Board of Directors for approval; and

Whereas, the Board of Directors for the Lower Cape Fear Water & Sewer Authority (Authority) find that the Local Water Supply Plan is in accordance with the provisions of North Carolina General Statute 143-355 (l) and that it will provide appropriate guidance for the future management of water supplies for the Authority, as well as useful information to the Department of Environmental Quality for the development of a state water supply plan as required by statute.

Now, Therefore, Be It Resolved by the Chairman and Board of Directors of the Lower Cape Fear Water & Sewer Authority that the Local Water Supply Plan for calendar year 2023 for Bladen Bluffs Regional Surface Water System is approved for submittal to the Department of Environmental Quality, Division of Water Resources; (Department); and

Be It Further Resolved that the Board of Directors of the Authority intends that this plan shall be revised to reflect changes in relevant data and projections at least once every five years or as otherwise requested by the Department, in accordance with the statute and sound planning practice.

This Resolution was adopted on the 8th day of April 2024.

_____

Harry Knight, Chairman

ATTEST:

_____

Scott Phillips, Secretary

Bladen Bluffs - LCFWSA

2023

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Water System Name:	Bladen Bluffs - LCFWSA	PWSID:	50-09-012
Mailing Address:	1107 New Pointe Blvd., Suite # 17 Leland, NC 28451	Ownership:	Authority
Contact Person:	Tim Holloman	Title:	Executive Director
Phone:	910-383-1919	Cell/Mobile:	–
Secondary Contact:	James Kern	Phone:	910-733-0016
Mailing Address:	PO Box 100 Tar Heel, NC 28392	Cell/Mobile:	–

Provisional

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Ductile Iron	24	100.00 %

What are the estimated total miles of distribution system lines? 1 Miles

How many feet of distribution lines were replaced during 2023? 0 Feet

How many feet of new water mains were added during 2023? 0 Feet

How many meters were replaced in 2023? 0

How old are the oldest meters in this system? 0 Year(s)

How many meters for outdoor water use, such as irrigation, are not billed for sewer services? 0

What is this system's finished water storage capacity? 4.0000 Million Gallons

Has water pressure been inadequate in any part of the system since last update? *Line breaks that were repaired quickly should not be included.* No

Programs

Does this system have a program to work or flush hydrants? No
Does this system have a valve exercise program? No
Does this system have a cross-connection program? No
Does this system have a program to replace meters? No
Does this system have a plumbing retrofit program? No
Does this system have an active water conservation public education program? No
Does this system have a leak detection program? No

Water Conservation

What type of rate structure is used? Other
How much reclaimed water does this system use? 0.0000 MGD For how many connections? 0
Does this system have an interconnection with another system capable of providing water in an emergency? Yes

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Cape Fear River (02-3)	100 %	Bladen	100 %

What was the year-round population served in 2023? 0
Has this system acquired another system since last report? No

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	0	0.0000	0	0.0000
Commercial	0	0.0000	0	0.0000
Industrial	0	0.0000	0	0.0000
Institutional	0	0.0000	0	0.0000

How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0597 MGD

Water Sales

Purchaser	PWSID	Average Daily Sold (MGD)	Days Used	MGD	Contract Expiration	Recurring	Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
Smithfield Packing Company	03-09-527	2.4566	240	4.0000		Yes	No	24	Regular

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	2.1397	3.4800	May	1.6761	3.4300	Sep	1.7710	3.8900
Feb	2.1479	4.2400	Jun	1.6537	3.8300	Oct	1.4642	3.8900
Mar	1.9874	3.5000	Jul	1.4974	3.8300	Nov	1.6363	3.5600
Apr	1.4410	3.4200	Aug	1.5942	3.0700	Dec	1.8632	3.8700

Surface Water Sources

Stream	Reservoir	Average Daily Withdrawal		Maximum Day Withdrawal (MGD)	Available Raw Water Supply		Usable On-Stream Raw Water Supply Storage (MG)
		MGD	Days Used		MGD	* Qualifier	
Cape Fear River		2.7933	227	4.2400	6.0000	T	0.0000

* Qualifier: C=Contract Amount, SY20=20-year Safe Yield, SY50=50-year Safe Yield, F=20% of 7Q10 or other instream flow requirement, CUA=Capacity Use Area Permit

Surface Water Sources (continued)

Stream	Reservoir	Drainage Area (sq mi)	Metered?	Sub-Basin	County	Year Offline	Use Type
Cape Fear River		4,900	Yes	Cape Fear River (02-3)	Bladen		Regular

What is this system's off-stream raw water supply storage capacity? **0 Million gallons**

Are surface water sources monitored? **Yes, Daily**

Are you required to maintain minimum flows downstream of its intake or dam? **No**

Does this system anticipate transferring surface water between river basins? **No**

Water Purchases From Other Systems

Seller	PWSID	Average Daily Purchased (MGD)	Days Used	Contract			Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
				MGD	Expiration	Recurring			
Smithfield Packing Inc.	03-09-527	0.0000	0			Yes	No	24	Regular

Water Treatment Plants

Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Ouput Metered?	Source
Bladen Bluffs Surface Water Tr	6.0000	Yes	Yes	Cape Fear River

Did average daily water production exceed 80% of approved plant capacity for five consecutive days during 2023? **No**

If yes, was any water conservation implemented?

Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2023? **No**

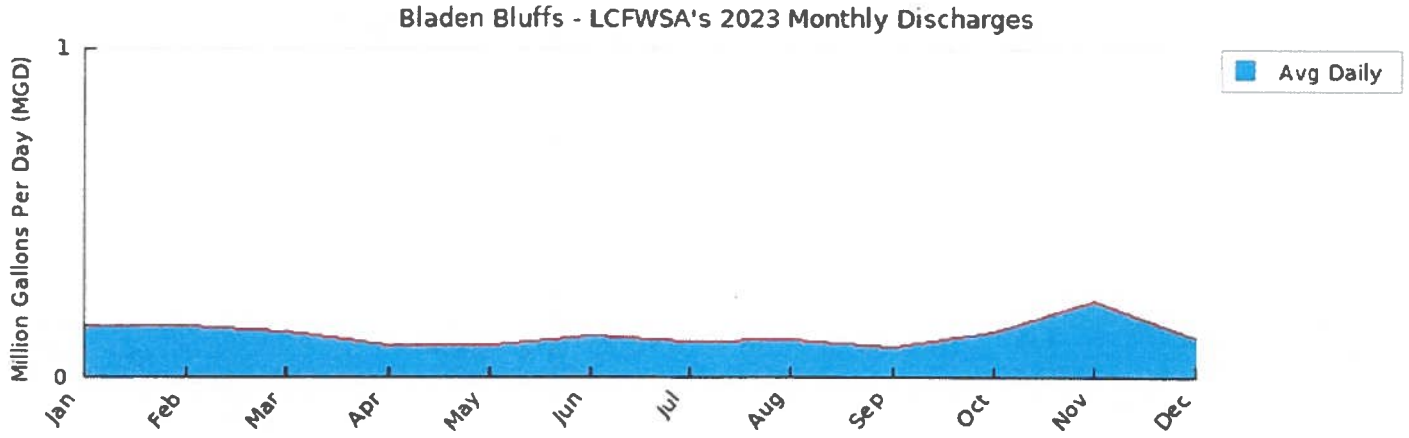
If yes, was any water conservation implemented?

Are peak day demands expected to exceed the water treatment plant capacity in the next 10 years? **No**

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.1602	May	0.1009	Sep	0.0944
Feb	0.1579	Jun	0.1276	Oct	0.1406
Mar	0.1427	Jul	0.1126	Nov	0.2357
Apr	0.1011	Aug	0.1204	Dec	0.1257



How many sewer connections does this system have? 0

How many water service connections with septic systems does this system have? 0

Are there plans to build or expand wastewater treatment facilities in the next 10 years? **No**

Wastewater Permits

Permit Number	Type	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NCG590020	WTP	1.5000	1.5000	0.2000	1.5000	Cape Fear River	Cape Fear River (02-3)

5. Planning

Projections

	2023	2030	2040	2050	2060	2070
Year-Round Population	0	0	0	0	0	0
Seasonal Population	0	0	0	0	0	0
Residential	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Commercial	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Industrial	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Institutional	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
System Process	0.0597	0.0597	0.0597	0.0597	0.0597	0.0597
Unaccounted-for	0.0622	1.5900	1.5900	1.5900	1.5900	1.5900

Demand v/s Percent of Supply

	2023	2030	2040	2050	2060	2070
Surface Water Supply	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Supplies		0.0000	0.0000	0.0000	0.0000	0.0000
Total Available Supply (MGD)	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Service Area Demand	0.1219	1.6497	1.6497	1.6497	1.6497	1.6497
Sales	1.6153	4.0000	4.0000	4.0000	4.0000	4.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	1.7372	5.6497	5.6497	5.6497	5.6497	5.6497
Demand as Percent of Supply	29%	94%	94%	94%	94%	94%

The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is unavailable until we receive population data for 2023 gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here.

Are there other demand management practices you will implement to reduce your future supply needs?

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs?

How does the water system intend to implement the demand management and supply planning components above?

Additional Information

Has this system participated in regional water supply or water use planning? **No**

What major water supply reports or studies were used for planning?

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues.

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

CONSENT AGENDA (C6)

Lower Cape Fear Water & Sewer Authority

CONSENT ITEM- Background: Line-Item adjustments are made to align revenues and expenditures more closely to actuals without exceeding or decreasing the approved or amended budget.

LINE-ITEM ADJUSTMENTS FOR 02/29/2024

Operating Fund:	Line-Item Budget Amount prior to Adjustment	Decrease	Increase	Budget Amount as of 02/29/2024
Expenses				
4047-01 Office Expense	$8,000		$200	$8,200
4049-01 Information Technology	$45,370		$2,000	$47,370
4062-01 Office Equipment	$20,000		$6,000	$26,000
4062-01 Print and Advertising	$5,000		$3,000	$8,000
4062-01 Office Equipment	$15,000	$11,200		$3,800
Total	**$ 93,370**	**$(11,200)**	**$11,200**	**$ 93,370**

NEW BUSINESS (OB1)

Lower Cape Fear Water & Sewer Authority

AGENDA ITEM

To: CHAIRMAN KNIGHT AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: April 8, 2024

Re: Resolution of Lower Cape Fear Water and Sewer Authority Board of Directors Awarding Contract for Partial Replacement of Existing Roof at the Kings Bluff Pump Station

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

Background: The Lower Cape Fear Water & Sewer Authority has undertaken a thorough assessment of the Kings Bluff roofing system's condition to address maintenance and safety concerns.

Action Requested: Motion to approve/disapprove.

RESOLUTION OF LOWER CAPE FEAR WATER AND SEWER AUTHORITY BOARD OF DIRECTORS AWARDING CONTRACT FOR PARTIAL REPLACEMENT OF EXISTING ROOF AT THE KINGS BLUFF PUMP STATION

WHEREAS, the Lower Cape Fear Water and Sewer Authority ("LCFWASA") has determined that it is necessary for a partial replacement of the standing seam metal roof at the Kings Bluff Pump Station;

WHEREAS, LCFWASA initially solicited informal bids without engineering specifications from prospective roofing contractors for the roof replacement project and received three bids that varied widely in scope of work, specifications and price;

WHEREAS, based upon the wide variation and lack of standardization in the informal bid responses, LCFWASA determined that it was in the public interest to engage an engineering firm to prepare plans detailing the roof replacement specifications and scope of work required for the project for purposes of ensuring the safety and integrity of the facilities, securing high-quality services within budgetary constraints, and to assist in the contractor procurement process for the project;

WHEREAS, in August 2023 LCFWASA engaged McKim & Creed ("Engineer") to provide LCFWASA with a bid package of construction documents consisting of construction drawings and specifications in order to allow LCFWASA to solicit bids from prospective contractors qualified to perform the work pursuant to the Engineer's plans and specifications;

WHEREAS, the Engineer completed the roof replacement plans and specifications in November 2023, and the project was advertised with bids due in mid-December 2023;

WHEREAS, LCFWASA received no responses to the first advertisement for bids;

WHEREAS, LCFWASA readvertised the roof replacement project in January 2024 with responses due in February 2024;

WHEREAS, LCFWASA received only one bid in response to the second advertisement, the amount of which was significantly higher than LCFWASA's budget for the project; and,

WHEREAS, LCFWASA determined that it was not in the public interest to accept the sole bid submitted because the amount of the bid was not cost effective and significantly exceeded LCFWASA's budget for the project;

WHEREAS, accordingly, at the Board's Regular Meeting on March 11, 2024, the Board rejected the sole bid, instructed the Executive Director to provide the sole bidder notice of the same, and authorized the Executive Director to solicit additional bids for the project pursuant to the requirements of N.C.G.S. § 143-131 and LCFWASA's Contract and Purchasing Policy;

WHEREAS, LCFWASA solicited additional bids for the project and received one additional bid in the amount of $93,788.00 from Highland Roofing Company of Wilmington / Raleigh, North Carolina, dated March 29, 2024, based upon the project drawings dated November 28, 2023;

WHEREAS, LCFWASA has determined that it is in the public interest to accept Highland Roofing Company's bid because it is cost effective, within LCFWASA's budget for the project, and Highland Roofing Company is the lowest responsible, responsive bidder; and,

WHEREAS, the Board wishes to award the contract for the partial replacement of the standing seam metal roof at the Kings Bluff Pump Station to Highland Roofing Company.

NOW, THEREFORE, BE IT RESOLVED by the Chairman and Directors of the LCFWASA Board that the bid received from Highland Roofing Company for the partial replacement of the standing seam metal roof at the Kings Bluff Pump Station dated March 29, 2024, in the amount of $93,788.00 is hereby accepted. The Board of Directors designates that the Chairman and the Executive Director are duly authorized to execute a contract with Highland Roofing Company for the above-referenced matter on behalf of LCFWASA in the amount of $93,788.00, subject to review and approval of the contract as to form by LCFWASA's attorney.

THEREFORE, BE IT FURTHER RESOLVED, that a copy of this Resolution be recorded in the permanent minutes of this Board. This Resolution shall be effective upon passage.

Adopted this _____ day of April 2024.

_____
Harry Knight, Chairman

ATTEST:

_____
Scott Phillips, Secretary

NEW BUSINESS (NB1)	Lower Cape Fear Water & Sewer Authority

AGENDA ITEM

To: CHAIRMAN KNIGHT AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: April 8, 2024

Re: Resolution Recognizing National Drinking Water Week

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

Background: For more than 40 years, the American Water Works Association and its members have used Drinking Water Week as a unique opportunity for water professionals and the communities they serve to recognize water's vital role in our daily lives.

National Drinking Water Week is celebrated annually during the first whole week in May. This year's recognition will be May 5-11, 2024.

Action Requested: Motion to approve/disapprove Resolution.

Resolution Recognizing National Drinking Water Week

WHEREAS the Board of Directors for Lower Cape Fear Water & Sewer Authority ("the Authority") wishes to provide and promote the importance of raw water to the region; and

WHEREAS, the Authority is a regional organization created to aid the development of a water supply system for its sponsoring member governments comprised of Bladen, Brunswick, Columbus, New Hanover, and Pender Counties, and the City of Wilmington; and

WHEREAS the Authority recognizes that water is our most valuable natural resource; and

WHEREAS, water is treated by our wholesale partners providing public health protection, fire protection, support for our economy and the quality of life we enjoy; and

WHEREAS, any measure of a successful society, low mortality rates, economic growth and diversity, productivity, and public safety are related to access to water; and

WHEREAS we are all stewards of the water infrastructure upon which future generations depend; and

WHEREAS the Authority's Board of Directors calls upon the residents and businesses of our region and those further upriver to protect our source waters from pollution, to practice water conservation, and to get involved in local water issues.

NOW, THEREFORE, BE IT RESOLVED, by the Chairman and the Board of Directors for the Lower Cape Fear Water & Sewer Authority that the first full week in May is proclaimed as Drinking Water Week.

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

This Resolution was adopted on the 8th day of April 2024.

_____

Harry Knight, Chairman

ATTEST:

_____

Scott Phillips, Secretary

Executive Director's Report (EDR1-3)	Lower Cape Fear Water & Sewer Authority

AGENDA ITEM

To: CHAIRMAN KNIGHT AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: April 8, 2024

Re: Executive Director's Report

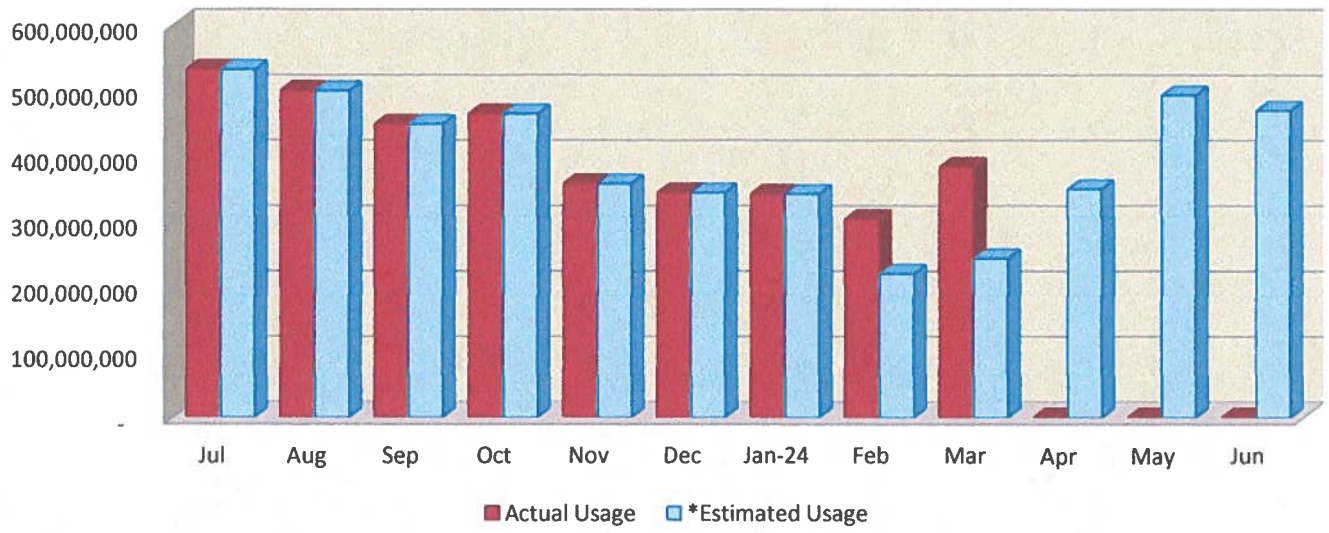
EDR1 - Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending March 31, 2024

EDR2 - Operating Budget Status, Ending February 29, 2024

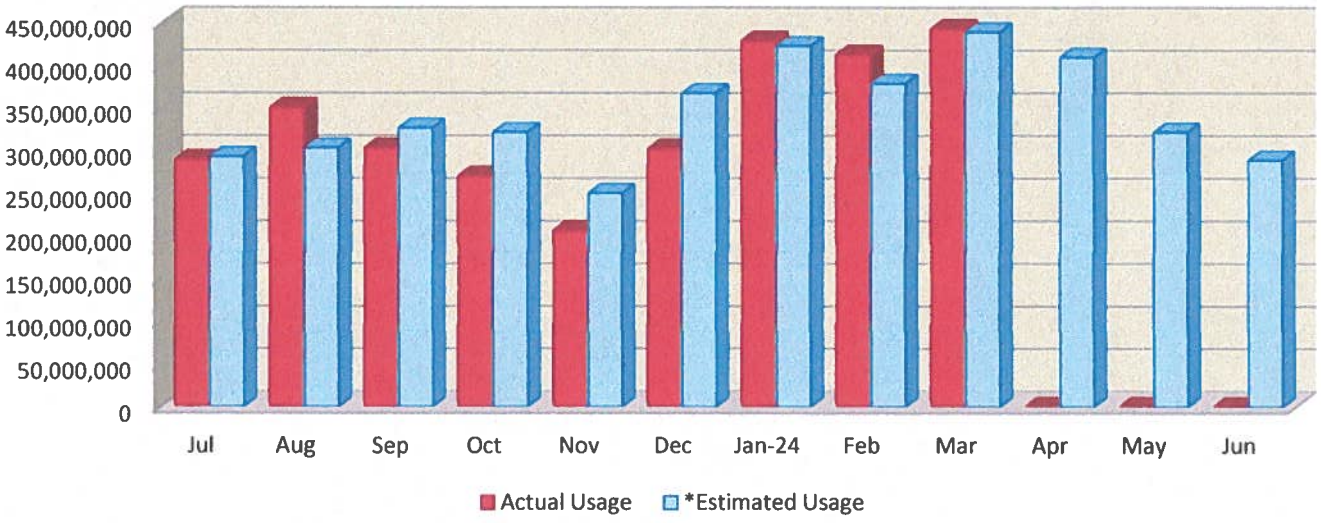
EDR3 - Summary of Activities.

Action Requested: For information purposes.

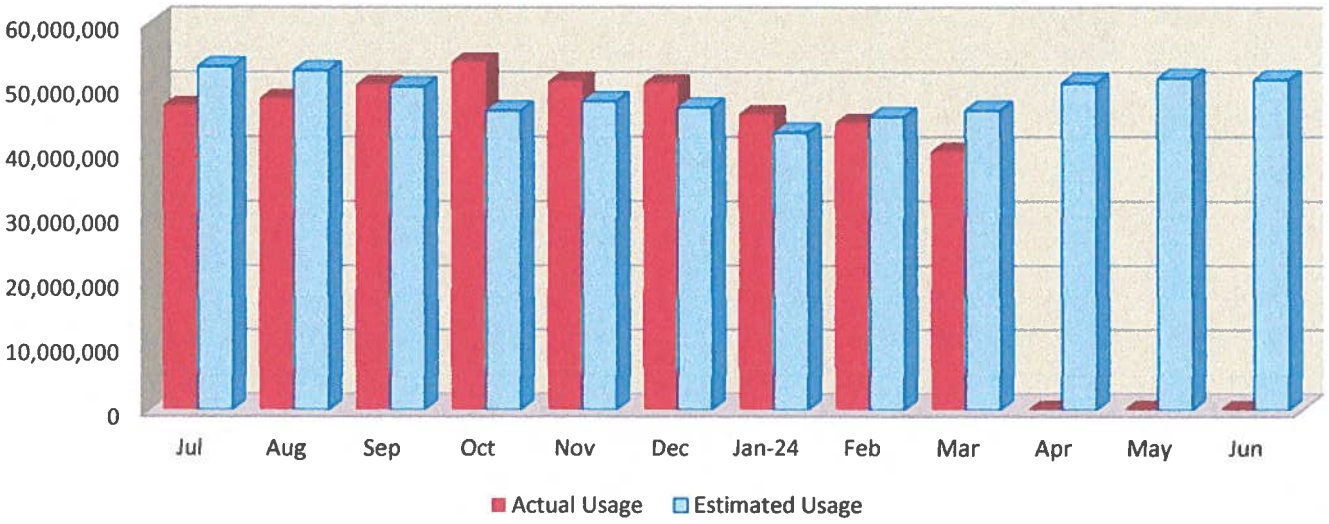
Brunswick County Water Usage FY 23-24



CFPUA Water Usage FY 23-24



Pender County Water Usage FY 23-24



OPERATING FUND BUDGET PERFORMANCE

Jul-1 through Feb 29

	Approved Annual Budget	Approved Annual Budget	Jul 1- Feb 29 Kings Bluff	Jul 1- Feb 29 Bladen Bluffs	Jul 1- Feb 29 OF BUDGET	Budget As of 2/29/2024
Income						
3000-01 · OPERATING REVENUE						
3001-01 · 01 Bruns County Public Utility	1,725,765	1,908,193	1,315,592		1,315,592	69%
3002-01 · 01 CFPUA	1,652,562	1,652,562	1,026,644		1,026,644	62%
3003-01 · 01 Pender County	234,160	234,160	156,832		156,832	67%
3004-01 · 01 HWY 421 - Invista	200,000	100,000	78,638		78,638	79%
3005-01 · 01 Praxair, Inc	100,000	40,784	10,135		10,135	25%
3006-01 · 01 Bladen Bluffs Revenue	4,938,603	4,938,603		4,215,237	4,215,237	85%
Bladen Admin Reimb	110,473	110,473		105,836	105,836	96%
3007-01 · Sales Tax Refund Revenue	100,000	100,000		106,041	106,041	106%
Total 3000-01 · OPERATING REVENUE	9,061,563	9,084,775	2,587,840	4,427,113	7,014,954	77%
3100-00 · OF NONOPERATING REVENUE						
3120-00 · Revenue-Other						
Interest & Investment Revenue	500	9,716	36,993		36,993	381%
FEMA Reimbursement	0	0	0		0	0%
Refunds / Insurance Proceeds/ Other	0	0	489		489	0%
3180-00 · SRF/Parallel Revenue	2,500,000	2,500,000	1,005,732		1,005,732	40%
3900-01 R&R Fund Appropriated	0	0	0		0	0%
2900-00 Fund Balance	0	0	0		0	0%
Total 3100-00 · OF NONOPERATING REVENUE	2,500,500	2,509,716	1,043,214	0	1,043,214	42%
Total Income	**11,562,063**	**11,594,491**	**3,631,054**	**4,427,113**	**8,058,168**	70%
Expense						
4000-01 · ADMINISTRATION EXPENDITURES						
4001-01 · Salary - gross	203,530	203,530	92,159	35,618	127,777	63%
4010-01 · Per Diem= mileage+per diem pay	64,001	64,001	25,407	11,200	36,607	57%
4012-01 - Vehicle Allowance	5,200	5,200	2,490	910	3,400	65%
4070-02 - Phone Allowance	520	520	249	91	340	65%
4015-01 · Payroll Taxes	20,953	20,953	9,127	3,667	12,794	61%
4029-01 · Retirement Employer's Part	26,153	26,153	11,785	4,577	16,362	63%
4035-01 · 401K Employer PD Contribution	11,312	11,312	5,100	1,980	7,080	63%
4036-01 · Payroll Processing Exp	2,900	2,900	1,976		1,976	68%
4038-01 · Insurance Group	40,176	40,176	18,304	7,031	25,334	63%
4039-01 · Insurance, Property	103,734	103,734	66,361	18,153	84,514	81%
4046-00 Professional Services General	15,000	3,800	0	0	0	0%
4046-01 · Attorney	50,000	50,000	23,437		23,437	47%
4047-01 · Auditor	8,000	8,200	5,400	2,800	8,200	100%
4048-01 · Engineer	300,000	290,000	38,609		38,609	13%
4049-01 Information Technology	16,000	50,428	14,539		14,539	29%
4055-01 · Office Maint/Repair	24,000	24,000	11,529		11,529	48%
4058-01 Office Utilities	5,000	5,000	1,513		1,513	30%
4059-01 Office Expense	14,000	14,000	9,488		9,488	68%
4062-01 Office Equipment	10,000	26,000	29,001		29,001	112%
4064-01 Printing & Advertising	5,000	8,000	4,445		4,445	56%
4065-01 Telephone and Internet	3,500	3,500	2,145		2,145	61%
4070-01 · Travel & Training	29,000	29,000	13,327		13,327	46%
4080-01 · Miscellaneous Expenses	20,000	20,000	11,707		11,707	59%
Total 4000-01 · ADMINISTRATION EXPENDITURES	977,979	1,010,407	398,097	86,026	484,123	48%
4500-01 · OPERATING EXPENDITURES						
4501-00 · Sales Tax Expense - Other	100,000	100,000		96,294	96,294	96%
4510-01 · Bladen Bluffs Expenses	3,324,385	3,324,385		2,772,657	2,772,657	83%
4520-01 · Utilities-Energy Pump Station	786,589	786,589	483,018		483,018	61%
4530-01 · Kings Bluff O&M Expenses	686,749	686,749	221,872		221,872	32%
4535-01 Kings Bluff Hurricane Other FEMA	0	0	0		0	0%
4543-01 · Series 2012 Bond Principal (ST)	0	0	0		0	0%
4544-01 · Series 2012 Bond Interest (ST)	0	0	0		0	0%
4545-01 · Series 2010 Bond Principal (BB)	970,000	970,000		970,000	970,000	100%
4546-01 · Series 2010 Bond Interest (BB)	450,000	450,000		351,436	351,436	78%
5180-00 · SRF/Parallel Expenditures	2,500,000	2,500,000		1,601,653	1,601,653	64%
7400-01 · Operating Capital Expense	1,286,360	1,286,360		76,329	76,329	6%
4998-05- Transfer to R&R- KB R&R Expense	380,000	380,000		380,000	380,000	100%
4998-05- Transfer to Enterprise Fund	100,000	100,000		100,000	100,000	100%
Total 4500-01 · OPERATING EXPENDITURES	10,584,083	10,584,084	704,890	6,348,369	7,053,259	67%
Total Expense	**11,562,062**	**11,594,491**	**1,102,987**	**6,434,396**	**7,537,383**	65%

Executive Director Highlighted Activities:

- Regular Monthly meeting with Design Build Team and Owner's Advisor for the parallel line project.
- Worked with McKim and Creed on roof work at Kings Bluff and met with bidders.
- Worked with McKim and Creed on the PER for the air backwash and walkway.
- Worked with McKim and Creed to update the Master Planning Document to submit to the Long-Range Planning Commission.
- Worked with the Owner's Advisor to submit a request for drawing down the $30 million for the 10-mile parallel project and the reservoir project exploration.
- Participated in weekly update meetings on the 10-mile parallel line.
- Met with the electrician and Duke to schedule the placement of service on "Red Barn" in preparation for burning and removing the former rental house.
- Spoke at the New Hanover County Board meeting in regard to Sand Mine Special Use Permit modification.
- Attended Pender County monthly meeting.
- Attended CFPUA monthly meeting.
- Participated in a meeting with our Environmental Commission representative and partners.
- Planned the Environmental presentation for Leadership Brunswick, hosted at LCFWASA.
- Participated in the Health Services Education Day for Leadership Brunswick.
- Participated in interviews for the new operator at Kings Bluff.
- Continued work on the 2024-2025 physical year budget.
- Worked with Brunswick County and Power Secure for Generator sensor repairs and testing.
- Spoke with a Duke sustainability representative on opportunities in the Cape Fear Region.

Closed Session (CS1)	Lower Cape Fear Water & Sewer Authority

AGENDA ITEM

To: CHAIRMAN KNIGHT AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: April 8, 2024

Re: Closed Session in Accordance with NCGS §143-318.11(a)(3) and (a)(6) to consult with attorney in order to preserve the attorney-client privilege and for Personnel Matters respectively

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

A Closed Session is required in accordance with NCGS §143-318.11(a)(3) and (a)(6) to discuss with our attorney matters within the attorney-client privilege and for Personnel Matters respectively.

A motion is made by _____ to go into a closed session in accordance with North Carolina General Statute Section 143-318.11(a)(3) and (a)(6).

The motion is seconded by _____.

Closed Session

A motion is made by _____ to return to open session.

The motion is seconded by _____.