

AGENDA
Lower Cape Fear Water & Sewer Authority
1107 New Pointe Boulevard, Suite # 17, Leland, North Carolina
9:00 a.m. – Regular Monthly Board Meeting
July 13, 2026

MEETING CALL TO ORDER: Chairman Phillips

INVOCATION

PLEDGE OF ALLEGIANCE

APPROVAL OF CONSENT AGENDA

- C1** – Minutes of June 8, 2026, Regular Board Meeting
- C2** – Minutes of May 11, 2026, Regular Board Meeting
- C3** – Minutes of May 11, 2026, Finance Committee Meeting
- C4** – Kings Bluff Monthly Operations and Maintenance Report
- C5** – Bladen Bluffs Monthly Operations and Maintenance Reports
- C6** – Line-Item Adjustment for May 31, 2026

NEW BUSINESS

- NB1** – Truck for Lower Cape Fear Water & Sewer Authority Office
- NB2** – Owners Advisor for Reservoir Project

ENGINEER'S COMMENTS

ATTORNEY COMMENTS

EXECUTIVE DIRECTOR REPORT

- EDR1** – Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending June 30, 2026
- EDR2** – Operating Budget Status, Ending May 31, 2026
- EDR3** – Summary of Activities

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

PUBLIC COMMENT

ADJOURNMENT

The next board meeting of the Lower Cape Fear Water & Sewer Authority is scheduled for Monday, August 10th at 9:00 a.m. in the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina.

AGENDA ITEM

To: CHAIRMAN PHILLIPS AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: July 13, 2026

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 June 8, 2026, Regular Board Meeting
- C2** – Minutes of May 11, 2026, Regular Board Meeting
- C3** – Minutes of May 11, 2026, Finance Committee Meeting
- C4** – Kings Bluff Monthly Operations and Maintenance Report
- C5** – Bladen Bluffs Monthly Operations and Maintenance Report
- C6** – Line-Item Adjustment for May 31, 2026

Action Requested: Motion to approve/disapprove Consent Agenda.

Lower Cape Fear Water & Sewer Authority
Regular Board Meeting Minutes
June 8th, 2026

Chairman Phillips called to order the Authority meeting scheduled on June 8th, 2026, 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 Edge gave the invocation.

Roll Call by Chairman Phillips:

Present: Chakema Clinton-Quintana, Patrick DeVane, Wayne Edge, Jerry Groves, Harry Knight, Al Leonard, Scott Phillips, Chris Smith, Phil Tripp, Frank Williams, and Rob Zapple

Present by Virtual Attendance: Damien Buchanan and Bill Saffo

Absent: Bill Sue

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

Guests Present: Jorgen Holmberg, Computer Warriors; Kevin Morris, Cape Fear Public Utility Authority Deputy Director; Ken Waldroup, Cape Fear Public Utility Authority Executive Director; David Fournier, HDR Construction Services; Jeff Gramm, Cape Fear Public Utility Authority Treatment/Engineering Services Administration; Greg Lazorchak, Brunswick County Kings Bluff Water Plant Facility Operator; Amy Vitner, First Tryon Advisors Managing Director; and Sean Kenyon, McKim & Creed Project Manager

Guests Virtual Attendance: Heidi Cox, NC DEQ Regional Engineering Supervisor, Division of Water Infrastructure; James Proctor, Pender County Interim Utilities Director; Aaron Smith, Brunswick County Director of Fiscal Operations; Eileen Callori, Brunswick County Deputy Finance Officer; John Nichols, Brunswick County Public Utilities Director; Kim Colson, P.E., Regulatory and Funding Strategy Lead HDR Inc; and Craig Wilson, PE, Cape Fear Public Utility Authority Assistant Operations Director

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

APPROVAL OF CONSENT AGENDA

C1 – Minutes of May 11, 2026, Regular Board Meeting

C2 – Minutes of May 11, 2026, Personnel Committee Meeting

C3– Minutes of May 11, 2026, Finance Committee Meeting

C4– Minutes of May 11, 2026, Long Range Planning Committee Meeting

C5 – Kings Bluff Monthly Operations and Maintenance Report

C6 – Bladen Bluffs Monthly Operations and Maintenance Reports

C7 – Line-Item Adjustment for April 30, 2026

Director Zapple would like to remove Consent Agenda items C1 and C3 to correct the minutes. The board would like an engineering presentation for the July meeting on the leaking fuel tank, covering the current leak condition, containment status, and fuel volume, so the board fully understands the situation before hurricane season.

Motion: Director Leonard **MOVED**; seconded by Director Williams, approval of the Consent Agenda Items C2, C4-C7. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

OLD BUSINESS

OB1 - Finance Committee Recommended Budget for Fiscal Year 2026-2027

Executive Director Holloman reviewed essential cost items for the FY 2026-2027 draft budget. Our customers' water usage is projected at 11,196,923 gallons, with a proposed rate of \$0.52 per 1,000 gallons, resulting in an estimated \$5.8 million in revenue. Health insurance will increase by 18%. The property and liability insurance expenses will increase by 8%. State retirement will increase from 14.85% to 15.10%. LCFWASA will purchase a fourth pump through Pay-Go. We will pay for the Air Backwash and Walkway cost of \$4,200,000 through either state appropriation, finance, or partner contribution. Rates will increase by 0.04 for governmental partners and Industrial customers. Governmental partners rates will increase to 0.52 per 1,000 gallons from the current

0.48, and industrial customers will increase to 0.74 per 1,000 gallons from the current 0.70, as recommended by the rate forecast for the Master Plan. The FY 2026-2027 budget has a 23% decrease over the FY2025-2026 budget, primarily due to the Parallel Line Project nearing completion. Director Zapple would like an update from Executive Director Holloman next month on the Bladen Bluff budget expense decrease. No written or public comments were received regarding the Draft Budget and Budget Ordinance for Fiscal Year 2026–2027.

Motion: Director Williams **MOVED**; seconded by Director Knight, to approve the Budget for Fiscal Year 2026-2027. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

NEW BUSINESS

NB1 - Annual Right-of-Way Mowing Contract

Executive Director Holloman recommends executing the right-of-way mowing contract with Rogers Excavating.

Motion: Director Leonard **MOVED**; seconded by Clinton-Quintana, to approve the recommended contractor for the Right-of-Way Mowing Contract. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

NB2 - Final Master Planning Document (25-Year Planning Period FY 2026-2051)

Sean Kenyon presented the current draft Capital Improvement Plan (CIP) from 2026 through 2051, including Kings Bluff, Raw Water, and Bladen Bluff water treatment facilities. The CIP had several factors, including category of need, capacity issue, whether it needs to be replaced or rehabilitated, and whether there is a maintenance efficiency or redundancy issue. They assigned each project a criticality score indicating whether it was a high or low priority and assessed the consequences if no action was taken. There are three primary drivers: demand and capacity, life cycle, redundancy, and resiliency. The criticality is scored as 1, 2, or 3. One being the lowest and three being the highest need. The preliminary design memorandum is based on a demand table for projected usage by different entities, with a projected demand of 96 million gallons per day in 2062.

Sean Kenyon listed thirteen projects for Kings Bluff and three cost-sharing projects. KB1 New 4th Pump at Kings Bluff has a criticality of three because current pumps will meet projected demands by 2037. The fourth pump will be on standby/backup and will be added to the pump rotation to reduce hours per pump. KB2 Rebuild/Refurbish the existing 1600 HP vertical turbine raw water pump. Rebuilding the pumps will extend their service life. KB3 Generators at King's Bluff Raw Water Pump Station have a criticality of two due to the future need for increased load associated with auxiliary pump motor HP and larger quantities. The KB4 Pig 48" pipe from the Kings Bluff pump station to the 3 MG ground tank is critical because pigging will maintain a clean pipeline free of sediment, silt, and debris. It will also improve pump efficiency by reducing frictional losses in the pipeline. KB5 Pig Future 54" pipe from King's Bluff Pump Station to 3MG ground tank has a criticality of one sighting, for the same reason as pigging the 48" pipeline. KB6 Walkway and air backwash building replacement has a criticality of 2 due to the walkway's condition and will need to be replaced by 2027 due to rotting wood and overall weathering. KB7: Replacing raw water pumps 1, 4, and 5 has a criticality of 3 due to age and mechanical wear. KB8: New surge tank and Control Panel at Kings Bluff have a criticality of 2 because, as demand increases, system surges are likely to rise, and this needs to be installed before the fifth pump comes online. KB9 5 ROW acquisitions rated a criticality of one. The KB10 48-inch PCCP inspection and pig from the ground tank to US 421, with a criticality of 1, is of utmost importance due to current capacity loss and/or clogging caused by sediment buildup. Similarly, the KB11 48-inch PCCP repairs, also with a criticality of one, pose a significant risk of a pipeline break. The KB12 48" PCCP Leak Detection Project has a criticality of one because of potential leaks and weak points in the existing line before a break or failure. KB13 Solar Power Study and Installation has a criticality of two. This will enhance the station's reliability and efficiency by providing a redundant power source. KB14 Lock and Dam No. 1 Check Dam Repair/Restoration has a criticality of three.

CS1 A New fifth pump at the Kings Bluff raw water pump station has a criticality of 3 because reducing the load and run times of existing pumps will extend their life and improve all pumps' reliability. CS2 3-Mile parallel raw water main from 3MGD Pender Vault to Cape Fear Public Utilities vault has one criticality. CS3 100MGD Reservoir has a criticality of 1 due to the increasing availability of a water storage system, allowing temporary redundancy of supply in the event of an emergency (line break, power outage, hurricane).

BB1 Replacing two pumps at the Bladen Bluffs raw water pump station has a criticality of 1 because the pumps will be approximately 20 years old by 2032 and are approaching the end of their useful life. BB2 Replace blower in the Blower Building has one criticality. BB3: Replacing the existing pumps at the recycle pumping station has a criticality of 1, and the blowers will be approximately 25 years old by 2032, approaching the end of their useful life. BB4 Replace three pumps at the transfer pump station has a criticality of one. BB5 Replacing two generators at the site has a criticality of one because the facility currently has two (2) generators on-site. Generators will be approximately 25 years old by 2037 and approaching the end of their service life. BB6 PLC Upgrades has a criticality of one. BB7 SCADA upgrades has a criticality of one and are due to Routine upgrades to the existing SCADA system on a periodic basis. BB8 Intake screen walkway has a criticality of one.

Executive Director Holloman advised that, over the coming months, he will continue collaborating with all project partners and will meet with the Long-Range Planning Committee to develop a third planning session. The purpose of this session will be to identify and prioritize regional capital projects, including the proposed 54-inch parallel transmission line segment to the CFPWA Sweeney Water Treatment Plant. The Master Plan will be updated through an amendment to clearly identify and emphasize these regional capital improvement needs.

Director Leonard stated that he would like to hear Pender County's perspective regarding the proposed extension of the water transmission line to the CFPWA Sweeney Water Treatment Plant. He noted that when Pender County connected to LCFWASA's system, the county was responsible for funding the water line extension to its own treatment plant.

Motion: Director Williams **MOVED**; seconded by Director Leonard, to approve the Final Master Planning Document (25 Year Planning Period FY 2026-2051). Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

PRESENTATION: Annual Review from First Tryon Advisors

A copy of the presentation will be attached to the minutes.

ENGINEER'S COMMENTS

No comments.

ATTORNEY COMMENTS

No comments.

EXECUTIVE DIRECTOR REPORT

EDR1 – Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending May 2026

Executive Director Holloman reported that all customers exceeded projections in May.

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

No comments.

PUBLIC COMMENT

No comments.

ADJOURNMENT

There being no further business, Chairman Phillips adjourned the meeting at 10:56 a.m.

Respectfully Submitted:

Chakema Clinton-Quintana, Secretary



Lower Cape Fear Water & Sewer Authority

Financial Update Presentation

June 8, 2026

Agenda

- 1 Credit Overview
- 2 Financial Results and Peer Comparisons
- 3 Preliminary Debt Information
- 4 Market Update





Amy Vitner
Managing Director

e avitner@firsttryon.com
t 704.926.2457
m 704.458.4759

Credit Overview

Credit Profile of the Authority

The Authority's member units maintain strong credit ratings.

- Three primary rating agencies include Moody's, S&P Global and Fitch
- The Authority does not currently carry any standalone long-term credit ratings
 - The Authority's 2010 Bonds carry a short-term credit rating of A+/A-1 from S&P Global through the Substitute Credit Facility provided by Rabobank Nederland.
- The Members of the Authority carry the following ratings:
 - Bladen County (Aa3/NR/NR)
 - City of Wilmington (Aaa/AAA/NR)
 - Brunswick County (Aaa/AAA/AAA)
 - Columbus County (Aa3/NR/NR)
 - New Hanover County (Aaa/AAA/NR)
 - Pender County (Aa2/AA/NR)

Moody's	S&P	Fitch
Aaa	AAA	AAA
Aa1	AA+	AA+
Aa2	AA	AA
Aa3	AA-	AA-
A1	A+	A+
A2	A	A
A3	A-	A-
Baa1	BBB+	BBB+
Baa2	BBB	BBB
Baa3	BBB-	BBB-
Non Investment Grade		

Financial Results and Peer Comparisons

3-Year Historical Operating Results

Strong net position anchored by considerable capital contributions in FY 2025.

- **Operating Revenues**
 - 17.0% decrease since FY 2023
 - 8.1% decrease from FY 2024 to FY 2025
- **Non-Operating Revenues**
 - \$4.4 million of partner revenue received in FY 2025
 - \$14.0 million of capital contributions received in FY 2025
- **Operating Expenditures**
 - 30.7% decrease since FY 2023
 - 7.5% decrease from FY 2024 to FY 2025
- **Net Position**
 - 86.7% increase since FY 2023

Source: LCFWASA Audits



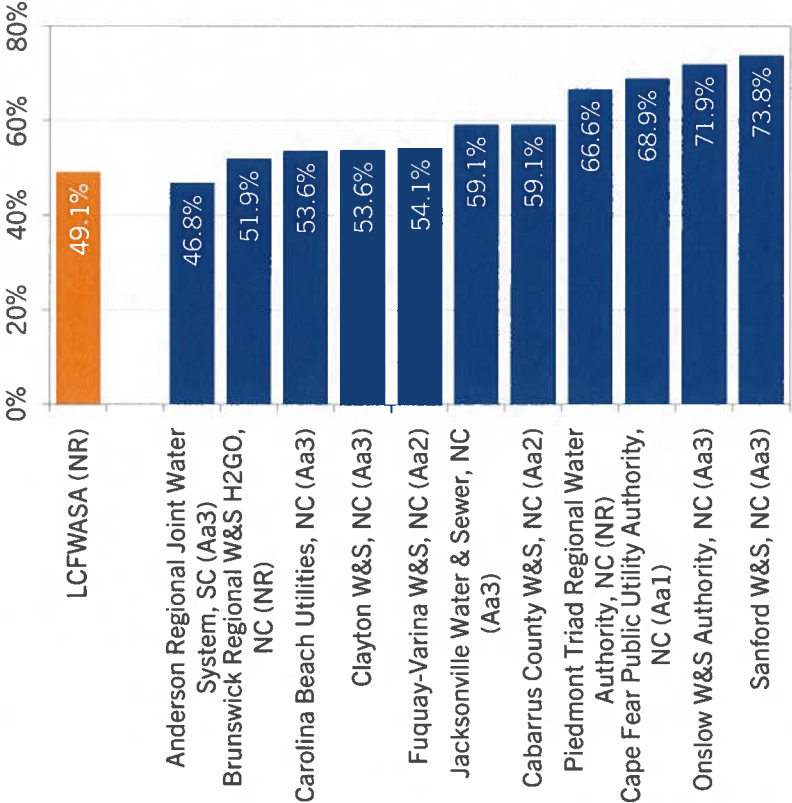
First Tryon Advisors

	FY 2023	FY 2024	FY 2025
Operating Revenues:			
Charges for services	11,170,678	10,098,155	9,246,891
Other operating revenue	114,314	89,005	116,124
Total operating revenues	11,284,992	10,187,160	9,363,015
Operating Expenses:			
Operations and administration	7,503,574	5,146,860	4,596,563
Depreciation and amortization	1,785,716	1,812,138	1,840,330
Total operating expenses	9,289,290	6,958,998	6,436,893
Operating income (loss)	1,995,702	3,228,162	2,926,122
Nonoperating Revenues (Expenses)			
Investment earnings	2,312	42,221	229,422
Partner revenue	-	-	4,432,152
Insurance Claim Proceeds	3,614	-	-
Capital contributions	-	1,664,740	-
Interest and fees paid	(506,120)	(607,137)	(610,946)
Other non-operating revenues (expenses)	1,611,154	97,496	-
Total nonoperating revenues (expenses)	1,110,960	1,197,320	4,050,628
Income (loss) before transfers and capital contributions	3,106,662	4,425,482	6,976,750
Other Financing Sources (Uses)			
Capital contributions	-	-	13,999,028
Total other financing sources (uses)	-	-	13,999,028
Change in net position	3,106,662	4,425,482	20,975,778
Net position, beginning	25,989,271	29,095,933	33,521,415
Restatement	-	-	(164,167)
Net position, ending	29,095,933	33,521,415	54,333,026

Financial Performance: Operating Ratio

The Authority's ratio is the second lowest in the peer group, demonstrating operational efficiency.

- Calculation
 - O&M Expenses / Total Operating Revenues
- Why it matters
 - A lower ratio indicates greater operational efficiency
 - Aim for the lowest costs required to generate maximum revenues
- LCFWASA's Performance
 - 49.1% as of June 30, 2025
 - Strong result compared to peer group



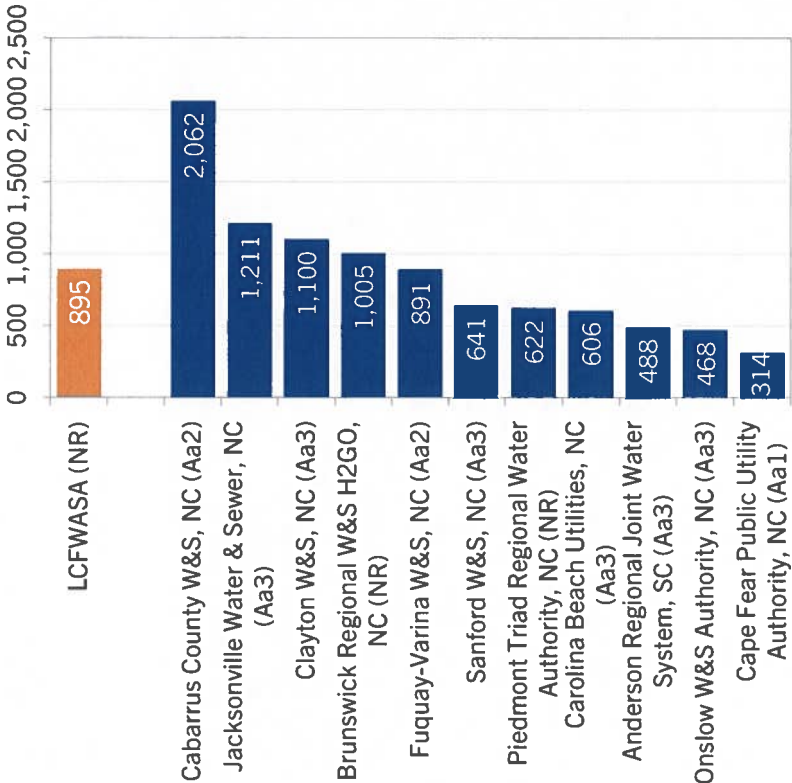
Source: LCFWASA Audits, Moody's Investors Service



Liquidity: Days Cash on Hand

The Authority’s maintains very strong liquidity and is above average in its peer group.

- Calculation
 - Unrestricted Cash & Investments / O&M Expenses * 365
- Why it matters
 - Represents how long a system can operate without generating any revenues
 - Greater levels of unrestricted cash leave a system better prepared for unforeseen expenditures or hardships (such as a hurricane)
- LCFWASA’s Performance
 - **895 days** as of June 30, 2025
 - Above average for the peer group
 - Coastal systems often maintain higher cash levels



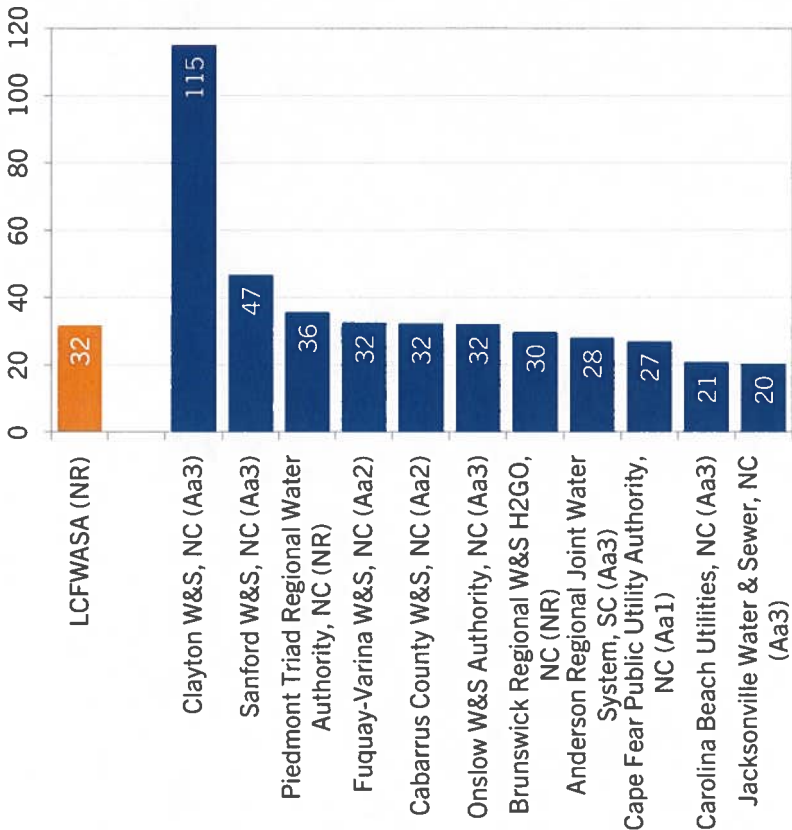
Source: LCFWASA Audits, Moody's Investors Service



Asset Condition: Remaining Useful Life

The remaining useful life of the Authority's assets is in line with its peers.

- Calculation
 - Fixed Assets (Net of Depreciation) / Annual Depreciation
 - Expressed in years
- Why it matters
 - Indicates the average age of a system's plant and equipment
 - A higher remaining useful life indicates that a system's infrastructure is in newer condition and less prone to issues with environmental regulations or service disruptions
- LCFWASA's Performance
 - 32 years as of June 30, 2025
 - Around the median level for the peer group



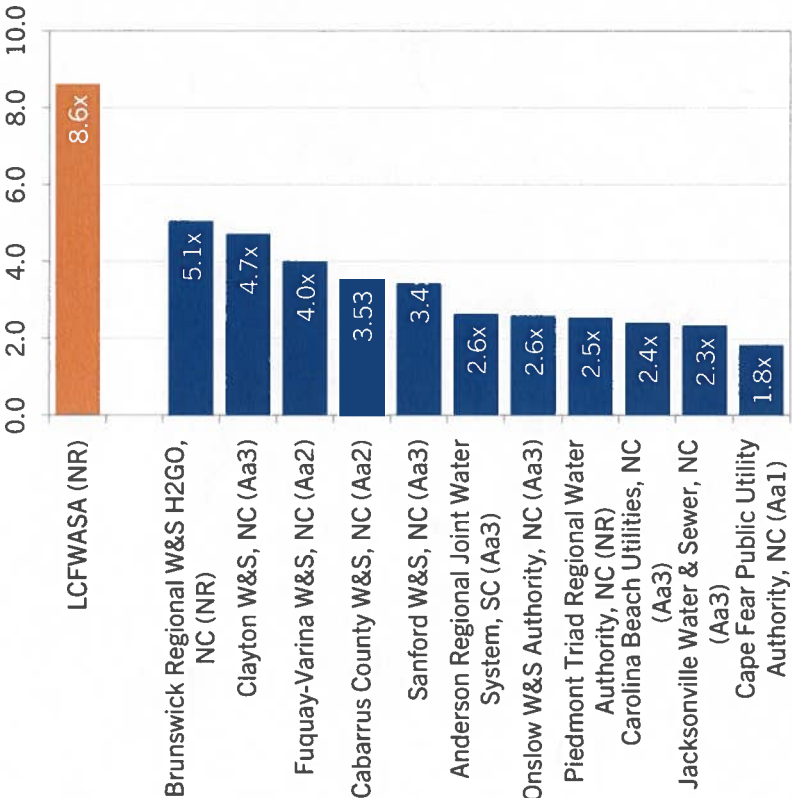
Source: LCFWASA Audits, Moody's Investors Service



Debt Affordability: Annual Debt Service Coverage

With its low debt burden, the Authority maintains exceptionally high debt service coverage.

- Calculation
 - Income Available for Debt Service / Annual Debt Service
- Why it matters
 - Represents the sufficiency of a system’s available net revenues to cover debt service payments
 - A higher ratio indicates that a system has greater flexibility to withstand volatile revenues or unexpected expenditures
- LCFWASA’s Performance
 - 8.6x as of June 30, 2025
 - Strongest result in its peer group

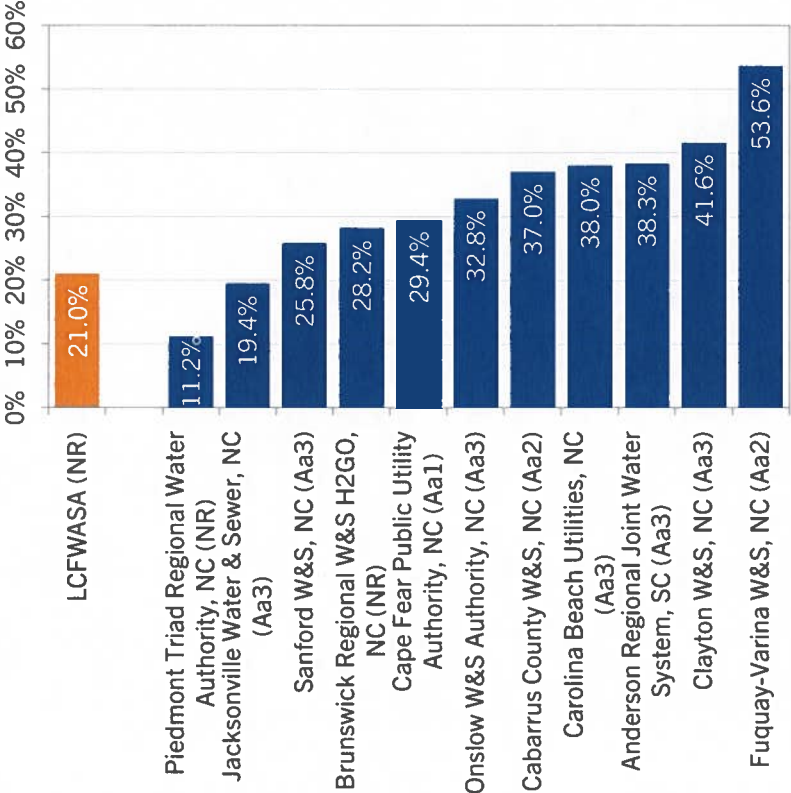


Source: LCFWASA Audits, Moody's Investors Service

Debt Leverage: Total Long-Term Debt to Total Assets

The Authority maintains a low amount of debt relative to its peers.

- Calculation
 - Total Long-Term Debt Outstanding / Total Assets
- Why it matters
 - Represents the leverage of a system
 - A lower ratio indicates the system has greater capacity to afford additional debt borrowing
- LCFWASA's Performance
 - 21.0% as of June 30, 2025
 - On the low end for the peer group



Source: LCFWASA Audits, Moody's Investors Service



Preliminary Debt Information

Estimated Debt Service Schedules

The Authority is considering a \$4.2 million financing for the Air Backwash Access Walkway and Building Replacement project.

- Background Information
 - Cost Estimate: \$4.2 Million
 - Timing: Fall 2026 (FY 2027)

15-Year Borrowing

- More banks can provide this term
- Lower interest rate
- Lower total debt service

20-Year Borrowing

- Limited banks can provide this term
- Higher interest rate
- Lower annual debt service

- The interest rates and debt schedules provided are estimated and subject to change.

15-Year Borrowing (4.50% Interest Rate)				20-Year Borrowing (4.75% Interest Rate)			
FY	Principal	Interest	Total	FY	Principal	Interest	Total
Total	4,200,000	1,664,415	5,864,415	Total	4,200,000	2,399,985	6,599,985
2027	-	89,775	89,775	2027	-	94,763	94,763
2028	201,000	184,478	385,478	2028	129,000	196,436	325,436
2029	210,000	175,230	385,230	2029	135,000	190,166	325,166
2030	219,000	165,578	384,578	2030	142,000	183,588	325,588
2031	230,000	155,475	385,475	2031	149,000	176,676	325,676
2032	240,000	144,900	384,900	2032	156,000	169,433	325,433
2033	251,000	133,853	384,853	2033	163,000	161,856	324,856
2034	263,000	122,288	385,288	2034	171,000	153,924	324,924
2035	275,000	110,183	385,183	2035	180,000	145,588	325,588
2036	287,000	97,538	384,538	2036	188,000	136,848	324,848
2037	301,000	84,308	385,308	2037	198,000	127,680	325,680
2038	314,000	70,470	384,470	2038	207,000	118,061	325,061
2039	329,000	56,003	385,003	2039	217,000	107,991	324,991
2040	344,000	40,860	384,860	2040	228,000	97,423	325,423
2041	360,000	25,020	385,020	2041	239,000	86,331	325,331
2042	376,000	8,460	384,460	2042	250,000	74,718	324,718
				2043	263,000	62,534	325,534
				2044	275,000	49,756	324,756
				2045	289,000	36,361	325,361
				2046	303,000	22,301	325,301
				2047	318,000	7,553	325,553

Estimated Debt Service Coverage Impact

Based on FY 2025 results, the financing appears to be affordable from a debt service coverage perspective.

- Due to the lower annual debt service, the 20-year term results in a stronger debt service coverage ratio than the 15-year term.

	15-Year Term	20-Year Term
Operating Revenues	9,363,015	9,363,015
Operating Expenses ⁽¹⁾	4,596,563	4,596,563
Operating Income	4,766,452	4,766,452
Investment Earnings	229,422	229,422
Income Available for Debt Service	4,995,874	4,995,874
Aggregate Debt Service ⁽²⁾	2,445,278	2,385,236
Debt Service Coverage Ratio	2.04x	2.09x

⁽¹⁾ Excludes depreciation and amortization expenses.

⁽²⁾ Estimated FY 2028 debt service, including existing and proposed debt.

Preliminary Bank Loan Financing Timeline

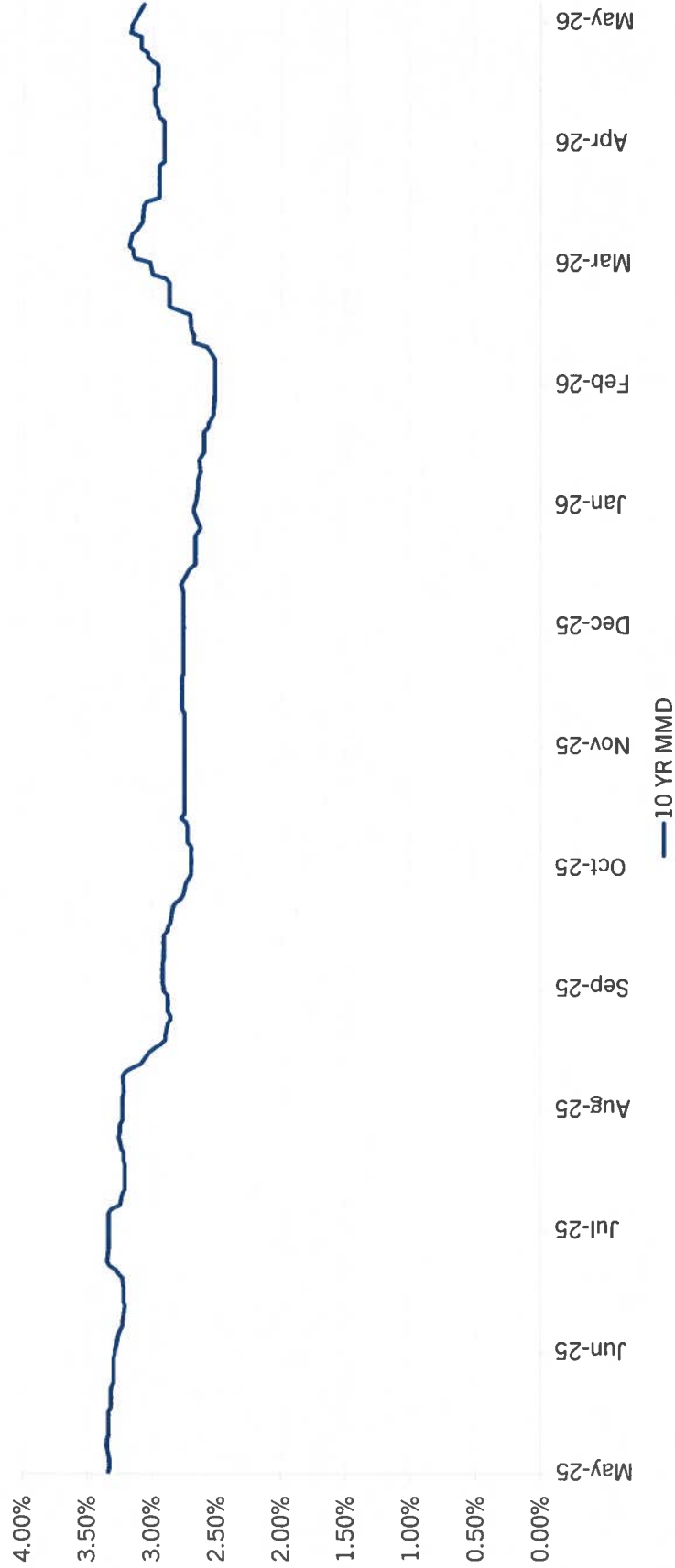
The timeline below assumes a November 2026 closing, but we will work around the Authority's preferred schedule.

Timing	Event
Mid-Summer	Organize working group
Late Summer / Early Fall	Obtain approvals from member entities
September 10 th	Send bank loan RFP to banks
October 1 st	Receive Bank Bids
October 6 th	Submit LGC Application
November 3 rd	LGC approval
November 5 th	Circulate closing documents
November 10 th	Close on financing

Market Update

10-Year Tax-Exempt Rates: One Year History

Interest rates have been volatile over the past couple of months, after remaining relatively stable for most of the year.



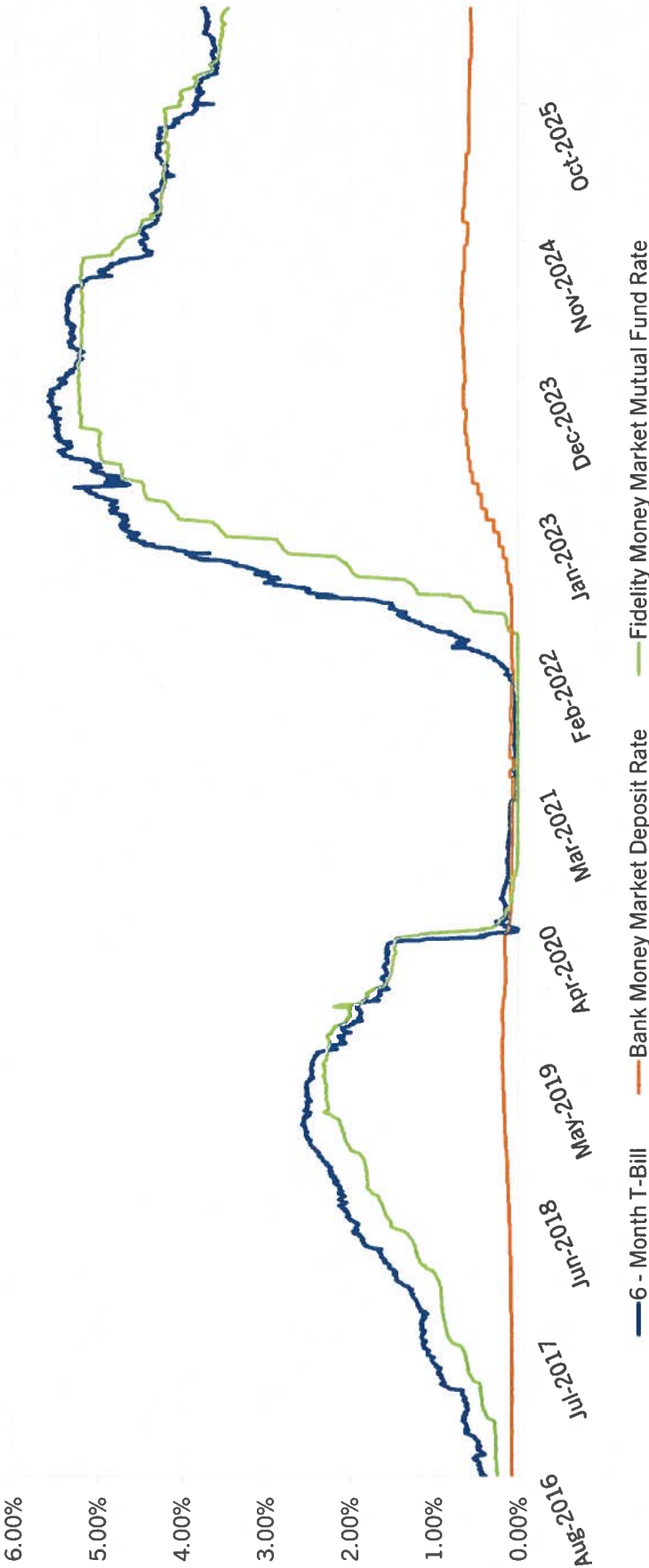
Source: MMD as of May 26, 2026



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Comparison of Deposit Yields

Deposit rates have declined over the past year, but remain strong.



Source: MarketWatch, FDIC, Bloomberg



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SIMPLIFYING PUBLIC FINANCE

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MSRB Registrant

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Lower Cape Fear Water & Sewer Authority
Regular Board Meeting Minutes
May 11th, 2026

Chairman Phillips called to order the Authority meeting scheduled on May 11th, 2026, at 9:00 a.m. and welcomed everyone present. The meeting was held at the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina. Director Leonard gave the invocation.

Roll Call by Chairman Phillips:

Present: Damien Buchanan, Chakema Clinton-Quintana, Patrick DeVane, Wayne Edge, Jerry Groves, Harry Knight, Al Leonard, Scott Phillips, Chris Smith, Bill Sue, Phil Tripp, Frank Williams, and Rob Zapple

Present by Virtual Attendance: Bill Saffo

Absent: None

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

Guests Present: Jorgen Holmberg, Computer Warriors; David Carson, Brunswick County Kings Bluff Water Resource Supervisor; Chris Giesting, Brunswick County Water Resources Manager; Kevin Morris, Cape Fear Public Utility Authority Deputy Director; Ken Waldroup, Cape Fear Public Utility Authority Executive Director; David Fournier, HDR Construction Services; and Christopher "CJ" Cahoy, Garney Construction

Guests Virtual Attendance: Heidi Cox, NC DEQ Regional Engineering Supervisor, Division of Water Infrastructure; James Proctor, Pender County Interim Utilities Director; Aaron Smith, Brunswick County Director of Fiscal Operations; and John Nichols, Brunswick County Public Utilities Director

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

APPROVAL OF CONSENT AGENDA

C1 – Minutes of April 14, 2026, Regular Board Meeting

C2 – Kings Bluff Monthly Operations and Maintenance Report

C3 – Bladen Bluffs Monthly Operations and Maintenance Reports

C4 – Retainer for General Counsel Services Agreement: Matthew Nichols, Attorney at Law in the amount of \$225 per hour for FY 2026-2027.

C5 A – Resolution of Lower Cape Fear Water & Sewer Authority Exempting Lower Cape Fear Water & Sewer Authority from the Provisions of N.C.G.S. §143-64.31 for C5 B.

C5 B – Retainer for Engineering Services Agreement: McKim & Creed in the amount of \$38,400 for Fiscal Year 2026-2027.

C6 – Resolution Approving Memorandum of Understanding Regarding Interlocal Agreement for Phased 10-Mile Parallel Raw Water Line Project.

C7 – Resolution Opposing the Expansion of the Chemours Fayetteville Works.

Motion: Director Clinton-Quintana **MOVED**; seconded by Director Buchanan, approval of the Consent Agenda Items. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

PUBLIC HEARING: PRESENTED DRAFT BUDGET FOR THE FISCAL YEAR 2026-2027 BUDGET AND BUDGET ORDINANCE:

Motion to open Public Hearing per North Carolina General Statute Section 159-12

Motion: Director Leonard **MOVED**; seconded by Director Clinton-Quintana, to open Public Hearing. Upon voting, the **MOTION CARRIED UNANIMOUSLY**.

NB1- Finance Committee Comments and Review of Draft Recommended Budget for the Fiscal Year 2026-2027 (Finance Committee Chairman Scott Phillips)

Executive Director Holloman reviewed essential cost items for the FY 2026-2027 draft budget. Our customers' water usage is projected at 11,196,923 gallons, with a proposed rate of \$0.52 per 1,000 gallons, resulting in an estimated \$5.8 million in revenue. Health insurance will increase by 18%. The property and liability insurance expenses will increase by 8%. State retirement will increase from 14.85% to 15.10%. LCFWASA will purchase a fourth pump through Pay-Go. We will pay for the Air Backwash and Walkway cost of \$4,200,000 through either state appropriation, finance, or partner contribution. Governmental partners rates will increase to 0.52 per 1,000 gallons from the current 0.48, and industrial customers will increase to 0.74 per 1,000 gallons from the current 0.70, as recommended by the rate forecast for the Master Plan. The FY 2026-2027 budget has a 23% decrease over the FY2025-2026 budget, primarily due to the Parallel Line Project nearing completion. No written or public comments were received regarding the Draft Budget and Budget Ordinance for Fiscal Year 2026-2027.

Motion to close Public Hearing per North Carolina General Statute Section 159-12

Motion: Director Williams **MOVED**; seconded by Director DeVane, to close Public Hearing. Upon voting, the **MOTION CARRIED UNANIMOUSLY.**

PRESENTATION: Raw Water Main Update by Christopher "CJ" Cahoy with Garney Construction

A copy of the presentation will be attached to the minutes.

ENGINEER'S COMMENTS

No comments.

ATTORNEY COMMENTS

No comments.

EXECUTIVE DIRECTOR REPORT

EDR1 – Comments on Customers' Water Usage and Raw Water Revenue for Fiscal Year to Date Ending April 2026

Executive Director Holloman reported that all customers exceeded projections in April.

DIRECTOR'S COMMENTS AND/OR FUTURE AGENDA ITEMS

No comments.

PUBLIC COMMENT

No comments.

ADJOURNMENT

There being no further business, Chairman Phillips adjourned the meeting at 9:27 a.m.

Respectfully Submitted:

Chakema Clinton-Quintana, Secretary

Lower Cape Fear Water & Sewer Authority

Finance Committee Meeting Minutes

May 11, 2026

Chairman Phillips called to order the Finance Committee Meeting on May 11, 2026, 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: Damien Buchanan, Chakema Clinton-Quintana, Patrick DeVane, Harry Knight, Al Leonard, and Scott Phillips

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: Jorgen Holmberg, Computer Warriors; Director Wayne Edge, Director Chris Smith, Director Bill Sue, Director Frank Williams, Director Phil Tripp, David Carson, Brunswick County Kings Bluff Water Resource Supervisor; Chris Giesting, Brunswick County Water Resources Manager; and Kevin Morris, Cape Fear Public Utility Authority Deputy Director

Guests Virtual Attendance: None

PowerPoint for Annual Budget Fiscal Year 2026-2027

Executive Director Holloman reviewed essential cost items for the FY 2026-2027 draft budget. Our customers' water usage is projected at 11,196,923 gallons, with a proposed rate of \$0.52 per 1,000 gallons, resulting in an estimated \$5.8 million in revenue. Health insurance will increase by 18%. The property and liability insurance expenses will increase by 8%. State retirement will increase from 14.85% to 15.10%. LCFWASA will purchase a fourth pump through Pay-Go. We will pay for the Air Backwash and Walkway cost of \$4,200,000 through either state appropriation, finance, or partner contribution. Governmental partners rates will increase to 0.52 per 1,000 gallons from the current 0.48, and industrial customers will increase to 0.74 per 1,000 gallons from the current 0.70, as recommended by the rate forecast for the Master Plan. The FY 2026-2027 budget has a 23% decrease over the FY2025-2026 budget, primarily due to the Parallel Line Project nearing completion.

ADJOURNMENT

There being no further business, Chairman Phillips adjourned the meeting at 8:50 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, March 8, 2027, at 8:30 a.m. in the Authority's office located at 1107 New Pointe Boulevard, Suite 17, Leland, North Carolina.

BRUNSWICK COUNTY PUBLIC UTILITIES

Kings Bluff Pump Station/LCFWASA

246 Private Rd. 703

Riegelwood, NORTH CAROLINA 28456

MAILING ADDRESS
P. O. Box 249
BOLIVIA, NORTH CAROLINA 28422

TELEPHONE (910) 655-4799
FAX (910) 655-4798

TO: Tim Holloman**FROM: David Carson****DATE: 7/1/2026****SUBJECT: Monthly maintenance report for June 2026**

Mr. Holloman,

The Maintenance and Operations of the King's Bluff facility (KB) for the month of June were performed as prescribed in the station SOPs, with the following additional items. The diesel drive booster pumps, along with the standby System Computer and Data Acquisition (SCADA) generator located at the raw tank and the SCADA generator located at the INVISTA /CFPUA vaults off HWY 421, were run and tested weekly and verified as standby-ready.

Items highlighted in yellow were on the Annual Inspection.

1. KB personnel completed all locates issued by the Boss 811 system.
2. KB personnel pumped out vaults at the Raw tank, the Bluffs, the 90, & Pender County.
3. KB personnel fixed sheard off pin on valve connection coupling on the 48" line to enable valve exercising and closer for inter connection work.
4. KB personnel assisted Garney Construction with the disassembly of blow-off piping at the 90° near the Raw tank.
5. KB personnel assisted Carbon Fuel Service with polishing fuel in Diesel storage tanks and transferring fuel from Diesel tank #1 to Diesel tank #2.
6. KB personnel in association with Garney construction, closed valve at 90 near Raw tank and at the 90 behind The Bluffs/DAX also opened 24" valve in DAX to dewater and remove pressure.

7. KB personnel exercised valves at Raw tank as a part of dewatering the old 48" line for the Mt Misery inter connection work.
8. KB personnel assisted Underwood Pump with disassembly, troubleshooting of the check valve, and then reassembly on pump #4. We are waiting for the replacement part to complete the check valve repair. Pump#4 is operational.
9. KB personnel supported Garney construction with Pender County/CFPUA bypass for the construction of the last two interconnections (Pender County and Mt Misery) of the parallel line project.
10. KB personnel inspected the entirety of the waterline R.O.W. (Right of Way).
11. KB personnel mowed Kings Bluff, Authority property, and the Raw tank. KB personnel have taken over the mowing /landscaping of Kings Bluff, Authority property at Raw tank.
12. KB personnel aided I&E (Instrumentation and Electrical) with the diagnosis and replacement of a transducer and checked all wiring and connections at the Stepan vault.
13. KB personnel cleaned and flushed to remove sediment and reassembled piping for the flow monitor in the pipe gallery for pump bay #1.
14. KB personnel assisted Gregory Poole with coolant changes on EMD engines for Generators #1 in the Generator building. Coolant is replaced every five years as preventative maintenance.
15. KB personnel, along with Redstar Oil, assembled over the spill containment area and then helped set up a temporary 10,000-gallon diesel fuel tank at the Generator building.
16. KB personnel opened valves at the Raw tank and at DuPont. In preparation for adding water back to the old 48" line for testing and return to service.
17. KB personnel, with help from Garney Construction, relocated old pipes from previous jobs.

Contractors:

Underwood Pump

Redstar Oil

Gregory Poole

Carbon Fuel Service

McDuffie Pest Service

I&E (instrumentation and electrical)

David Carson



To: Tim Holloman - LCFWASA

From: James Kern – Bladen Bluffs SWTP ORC

Date: 7/6/26

Subject: June 2026 Operations

During the month of June, Bladen Bluffs SWTP operated a total of 18 days, treating 61.77 million gallons of water.

We used:

32,298 lbs. of aluminum sulfate (Alum)

10,884 lbs. of sodium hydroxide (Caustic)

2,072 lbs. of sodium hypochlorite (4,161 gallons of 6% Chlorine Bleach)

James Kern
Water Treatment Plant
Supervisor

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

Smithfield.
Good food. Responsibly.®

Bladen Bluffs Surface Water Treatment
Plant
17014 Highway 87 West
Tar Heel, NC 28392
www.smithfieldfoods.com

Bladen Bluffs SWTP Maintenance Report

Date: 7/6/2026

ISSUE:

PLAN OF ACTION:

1. All PLC need updated	Parts arrived – scheduling install
2. Vault intrusion electrical needs replaced	FIXED
3. Wooden walkway to river needs replacement	Tim and Jess plan to meet and discuss plan
4. Transfer pump #2 NA	Bad wire – temp fix. Planning with internal electrician – Pump available
5. Look into replacing worn out safety signs	FIXED
6. RWPS level indicator not working	FIXED
7. Chemical pump PM needed	Completed partial – planning full PM
8. Caustic pump #3 NA	Have spare...planning install
9. Flocculator 2B failed	Replace motor – issue with gear box
10. Suspected mud valve leak on settle basin #2	Ordering repair kit – inspect next time we clean basin - August
11. UPS needs software update	Planning with Eaton – scheduled end of July
12. Generator has recommended PM repairs	Quotes approved
13. Bulk tank vents need screens	FIXED
14. Issue with AC unit in MMC room	Parts ordered – room has two units. One is keeping up.
15. DUCT smoke detector issue	Superior mechanical diagnosing
16. Air compressor failed at RWPS	FIXED

Monthly Operating Reports (MORs) Summary

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

Year: 2026 PWS Name: Bladen Bluffs Water System PWSID#: NC5009012
 Month: June Facility Name: Bladen Bluff

Combined Filter Effluent (CFE) Turbidity

Samples exceeding 1 NTU (count):	<u>0</u>	Number of samples required:	<u>99</u>
Samples exceeding .3 NTU (count):	<u>0</u>	Number of samples taken:	<u>99</u>
Samples exceeding .3 NTU (pct):	<u>0.0%</u>	Highest single turbidity reading NTU:	<u>0.210</u>
		Monthly average turbidity NTU:	<u>0.066</u>

Individual Filter Effluent (IFE) Turbidity

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

Entry Point Residual Disinfectant Concentration (EPRD)

Disinfectant Used	<u>Chlorine</u>	Number of samples required	<u>99</u>
Minimum EPRD concentration	<u>0.5500</u>	Number of samples taken	<u>99</u>

Distribution Residual Disinfectant Concentration

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

Contact Time (CT) Ratio

Lowest CT ratio reading	<u>18.50</u>	Number of CT ratios required	<u>18</u>
Number of CT ratios below 1.0	<u>0</u>	Number of CT ratios calculated	<u>18</u>

Remarks From General Info Worksheet

☒ By checking this box, the ORC certifies that the requirements of 15A NCAC 18C .1301 "General Requirements", .1302 "Tests, Forms, and Reporting", and .1303 "Facility Oversight" have been met for the month of June, 2026 and that records documenting compliance with this rule are maintained on the premises and available for inspection upon request.

NCDENR/DEH
PWSS
Version: V02.10-00

COMPLETED BY:	<u>James Kern</u>
CERTIFICATE GRADE:	<u>A - Surface</u>
CERTIFICATE NUMBER:	<u>120147</u>

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 05/31/2026

Operating Fund:	Line-Item Budget Amount prior to Adjustment	Decrease	Increase	Budget Amount as of 04/30/2026
Expenses				
4046-01 Attorney	\$66,000		\$7,500	\$73,500
4081-01 Dues & Subscription	\$12,500		\$1,665	\$14,165
4520-01 Utilities/Energy Kings Bluff	\$701,452	\$(39,165)		\$662,287
4530-01 Contract O&M Kings Bluff	\$736,811		\$30,000	\$766,811
Total	\$1,516,763	\$(39,165)	\$39,165	\$1,516,763

AGENDA ITEM

To: CHAIRMAN PHILLIPS AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: July 13, 2026

Re: Truck for LCFWASA Office

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

Background: LCFWASA functioned until 2020 with an in-house vehicle. Demands for travel to the State Capital, Kings Bluff, and project-related travel necessitate a vehicle for the office. Four bids were obtained for such a vehicle.

Action Requested: Motion to approve Bid from Hendrick Dodge of 46,232.68.

Truck Bid #1



Date: 6/8/2026
 Salesperson: Dania Flaverney
 Manager: Dee Reynolds
 Customer ID #: aa-A58G4XHFVKJVpps

FOR INTERNAL USE ONLY

BUSINESS NAME	Lower Cape Fear Water & Sewer Authority	Home Phone :
CONTACT	Tim Holloman	
	1107 New Pointe Blvd. Suite 17	
Address :	Leland, NC 28451	Work Phone :
	Brunswick	
E-Mail :	director@lcfwasa.gov	Cell Phone : (919) 333-5933

VEHICLE			
Stock # : S64620	New / Used : New	VIN : 1C6RRFFGXS764620	Mileage:
Vehicle : 2025 RAM 1500	Color : BRT WHT CC		
Type : Big Horn/Lone Star 4x4 Crew Cab 144	DT6H98		
Body Size :	Style :	Weight : 4999	Unit Class :

Loan Payments		Estimated		
Cash Down	5,778	8,666	11,555	
60 Months	831	772	713	
48 Months	998	927	856	
36 Months	1278	1187	1096	
* A.P.R. Subject to equity and credit requirements.				

MSRP	57,775.00
Discount	14,183.00
Adjusted Price	43,592.00
Dealer Administrative Charge	799.00
Tax	1,331.73
NC Title	66.75
NC License	46.25
Net Price	45,835.73
Oil Change Program (Optional)	396.95
Balance	46,232.68

"This offer is based on incentives, rates and other conditions that may expire at any time without notice. All offers are subject to vehicle availability, lender's credit approval and lender's other requirements."

2025 MODEL YEAR RAM 1500 BIG HORN CREW CAB 4X4



*THIS VEHICLE IS MANUFACTURED TO MEET SPECIFIC UNITED STATES REQUIREMENTS. THIS VEHICLE IS NOT MANUFACTURED FOR SALE OR REGISTRATION OUTSIDE OF THE UNITED STATES. THIS MODEL INCLUDING DEALER PREPARATION

Base Price: \$51,535

RAM 1500 BIGHORN/UNSTAR CREW 4X4
Exterior Color: 3.0L Hemi Clear Coat Exterior Paint
Interior: Cloth Bench Seat
Engine: 3.6L V6 24V VVT e-Force Engine with Stop/Start
Transmission: 8-Speed Automatic 850RE Transmissions on
STANDARD EQUIPMENT (UNLESS REPLACED BY OPTIONAL EQUIPMENT)

FUNCTIONAL SAFETY FEATURES
Advanced Multistage Front Air Bags
Supplemental Side-Impact Protection System
Advanced Side-Curtain Front and Rear Air Bags
Advanced Brake Assist
3.2L Rear Air Bags
Electronic Shift-On-Demand Transfer-Case
Safety Key® Theft Deterrent System
Electric Parking Brakes
Electronic Roll-Over Mitigation
Electronic Stability Control
Front Heavy-Duty Shock Absorbers
Rear Heavy-Duty Shock Absorbers
Adaptive Cruise Control with Stop and Go
Automatic High-Beam Headlamp Control
Blind-Spot and Cross-Park Detection
Full-Speed Forward-Collision Warning Plus
ParkView® Front and Rear Park-Assist
ParkView® Rear Back-Up Camera
Pedestrian Emergency Braking
Remote Keyless Entry
Rear Cross-Traffic Alert
Rear Park Assist
Class IV Receiver-Hitch
Trailer Sway Dampening
28-Gallon Fuel Tank

INTERIOR FEATURES
4-Way Manual Adjustable Driver Seat
4-Way Manual Adjustable Front Passenger Seat
Uconnect® 5 with 8.4-Inch Touch Screen Display
Handsfree Phone and Audio
Ram Connect (Connected Services) with Trail
IG LTE Wi-Fi Hot Spot
6 Speakers
Full-Function Media Hub with 2-USB Plus Aux Port
12-Volt Auxiliary Power-Outlet
EXTERIOR FEATURES
18-Inch x 7-Piece Steel Wheel
275/65R18 BSW All-Season LTR Tires
18-Inch Full-Size Spare Wheel
Power Mirrors

OPTIONAL EQUIPMENT (Any Feature Standard Equipment)
Big Horn Package 22Z
Protection Group
Fuel Tank Side-Plate

\$95

Assembly Point/Port of Entry: STERLING HTS, MICH., U.S.A.

14-0000 2082

WV: 1C6-RPF6G3SN-764622

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FCA US LLC

For more information visit: www.ramtrucks.com
or call 1-866-RAMINFO

Gasoline Vehicle

Fuel Economy and Environment

You Spend \$3,000 in fuel costs over 5 years
compared to the average new vehicle.

21 MPG
19 city
24 highway
4.8 gal./ons per 100 miles
combined city/hwy

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

Smog Rating (tailpipe only)
1 2 3 4 5 6 7 8 9 10 Best

Annual fuel cost \$2,500

Smog Rating (tailpipe only)

fuelconomy.gov
Calculate personalized estimates and compare vehicles.

Smog Rating (tailpipe only)

Smog Rating (tailpipe only)

GOVERNMENT 5-STAR SAFETY RATINGS

Overall Vehicle Score Not Rated

Based on the combined ratings of frontal, side and rollover.
Should ONLY be compared to other vehicles of similar size and weight.

Frontal Crash Driver Not Rated
Passenger Not Rated

Based on the risk of injury in a frontal impact.
Should ONLY be compared to other vehicles of similar size and weight.

Side Crash Front seat ★★★★★
Rear seat ★★★★★

Based on the risk of injury in a side impact.

Rollover ★★★★★

Based on the risk of rollover in a single-vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★) with 5 being the highest.

Source: National Highway Traffic Safety Administration (NHTSA)

www.safercar.gov or 1-888-327-4236

The safety ratings above are based on Federal Government tests of particular vehicles equipped with certain features and options. The performance of this vehicle may differ.

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE:
U.S./CANADIAN PARTS CONTENT: 55%

MAJOR SOURCES OF FOREIGN PARTS CONTENT:

MEXICO: 39%

NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

FOR THIS VEHICLE:

FINAL ASSEMBLY POINT:
STERLING HTS, MICH., U.S.A.

COUNTRY OF ORIGIN:

ENGINE: UNITED STATES

TRANSMISSION: UNITED STATES

FlexCare

VEHICLE PROTECTION

Ask for FlexCare Vehicle Protection. We Built It. We Back It.

Truck Bid #2



RALEIGH, NC



GOVERNMENT SALES DIVISION

From Greg Ford, Government Sales Manager
 Phone/Fax 919-790-4600, ext. 1413 Fax 919-871-6917
 E-Mail gregory.ford@capitalford.com

Date 11-Jun-26
 Lower Cape Fear Water & Sewer Authority

Quote NC2510A

2026 Ford F150 XL SuperCrew 4wd Pickup

2026 F150 XL SuperCrew 4wd, W1L, 145" WB, 5.5' bed, 101A package
 Upgrade to STX (W2L)
 Oxford White w/Black STX Cloth 40/console/40 seating
 3.55 Ratio Regular Axle
 Class IV Hitch w/Smart Trailer Tow Connector

NC2510A Base Pricing	\$41,987.14
	\$3,250.00
	NC
	NC
	NC
MSRP	Less 6%

Options

Equipment Group 200A (Mid) includes LED Fog Lamps, 12" Cluster, 20" Dark Gray
 Aluminum Wheels, 275/60R20 BSW All Terrain

\$1,705.00	\$1,645.00
------------	------------

Total Price Per Vehicle	\$46,882.14
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Remit to Capital Ford of Raleigh
 4900 Capital Blvd
 Raleigh, NC 27616

4800 Capital Blvd

1-800-849-3166



Raleigh, NC 27616 27616

05/04/26

2026 F-150®

PROPRIETARY

SUPERCAB / SUPERCREW® – STX SERIES
STANDARD EQUIPMENT

The following equipment is standard as indicated. This series includes all XL content plus the following:

EXTERIOR

- Bumper, Front/Rear – Body-color
- Electronic Rear-Window Defroster
- Rear Privacy Glass
- Fender Vent – Black
- Grille – Black and Dark Gray
- Tires
 - 265/60R 18 BSW all-season (A/S) (4x2)
 - 275/65R 18 BSW all-terrain (4x4)
- Wheels – 18" Gloss Black

INTERIOR/COMFORT

- Carpet – Color-coordinated with Carpeted Floor Mats
- Seat, Front
 - Unique Sport Cloth 40/console/40
 - Manual lumbar (driver)
 - Seatback Map Pockets

FUNCTIONAL

- Zone Lighting (NA w/ 201A)

★ = New for this model year

Truck Bid #3

5115 NEWCENTRE DRIVE
WILMINGTON, NC 28403
(910) 799-3520
TOLL FREE (800) BOB-KING
www.bobking.com

BOB KING

STOCK #
DEAL # 396558
CUSTOMER # 272681
DATE 06/03/2026
Item NB1

SOURCE		SALESPERSON #1 JOEL ANDREW WARTEL		SALESPERSON #2		MANAGER	
BUYER LOWER CAPE FEAR WATER & SEWER AUTH.				CO-BUYER			
STREET ADDRESS 1107 NEW POINTE BLVD STE 17		CITY LELAND		COUNTY BRUNSWICK		STATE NC	ZIP 284514129
E-MAIL director@lcfwasa.gov		RES. PHONE		BUS. PHONE (910) 383-1919		CELL PHONE (919) 333-5933	
PLEASE ENTER MY ORDER FOR THE DESCRIBED VEHICLE						Selling Price or (MSRP) \$56,590.00	
☒ NEW	☐ USED	☐ DEMO	☐ CAR	☐ TRUCK	Additional Accessories		
YEAR 2026	MAKE GMC	MODEL SIERRA SLE	BODY CREW CAB 4WD		Total Selling Price		\$56,590.00
COLOR WHITE		TRIM	ODOMETER		Discount		\$6,986.00
VEHICLE IDENTIFICATION #			NO. CYL.				
DEALER INSTALLED OPTIONS NOT COVERED BY FACTORY WARRANTY							
					Net Selling Price		\$49,604.00
					TRADE-IN ALLOWANCE		\$0.00
					DIFFERENCE		\$49,604.00
					N.C. Highway Use Tax 0%		\$0.00
					TOTAL OF INSTALLED OPTIONS		
COMMENTS					Balance Owed On Trade-In		\$0.00
					Administrative Services		\$799.00
					License and Registration		\$1.00
VEHICLE TRADE-IN ONE							
STOCK #	LIC PLATE #	EXP	TRANSFER	☐ YES ☐ NO			
YEAR	MAKE	MODEL	BODY		Sub-Total		\$50,404.00
COLOR	ODOMETER				Less DOWN PAYMENT		\$0.00
VEHICLE IDENTIFICATION #					Unpaid Balance		\$50,404.00
VEHICLE TRADE-IN TWO							
STOCK #	LIC PLATE #	EXP	TRANSFER	☐ YES ☐ NO			
YEAR	MAKE	MODEL	BODY				
COLOR	ODOMETER						
VEHICLE IDENTIFICATION #					OUTSIDE LIEN INFORMATION		
THE PAYOFF BALANCE(S) OF ANY EXISTING LIEN(S) AND LICENSE FEES ARE ESTIMATED. IF THE ACTUAL PAYOFF OR LICENSE FEES ARE MORE THAN THE ESTIMATE THEN THE CUSTOMER AGREES TO PAY THE DIFFERENCE. CUSTOMER GUARANTEES UNENCUMBERED TITLE TO TRADE-IN. CUSTOMER GUARANTEES TRADE-IN DOES NOT HAVE A RESTORED SALVAGE TITLE AND TO MY KNOWLEDGE HAS NEVER HAD A RESTORED SALVAGE TITLE. X _____ CUSTOMER INITIALS					Lienholder		
					Address		
					City State Zip		
					It's the dealership's responsibility to disclose that the dealer may receive a fee, commission, or other compensation for providing, procuring, or arranging financing for the retail purchase or lease of a motor vehicle for which the customer may be responsible.		
INSURANCE INFORMATION:							
AGENT NAME		PHONE	POLICY #		COMPREHENSIVE DEDUCTIBLE	COLLISION DEDUCTIBLE	
AGENT ADDRESS		INS COMPANY NAME		SPOKE TO			
EFFECTIVE DATE		EXPIRATION DATE					
BUYER		DATE		CO-BUYER		DATE	
NOTICE TO BUYER:		This order is not binding until accepted by Dealer or designated representative		BY:		DATE	


BOB KING BUICK, GMC INC.

JOEL WARTEL | 9106201654 | JOELW@BOBKING.COM

Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (Complete)

Window Sticker
SUMMARY

[Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE

MSRP:\$54,600.00

Interior:Jet Black, Cloth seat trim

Exterior 1:Summit White

Exterior 2:No color has been selected.

Engine, TurboMax

Transmission, 8-speed automatic, (Column shifter) electronically controlled

OPTIONS

CODE	MODEL	MSRP
TK10543	[Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE	\$54,600.00
OPTIONS		
3SA	SLE Preferred Equipment Group	\$0.00
AZ3	Seats, front 40/20/40 split-bench	\$0.00
C5W	GVWR, 7000 lbs. (3175 kg)	\$0.00
CGN	Bedliner, Spray-on	\$545.00
FE9	Emissions, Federal requirements	\$0.00
GAZ	Summit White	\$0.00
GU6	Rear axle, 3.42 ratio	\$0.00
H0U	Jet Black, Cloth seat trim	\$0.00
IOK	Audio System, 13.4" diagonal Premium GMC Infotainment System with Google built in apps such as navigation and voice assistance, includes color touch-screen, multi-touch display, AM/FM stereo	\$0.00
L3B	Engine, TurboMax	\$0.00
MFC	Transmission, 8-speed automatic, (Column shifter) electronically controlled	\$0.00
Q5U	Wheels, 17" x 8" (43.2 cm x 20.3 cm) 6-spoke Bright Silver painted aluminum	\$0.00
QBN	Tires, 255/70R17 all-season, blackwall	\$0.00
QBR	Tire, spare 255/70R17 all-season, blackwall	\$0.00
—	Option/package discount	(\$1,350.00)
SUBTOTAL		\$53,795.00

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BOB KING BUICK, GMC INC.

JOEL WARTEL | 9106201654 | JOELW@BOBKING.COM

Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (Complete)

Adjustments Total	\$0.00
Destination Charge	\$2,795.00
TOTAL PRICE	\$56,590.00

FUEL ECONOMY

Est City:17 MPG

Est Highway:20 MPG

Est Highway Cruising Range:480.00 mi

Standard Equipment

Package

Trailer Package includes trailer hitch, 7-pin and 4-pin connectors and (CTT) Hitch Guidance

SLE Convenience Package includes (CJ2) dual climate control, (A2X) 10-way power driver seat including power lumbar, (KA1) heated driver and passenger seats, (KI3) heated steering wheel, (C49) rear-window defogger, (BTU) Remote Start, (UTJ) content theft alarm and (UF2) cargo bed LED lighting (Deleted with (RG4) Fleet Delete Base Content Package.)

SLE Value Package includes (G80) auto-locking rear differential and (Z82) Trailer Package

GMC Pro Safety includes (UEU) Forward Collision Alert, (UE4) Following Distance Indicator, (UKJ) Front Pedestrian Braking, (TQ5) IntelliBeam, (UHX) Lane Keep Assist with Lane Departure Warning, and (UHY) Automatic Emergency Braking (Includes (T8Z) Buckle to Drive.)

Mechanical

Pickup bed

Engine, TurboMax (310 hp [231 kW] @ 5600 rpm, 430 lb-ft of torque [583 Nm] @ 3000 rpm) (Includes (KW5) 220-amp alternator and (MFC) 8-speed automatic transmission. Not available with (X31) X31 Off-Road Package or (NHT) Max Trailing Package.) (STD)

Transmission, 8-speed automatic, (Column shifter) electronically controlled with overdrive and tow/haul mode. Includes Cruise Grade Braking and Powertrain Grade Braking (Standard and only available with (L3B) TurboMax engine.) (STD)

Rear axle, 3.42 ratio (Included and only available with (L3B) TurboMax engine or (NHT) Max Trailing Package with (L84) 5.3L EcoTec3 V8 engine.)

GVWR, 7000 lbs. (3175 kg) (Requires Crew Cab 4WD or Double Cab 4WD model and (L3B) TurboMax engine. Requires Double Cab 4WD model with (L84) 5.3L EcoTec3 V8 engine without (NHT) Max Trailing Package.) (STD)

Push Button Start

Automatic Stop/Start

Auto-locking rear differential

Transfer case, single speed, electronic Autotrac with push button control (4WD models only)

Suspension Package, Standard

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BOB KING BUICK, GMC INC.

JOEL WARTEL | 9106201654 | JOELW@BOBKING.COM

Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (Complete)

Mechanical

Four wheel drive

Alternator, 220 amps (Included and only available with (L3B) TurboMax engine, (LZ0) Duramax 3.0L Turbo-Diesel I6 engine, (VYU) Snow Plow Prep Package or (NHT) Max Trailering Package.)

Battery, heavy-duty 730 cold-cranking amps/80 Amp-hr, maintenance-free with rundown protection and retained accessory power (Included and only available with (L84) 5.3L EcoTec3 V8 engine or (L3B) TurboMax engine.)

Frame, fully-boxed, hydroformed front section

Trailer brake controller, integrated

Recovery hooks, front, frame-mounted, Black (Included with 4WD models. Included and only available on 2WD models with (PED) Sierra Safety Plus Package.)

Cargo tie downs (12), fixed

Steering, Electric Power Steering (EPS) assist, rack-and-pinion

Brakes, 4-wheel antilock, 4-wheel disc with DURALIFE rotors

Brake lining wear indicator

Capless Fuel Fill

Exhaust, single outlet

Exhaust, aluminized stainless-steel muffler and tailpipe

Exterior

Wheels, 17" x 8" (43.2 cm x 20.3 cm) 6-spoke Bright Silver painted aluminum (STD)

Tires, 255/70R17 all-season, blackwall (STD)

Tire, spare 255/70R17 all-season, blackwall (Included with (QBN) 255/70R17 all-season, blackwall tires.) (STD)

Wheel, 17" x 8" (43.2 cm x 20.3 cm) full-size, steel spare

Tire carrier lock keyed cylinder lock that utilizes same key as ignition and door

Bumper, front chrome lower

Bumper, rear chrome with bumper CornerSteps

CornerStep, rear bumper

Moldings, window surround, Chrome

Grille (Chrome header with medium silver grille insert bars.)

Headlamps, LED projectors with Fade-on/Fade-off animation, LED turn signals and Daytime Running Lamps

IntelliBeam, automatic high beam on/off (Included and only available with (PDI) GMC Pro Safety.)

Taillamps, LED LED signature taillight and Fade-on/Fade-off animation, incandescent stop, turn and reverse light

Mirrors, outside heated power-adjustable

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BOB KING BUICK, GMC INC.

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Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (✔ Complete)

Exterior

Mirror caps, chrome (Requires (DLF) outside heated power adjustable mirrors.)

Glass, deep-tinted

Lamps, cargo area, cab mounted integrated with center high mount stop lamp, with switch in bank on left side of steering wheel

LED Cargo Area Lighting located in cargo bed activated with switch on center switch bank or key fob (Deleted with (RG4) Fleet Delete Base Content Package.)

Tailgate, standard

Tailgate, gate function manual with EZ Lift includes power lock and release, includes hitch area light

Tailgate and bed rail protection caps, top

Door handles, body-color

Entertainment

Audio System, 13.4" diagonal Premium GMC Infotainment System with Google built in apps such as navigation and voice assistance, includes color touch-screen, multi-touch display, AM/FM stereo Bluetooth streaming audio for music and most phones; featuring wireless Android Auto and Apple CarPlay capability for compatible phones (STD)

SiriusXM Trial Subscription

SiriusXM with 360L Trial Subscription. SiriusXM with 360L transforms your customers' ride with our most extensive and personalized radio experience on the road. (IMPORTANT: The SiriusXM trial subscription is not provided on vehicles that are ordered for Fleet Daily Rental ("FDR") use. Trial subscription is subject to the SiriusXM Customer Agreement and privacy policy, visit siriusxm.com which includes full terms and how to cancel. All fees, content, features, and availability are subject to change. Some features require GM connected vehicle services.)

Audio system feature, 6-speaker system

Bluetooth for phone, connectivity to vehicle infotainment system

Wireless, Apple CarPlay / Wireless Android Auto

Steering wheel audio controls

Wi-Fi Hotspot capable (Terms and limitations apply. See onstar.com or dealer for details.)

Interior

Seats, front 40/20/40 split-bench with covered armrest storage and under-seat storage (lockable) (STD)

Seat trim, Cloth

Seat adjuster, driver 10-way power including lumbar (Deleted with (RG4) Fleet Delete Base Content Package.)

Seat adjuster, passenger 4-way manual

Seating, heated driver and front outboard passenger (Deleted with (RG4) Fleet Delete Base Content Package.)

Seat, rear 60/40 folding bench (folds up), 3-passenger (includes child seat top tether anchor)

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Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (Complete)

Interior

Floor covering, color-keyed carpeting (Includes (B32) front floor mats and (B33) rear floor mats on Crew Cab and Double Cab models.)

Floor mats, rubberized-vinyl front (Deleted when (RIA) All-weather floor liner, LPO is ordered.)

Floor mats, rubberized-vinyl rear (Deleted when (RIA) All-weather floor liner, LPO is ordered.)

Steering column, manual Tilt-Wheel and telescoping (Deleted with (RG4) Fleet Delete Base Content Package.)

Steering wheel, wrapped

Steering wheel, heated (Deleted with (RG4) Fleet Delete Base Content Package.)

Driver Information Center, enhanced, 12.3" diagonal reconfigurable multicolor digital display

GMC Premium information Display- 13.4" diagonal Multicolor touch screen

Compass, located in instrument cluster

Exterior Temperature Display, located in radio display

Windows, power front, drivers express up/down

Window, power front, passenger express down

Windows, power rear, express down

Door locks, power

Keyless Open and Start includes remote keyless entry

Remote vehicle starter system (Fleet or Government orders are included with (B59) Remote Start Package and deleted with (RG4) Fleet Delete Base Content Package when (B59) Remote Start Package is not ordered.)

Cruise control, steering wheel-mounted

Theft-deterrent system, unauthorized entry (Included with (B59) Remote Start Package. Deleted with (RG4) Fleet Delete Base Content Package when (B59) Remote Start Package is not ordered.)

Steering column lock, electrical

USB Ports, 2, Charge/Data ports located on instrument panel

Power outlet, interior power outlet, 120-volt (400 watts shared with (KC9) bed mounted power outlet) (Includes (UBI) 2-USB charge ports.)

USB ports, (2) charge-only, rear

Power outlet, bed mounted, 120-volt (400 watts shared with (KI4) interior power outlet) (Included and only available with (KI4) 120-volt AC power outlet.)

Air conditioning, dual-zone automatic climate control

Air vents, rear

Mirror, inside rearview, manual tilt

Assist handles front A-pillar mounted for driver and passenger, rear B-pillar mounted

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BOB KING BUICK, GMC INC.

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Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (✔ Complete)

Safety-Interior

Automatic Emergency Braking (Included and only available with (PDI) GMC Pro Safety.)

Airbags, Dual-stage frontal airbags for driver and front outboard passenger; Seat-mounted side-impact airbags for driver and front outboard passenger; Head-curtain airbags for front and rear outboard seating positions; Includes front outboard Passenger Sensing System for frontal outboard passenger airbag (Always use seat belts and child restraints. Children are safer when properly secured in a rear seat in the appropriate child restraint. See the Owner's Manual for more information.)

OnStar services capable (See onstar.com for details and limitations. Services vary by model. Service plan required.)

OnStar Basics (OnStar Fleet Basics for Fleet) Drive confidently with core OnStar services including remote commands, built-in voice assistance, real-time traffic and navigation, and Automatic Crash Response to help if you're in need. (Requires (UE1) OnStar. OnStar Basics includes remote commands, Navigation, Voice Assistance, and Automatic Crash Response, for eligible vehicles with compatible software. OnStar Basics is standard for 8 years; OnStar plan, working electrical system, cell reception and GPS signal required. OnStar links to emergency services. Service coverage varies with conditions and location. Service availability, features and functionality vary by device and software version. See onstar.com for details and limitations.)

Hitch Guidance

HD Rear Vision Camera (Removed with (UV2) HD Surround Vision.)

Following Distance Indicator (Included and only available with (PDI) GMC Pro Safety.)

Forward Collision Alert (Included and only available with (PDI) GMC Pro Safety.)

Lane Keep Assist with Lane Departure Warning (Included and only available with (PDI) GMC Pro Safety.)

Seat Belt Adjustable Guide Loops, front row only

Buckle to Drive prevents vehicle from being shifted out of Park until driver seat belt is fastened; times out after 20 seconds and encourages seat belt use (Included and only available with (PDI) GMC Pro Safety.)

Tire Pressure Monitoring System, auto learn includes Tire Fill Alert (does not apply to spare tire)

Rear Seat Reminder

Rear Seat Belt Indicator

Safety-Mechanical

Front Pedestrian Braking (Included and only available with (PDI) GMC Pro Safety.)

StabiliTrak, stability control system with Proactive Roll Avoidance and traction control, includes electronic trailer sway control and hill start assist

Safety-Exterior

Daytime Running Lamps, LED signature lighting

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Vehicle: [Retail] 2026 GMC Sierra 1500 (TK10543) 4WD Crew Cab 147" SLE (Complete)

WARRANTY

Warranty Note: <<< Preliminary 2026 Warranty >>>

Basic Years: 3

Basic Miles/km: 36,000

Drivetrain Years: 5

Drivetrain Miles/km: 60,000

Drivetrain Note: Sierra TurboMaxTM engines, 3.0L & 6.6L Duramax[®]; Turbo-Diesel engines, and certain commercial, government, and qualified fleet vehicles: 5 years/100,000 miles

Corrosion Years (Rust-Through): 6

Corrosion Years: 3

Corrosion Miles/km (Rust-Through): 100,000

Corrosion Miles/km: 36,000

Roadside Assistance Years: 5

Roadside Assistance Miles/km: 60,000

Roadside Assistance Note: Sierra TurboMaxTM engines, 3.0L & 6.6L Duramax[®]; Turbo-Diesel engines, and certain commercial, government, and qualified fleet vehicles: 5 years/100,000 miles

Maintenance Note: First Visit: 12 Months/12,000 Miles

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Truck Bid #4

JEFF GORDON

CHEVROLET

228 SOUTH COLLEGE ROAD
WILMINGTON, NC 28403
(910) 791-2424

www.jeffgordonchevy.com

Item NB1

Date 06/03/2026

Retail Purchase Order

Purchaser's Name LOWER CAPE FEAR WATER Co-Buyer Name Street 1107 NEW POINTE BLVD City LELAND State NC Zip 28451 County BRUNSWICK Phone # H (910) 383-1919 W (910) 383-1919		<table border="1"> <thead> <tr> <th>New</th> <th>Used</th> <th>Program</th> <th>Car</th> <th>Truck</th> </tr> </thead> <tbody> <tr> <td>Year 2026</td> <td>Make CHEVROLET</td> <td colspan="3">TRUCK</td> </tr> <tr> <td>Model SILVERADO 1500</td> <td>Type 4WD CREW 147"</td> <td colspan="3"></td> </tr> <tr> <td>Color SUMMIT WHT</td> <td>Miles 4</td> <td>Stock # T11413</td> <td colspan="2"></td> </tr> <tr> <td colspan="5">Vin # 1GCUKDED2TZ371188</td> </tr> <tr> <td colspan="2">Salesperson END</td> <td colspan="3">#</td> </tr> </tbody> </table>		New	Used	Program	Car	Truck	Year 2026	Make CHEVROLET	TRUCK			Model SILVERADO 1500	Type 4WD CREW 147"				Color SUMMIT WHT	Miles 4	Stock # T11413			Vin # 1GCUKDED2TZ371188					Salesperson END		#		
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Salesperson END		#																															
Rebate Amount \$6,000.00 # NCC QFV Trade-in Description Year Make Model Type Color Miles VIN # I warrant that my trade-in has NOT been reconstructed, rebuilt, or suffered major frame damage that caused the reconstructing of this vehicle. I warrant that the balance owed on my trade-in is correct as stated on this buyer's order and that if the actual amount is greater, I will reimburse JEFF GORDON CHEVROLET. I understand that if the amount is less JEFF GORDON CHEVROLET will refund the difference.		Cash Price of Car \$59,857.50 Sales Tax \$0.00 Tag & Title \$0.00 Electronic Registration Fee \$0.00 Processing & Documentation Fee \$0.00 1. Total Cash Price \$59,857.50 2. Cash Down Payment Deposit \$0.00 Cash on Del \$0.00 MFG Rebate \$6,000.00 3. Trade-In \$0.00 Less Payoff \$0.00 4. Total Down Payment (2+3) \$6,000.00 5. Unpaid Balance of Cash Price (1-4) \$53,857.50																															
Insurance Information Agent Name Phone Deductible Comp: Deductible Coll: Ins. Co. Policy # Eff Dates: from / / to / / Payoff Verification Lien Holder Street City State Zip Phone # Account # 10 day payoff Good til / / Quoted By		Additional Terms of Sale Customer Initials Manager Initials Signed Purchaser Signed Approved by MGR																															
Disclaimer This new or used motor vehicle is purchased by the undersigned without any expressed warranty whatsoever from JEFF GORDON CHEVROLET except as may be stated hereinafter in writing. The manufacturer gives limited warranty on all new vehicles for the benefit of the purchaser. This warranty is made by the manufacturer and not JEFF GORDON CHEVROLET. All implied warranties, including warranties of merchantability and fitness for a particular purpose, and otherwise, are excluded and disclaimed. Due to the insurance regulations we cannot loan cars. Order not valid unless accepted by Authorized management representative of JEFF GORDON CHEVROLET.																																	

AGENDA ITEM

To: CHAIRMAN PHILLIPS AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: July 13, 2026

Re: Owners Advisor for Reservoir Project

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

Background: Land has been secured for the proposed 100 MGD reservoir. LCFWASA advertised for an Owner's advisor twice, the first time receiving only two submittals, and readvertised for a second time receiving no additional submittals.

Action Requested: Motion to approve HDR as the Owners Advisor



Statement of Qualifications

Owner's Advisor For 100 MGD Reservoir and Associated Infrastructure Design Build Project

Lower Cape Fear Water and Sewer Authority

Leland, North Carolina



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June 25, 2026

Lower Cape Fear Water and Sewer Authority
Attention Tim Holloman, Executive Director
1107 New Pointe Blvd, Suite 17
Leland, NC 28451
Director@lcfwasa.gov

RE: Request for Qualifications - Owner's Advisor for 100 MGD Reservoir and Associated Infrastructure Design-Build Project

Dear Mr. Holloman and Members of Selection Committee:

HDR Engineering, Inc. of the Carolinas (HDR) is pleased to submit our Statement of Qualifications (SOQ) to provide Owner Advisor (OA) services for Lower Cape Fear Water and Sewer Authority's (LCFWASA) 100 MGD Reservoir and Associated Infrastructure Design-Build (DB) Project. Our experience serving as OA on DB projects, combined with our reservoir expertise and familiarity with LCFWASA, provides you with a skilled and familiar partner on this project.

HDR offers the following key benefits:

Unmatched Owner's Advisor Experience. HDR is a national leader in OA services for multi-phased collaborative delivery projects. Our team brings direct OA experience from multiple projects across NC, including LCFWASA's 54" Raw Water Transmission Project. HDR provides you with a trusted partner who understands the role of an OA, acting as an extension of your staff while maintaining clear, collaborative communication to keep the project moving forward.

Proven Team with LCFWASA Experience. Our proposed Principal in Charge, **Will Shull**, has worked with LCFWASA over the past couple years on the 54" Raw Water Transmission Main project. Additionally, our project team also includes **Kip Kalisiak** and **Kim Colson** as our proposed Contract Specialist and Funding leads - both of whom are familiar to LCFWASA through their involvement with the ongoing 54" Raw Water Main project. HDR understands the goals and overall vision of this project for LCFWASA and is committed to providing the responsive support and communication you have come to know and expect.

Extensive Reservoir Experience. HDR brings extensive experience delivering reservoir and dam projects for municipal, state, and federal clients across the country. HDR has supported multiple phases of reservoir development, from planning and feasibility through design, permitting, and construction, providing integrated solutions that address water supply, resilience, and regulatory requirements. With a strong track record of collaborating on large-scale, multidisciplinary projects, HDR combines technical depth in civil, hydraulic, structural, and geotechnical engineering with a client-focused approach to deliver a reliable, high-performance reservoir system tailored to LCFWASA.

HDR is excited for the opportunity to support LCFWASA in delivering this project. We appreciate your consideration of our qualifications to perform the OA role on this important project. If you have any questions or would like to request further information, please don't hesitate to contact Project Manager, **Dave Cowell** at **910.398.9023** or **David.Cowell@hdrinc.com**.

- HDR is registered with the North Carolina Office of the Secretary of State and with the North Carolina Board of Examiners for Engineers and Surveyors.
- HDR will meet insurance requirements.
- Documentation is located in the Appendix.

Sincerely,

HDR Engineering, Inc. of the Carolinas

Dave Cowell, PE
Project Manager

Jonathan Henderson, PE
Senior Vice President and Signatory Authority

101 N 3rd Street, Suite 201 Wilmington, NC 28401 T 910.398.9020

Executive Summary

Locally operating as HDR Engineering, Inc. of the Carolinas, the North Carolina operations began in 1961 with a team of just 25 professionals. As client needs evolved, HDR strategically expanded its range of disciplines to better support local communities and municipalities. Today, HDR's North Carolina presence includes more than 695 employees, offering a comprehensive suite of engineering, planning, architectural, utility management, and environmental services.

CONTACT INFORMATION

HDR Engineering, Inc. of the Carolinas
101 N 3rd St., Suite 201, Wilmington, NC 28401
(T) 910.398.9020 (F) 910.398.9021

Contact Person: **Dave Cowell, PE**
Email: David.Cowell@hdrinc.com
(T) 910.398.9023



YEAR ESTABLISHED

Founded in 1917. Opened office in North Carolina in 1961.

FORMER NAMES UNDER WHICH FIRM OPERATED

HDR Engineering, Inc. of North Carolina
HDR Infrastructure, Inc. of North Carolina
Henningson, Durham, & Richardson, Inc. of North Carolina
B.O. Vannort Engineers, Inc.

HDR'S APPLICABLE OWNER ADVISOR AND RESERVOIR EXPERIENCE



• Location of HDR's applicable OA experience

As represented in the map above, HDR has supported multiple municipal owners across North Carolina deliver complex water projects through program management and OA services. HDR has spent recent years focusing on providing value-added leadership to help our water and wastewater clients successfully execute DB projects. We understand the marketplace and the risk profiles for DB delivery and have included individuals with expertise in contracting and procurement to maximize Design-Builder performance while minimizing risk.



HDR team members **Richard LeBlanc** and **Loring Crowley** offer specialized expertise in reservoir systems, backed by HDR's deep bench and long-standing national experience in design and constructing reservoirs across the country. Drawing on this collective expertise and their work on complex water infrastructure projects, they proactively identify technical and constructability risks and help refine OPC documents to reduce ambiguity and design-build exposure.

LEADER IN NORTH CAROLINA DB AND OA SERVICES

HDR brings unmatched North Carolina DB experience, providing LCFWASA with a trusted partner to navigate project complexities. We are the only engineering firm in the state with a dedicated OA group, supported by a 10-member North Carolina team with diverse technical expertise and strong local government utility experience.

Our team understands the DB marketplace, delivery risks, and contracting strategies needed to maximize DB Team performance while minimizing risk.

HDR adds value through:

- » A collaborative, structured approach to project delivery
- » Effective management tools and risk mitigation strategies
- » DB contracting and procurement expertise

2025 ENGINEERING NEWS-RECORD RANKINGS

#6 ENR Top 500 Design Firm

#4 Top 15 in Dams and Reservoirs

#5 Top 50 in Water Supply



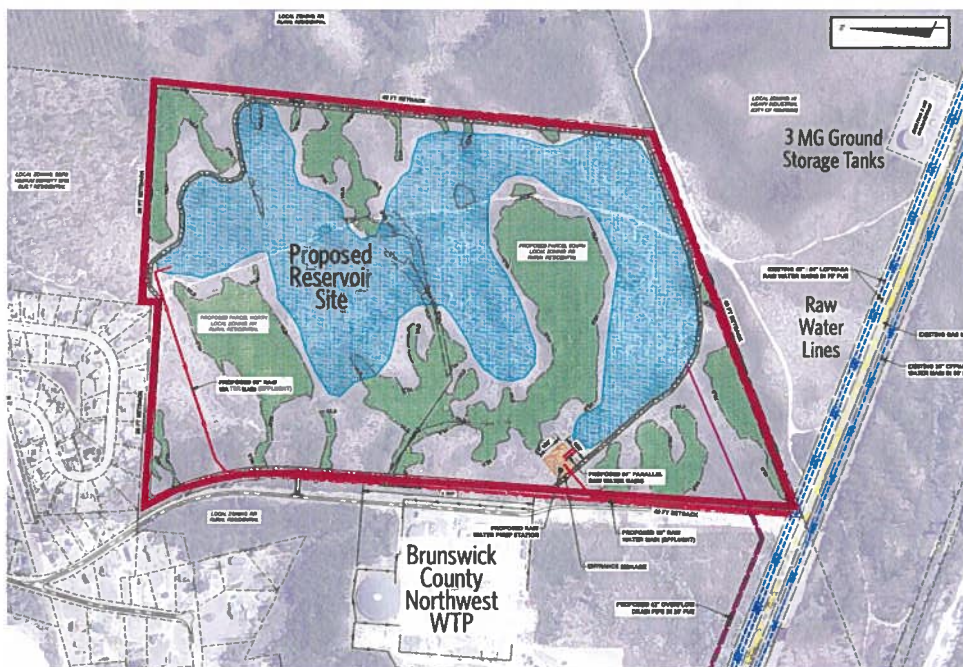
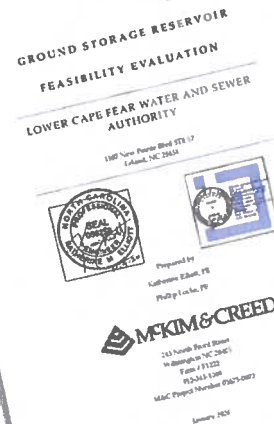
1. Project Understanding and Approach

a. Understanding of the Project

LCFWASA is advancing a critical resilience initiative to develop a new 100 MGD raw water storage reservoir and associated infrastructure to support its regional system serving over 550,000 customers across multiple counties in eastern North Carolina. The reservoir is intended to enhance system reliability by providing backup storage during outages, maintenance events, or disruptions to withdrawals from the Cape Fear River, which is LCFWASA's primary raw water source. This need is driven by increasing regional demand, projected to reach over 70 MGD by 2045, and the limited capacity of the existing 3 MG ground storage tank to provide operational redundancy.

The recently completed feasibility study evaluated multiple alternatives and confirmed a baseline concept of a 100 MG reservoir, with potential for phased expansion, to provide between approximately 1.4 to 2.4 days of storage under peak demand conditions and greater resilience under average demand scenarios. The study also identified key siting, hydraulic, water quality, and operational considerations, including integration with the existing Kings Bluff Raw Water System, transmission infrastructure, and pump station facilities.

Overall, this project represents a strategic investment in regional water supply resilience, positioning LCFWASA to meet future demand, mitigate risks associated with source water disruptions, and continue providing reliable raw water service to its partner utilities and communities.



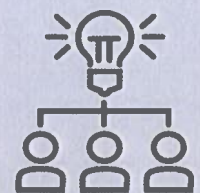
Early Project Momentum and Funding Alignment

HDR partnered with LCFWASA to successfully secure State Reserve funding (DWI Project SRP D 134 0198), enabling acquisition of the preferred reservoir site and completion of initial planning efforts.



LCFWASA intends to deliver this project using a DB approach and is seeking an OA to support:

- Owner's Project Criteria (OPC)
- Risk Management
- Compliance with state funding requirements
- Aligning project execution with LCFWASA's priorities
- Validating that the Design-Builder's solutions meet performance, budget, and schedule objectives through design and construction





b. Approach for the Work and to Keep the Project on Schedule and on Budget

PLANNING

Establishing reliable communication lines in the planning phase is an important early activity of any project. Early planning activities include developing an initial budget with funding/cash-flow strategy, risk register, regulatory requirements, and project alternatives. Led by **Dave Cowell**, HDR will organize and maintain communications to effectively inform and manage the flow of information related to project activity. Workshops are an integral part of our overall collaborative approach. Our proposed workshops are outlined within the schedule on Page 6.

DESIGN-BUILD CONTRACT

Developing a DB contract utilizing the Design-Build Institute of America (DBIA) and procurement process that meets LCFWASA's needs will be the initial top priority. HDR's thorough understanding in DB methods will provide insight into the standard contract issues that must be addressed at the beginning of the project, including your preferences, project administration, risk allocation, permitting, cost controls, schedules, and market volatility as well as many other items.

The DB contract form, risk allocation, and terms and conditions will impact the quantity and quality of the DB Teams that submit proposals. Potential proposers will need to review the contract to determine what their risks will be before they can decide whether to submit a proposal. Some of the key risks to DB Teams will be: consequential damages, indemnification, bonding requirements, insurance requirements, liquidated damages, unforeseen conditions and termination clauses.

TANGIBLE EXPERIENCE

54" Raw Water Transmission Main LCFWASA, NC

HDR has successfully assisted LCFWASA with four DB GMP negotiations for multiple phases of the project. The total value of all GMPs was approximately \$63M. Construction on the multi-phased project is ongoing with the DB Team of Garney-McKim & Creed. Through our GMP review and negotiations, HDR's comments helped to identify \$4.5M in cost savings across all phases of the Kings Bluff Raw Water Main Project.



KEY DB CONTRACT CONSIDERATIONS:

- Start with the DBIA base documents
- Develop DB contract that adheres to NC law and standard LCFWASA terms and conditions
- Shared savings provision
- The various phases of the project
- Termination clauses
- "Open-book" cost requirements

OWNER'S ADVISOR OBJECTIVES

HDR's role as OA is grounded in one core commitment: **to function as a seamless extension of LCFWASA's Project Team**. Our OA objectives align directly with LCFWASA's stated priorities and the defined scope of services:

- **ALIGN** entire integrated project team with LCFWASA's priorities.
- **COLLABORATE** with LCFWASA to develop OPC.
- **PREPARE** a DB contract and procurement process that adheres to NC law and standard LCFWASA terms and conditions.
- **SUPPORT** LCFWASA during RFQ phase and confirm submitted proposals meet project requirements and OPC.
- **CREATE** a project risk register to establish risk factors and mitigation measures.
- **EVALUATE** regulatory requirements and potential impacts to the project.
- **ADMINISTER** a DB procurement process that is streamlined, fair, and generates healthy competition.
- **ATTEND** progress meetings and review submittals, design documents, and cost estimates.
- **NEGOTIATE** a guaranteed maximum price (GMP) that is fair and acceptable.





PROJECT CRITERIA DEVELOPMENT

One of the first OA priorities will be to develop LCFWASA's Project Criteria, which will be part of the Design-Builder's Request for Qualifications (RFQ). This Project Criteria will be critical for setting the requirements of the project and establishing the expectations of the selected Design-Builder. The Project Criteria will be a significant component of the Design-Builder's Agreement with LCFWASA and will establish the scope of services and requirements for schedule, performance, and quality. HDR will support LCFWASA in the first month of the project to clearly define necessary Project Criteria.



IMPORTANCE OF PROJECT CRITERIA

It is important that the OA develops a Project Criteria that does not advance into the design stage. Advancing beyond the Project Criteria is a common mistake for inexperienced OAs and it costs the Owner time and money in the DB process.

The Project Criteria will establish the baseline Design-Builder's Scope of Service. An example of these Scope of Services includes the following:

- 1 DB will implement a robust safety program for all design and construction-related activities.
- 2 DB will lead interactive design workshops.
- 3 DB will provide 30%, 60-75%, 90%, and 100% Design Drawings and Specifications.
- 4 DB will develop cost estimates at the 30% design stage, update at 60-75% design stage, and a firm cost with the GMP.
- 5 DB will complete all field data collection (surveying, geotechnical, environmental, etc.).
- 6 DB will work with OA to finalize all permitting activities and obtain permits required for project construction.
- 7 DB will provide project management, documentation, and progress reporting as required.
- 8 DB will verify functional operation of existing infrastructure during construction.
- 9 DB will provide QC of design and construction related activities.
- 10 DB will provide engineering services during construction to include RFIs, shop drawing reviews, contractor change order requests, factory witness equipment testing observation and reports, preparation of record drawings, and project management support.
- 11 DB will provide all construction management services for their work.
- 12 DB will complete all required testing and startup procedures.
- 13 DB will complete project close-out activities including final punch-lists, operations and maintenance manual production, training, project certifications, documentation for asset management, and warranty efforts.

ADDITIONAL SPECIAL IDEAS, TECHNIQUES, & SUGGESTIONS

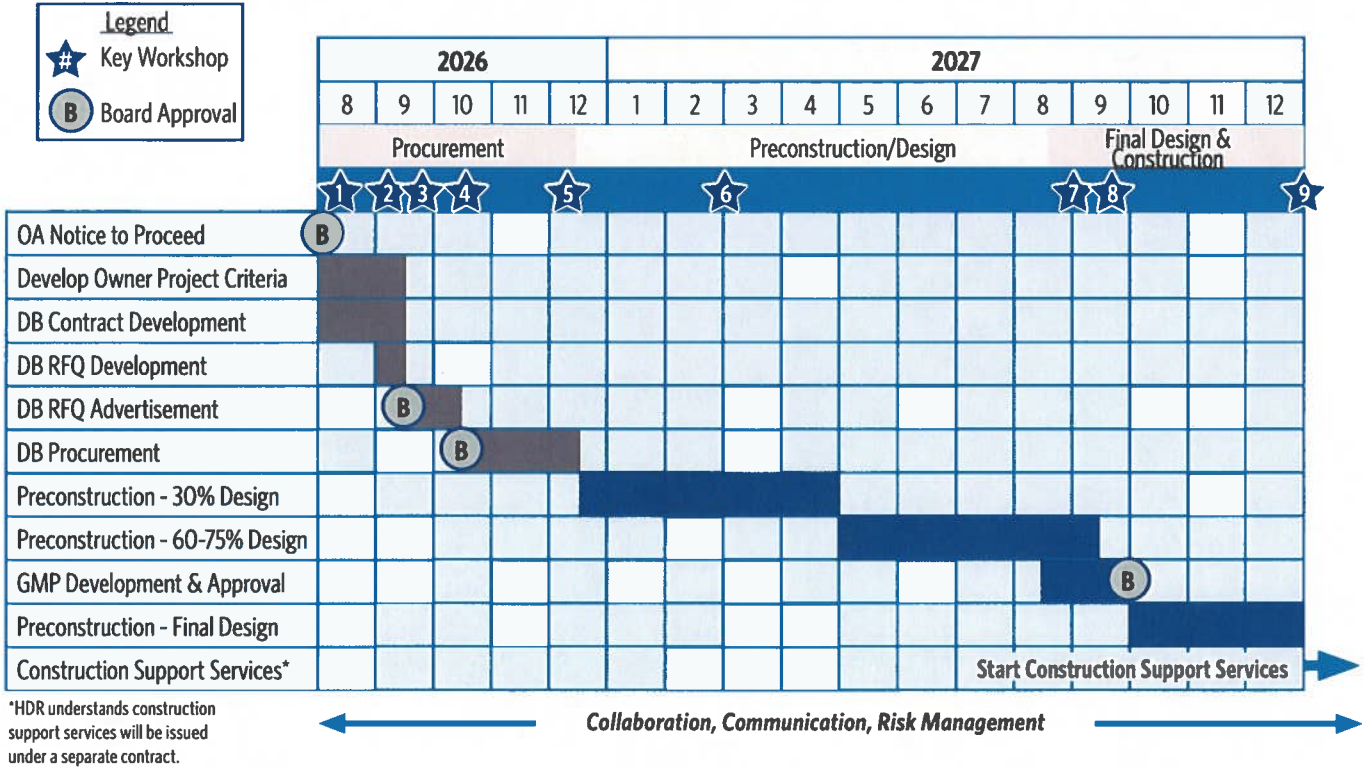
- Establish a collaborative team relationship with LCFWASA, OA, and DB Team. Make the project a win-win for everyone involved.
- Establish a clear communication matrix and a plan for timely conflict resolution.
- Utilize a proactive OA Cost Estimator to prevent GMP surprises and assist in GMP negotiations.
- Establish a cost estimating and GMP format that coincides with each other and the DB contract early in the preconstruction phase. Use this format throughout the project to avoid any misunderstandings on changes in costs.
- Utilize early work packages (or multi-step GMPs) when schedule is critical, but understand the associated risks.
- Clearly understand the trade-offs with risk shifts and additional costs.
- Request DB proposers to submit their approach to GMP development.
- Require major equipment, materials, or significant work intended to be subcontracted to be bid out with the 60-75% and final GMP cost estimates.
- OA and DB Team should track any scope deviations and identify cost and schedule impacts, as well as discuss these as soon as possible with LCFWASA leadership.

DESIGN-BUILD PROCUREMENT & NEGOTIATIONS

One of the most important ways to manage project risk is by selecting a DB Team that is best suited for the project and understands a collaborative approach. To determine the best-suited DB Team, we will assist LCFWASA with planning a procurement process focused on finding the right team for the project. We will assist LCFWASA through the process of developing an RFQ that meets North Carolina laws and the LCFWASA procurement requirements. We have demonstrated experience serving North Carolina Owners to develop these documents and successfully negotiate contract terms with DB Teams. **This provides you with the experience necessary to help create the best and most efficient procurement process for LCFWASA.**

PROPOSED SCHEDULE

The most likely schedule based on our experience and the current market conditions is shown below. Our approach to keeping the project on schedule and budget centers around a collaborative approach with LCFWASA, the Design-Build, and HDR. Workshops are an integral part of our overall collaborative approach. In our team's experience, workshops have proven to be the most effective way to share critical information needed to make sound decisions and establish consensus. Our proposed workshops are outlined within the schedule.



Expected Workshop Outcomes

- 1 Define project team roles, establish internal communications and decision making strategy; determine initial schedule and budget.
- 2 Review draft DB Contract, RFQ, and Project Criteria document. Establish initial risk register.
- 3 Finalize DB Contract, RFQ, and Project Criteria documents. Discuss pre-RFQ meeting. Discuss updated risk register, budget, and schedule.
- 4 Form collaborative partnership and negotiate contract terms with selected DB Team.
- 5 Preconstruction kickoff. Form integrated and collaborative team. Review Project Criteria. Discuss DB Team ideas including early procurement or work packages. Review updated risk register, budget, and schedule.
- 6 Review 30% design submittal, cost estimate, schedule, and risk register. Complete Value Engineering session. Determine opportunities for early procurement work packages.
- 7 Review 60-75% design submittal, cost estimate, schedule, and risk register.
- 8 Final GMP negotiation.
- 9 Construction kickoff. Review updated risk register, budget, and schedule.

GUARANTEED MAXIMUM PRICE DEVELOPMENT AND INDEPENDENT COST ESTIMATING

The GMP proposal marks the transition from pre-construction to construction phase and requires intentional pre-planning and attention. Proper planning and review throughout the pre-construction phase will prevent any surprises at the time of the GMP offering. Early involvement by our Principal in Charge, **Will Shull**, and our Independent Cost Estimator, **Pete Bredehoeft**, will provide cost tracking and accounting protocols that are aligned to allow for transparent cost comparison at the time of the GMP proposal and throughout project development. Will can confirm that the DB procurement strategy, bid packaging, and formatting are aligned with your goals and conducive to continuous cost trending/tracking, estimate analysis, and reconciliation efforts.

GMP STRUCTURE

One important lesson HDR has learned from other OA roles is to clearly define the GMP structure and requirements with the DB Team early in the project. This will avoid any misunderstandings and schedule delays associated with the GMP deliverable. Below we have drafted GMP requirements that we feel are appropriate for your project.

LCFWASA GMP REQUIREMENTS

Section 1 - GMP

- GMP Cost Summary
- GMP Backup Information
- Subcontractor Bids
- Vendor/Equipment Bids
- Project Contingency
- General Conditions Cost Details
- Subcontractor Markup
- Integrated Team Organizational Chart
- Final Engineering Design and Engineering Services during Construction Scope and Fee Proposals
- Allowance Item List and Backup
- Schedule of Alternate Prices
- Schedule of Unit Prices
- Statement of Additional Services
- Savings Provision
- Time Limit of Acceptance of the Proposal
- Owner's Permit List

Section 2 - Contract Documents as Basis for GMP

- 60-75% Plans
- Specifications Manual
- Geotechnical and SUE Data

Section 3 - Assumptions and Clarifications

Section 4 – Project Schedule

- Project Schedule with Substantial Completion Date



WE RECOMMEND THE FOLLOWING TACTICS TO ENABLE ACCURATE GMP DEVELOPMENT AND EVALUATION:

- Request proposers submit their approach to GMP development with their proposal. Identify and discuss approaches with selected team prior to finalizing selection of DB Team.
- State in RFQ any limitations or expectations regarding work to be self-performed by the DB Team.
- Require major equipment, materials, or significant work intended to be subcontracted to be bid out with 60-75% and final GMP cost estimates.
- Establish cost estimate software, formatting, work breakdown structure, and taxonomy early in pre-construction phase. Accurate estimate reconciliation can be best accomplished if estimated formats and protocol are jointly established and used.
- Reconcile DB estimate with independent cost estimate at each milestone submission.
- OA and DB Team track any scope deviations and identify cost and schedule impact with each deviation.



CRITICAL ELEMENTS OF A COLLABORATIVE APPROACH

- *efficiently establishing the OPC*
- *quickly negotiating a fair contract*
- *early definition of GMP requirements*
- *agreement on key project risk elements and mitigation measures*
- *independent cost estimating checks*
- *productive GMP negotiations*
- *consensus on QA/QC responsibilities*

INDEPENDENT COST ESTIMATING

Pete is an expert in cost estimating processes and procedures. He is a specialist in estimating location or area adjustment factors and in escalation development and commodity trends. He is a Certified Estimating Professional International (CEP) from AACE International, and has been awarded the Fellow and TCM Framework awards at AACE International. He also serves on the AACE International Technical Board as the Director of Recommended Practices.

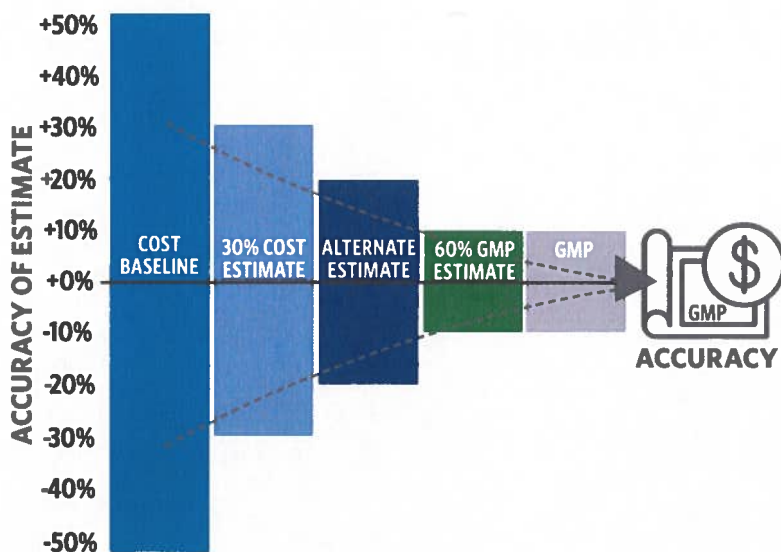
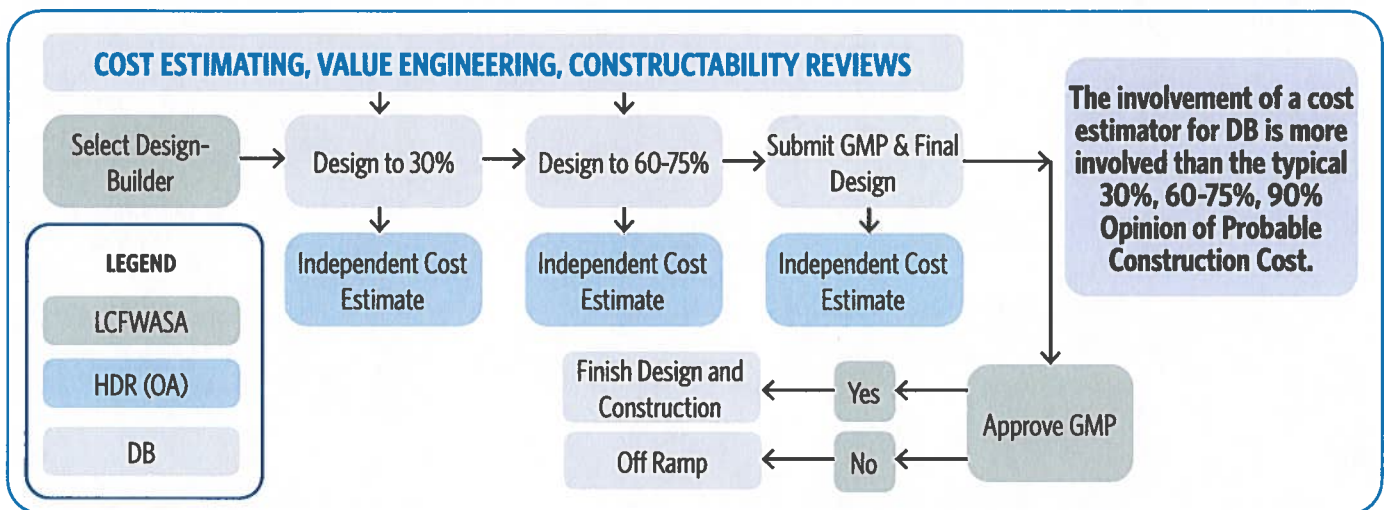
Pete has extensive cost estimating experience on large water capital improvement programs. He is the administrator of the Estimating Benchmarking Tool that tracks historical estimates, actuals, unit prices, ratios and metrics, and professional services. Pete has also implemented the GMP validation process on five recent DB projects.

Pete is proficient in a variety of leading construction industry software programs, including Timberline, Revit, Assemble, Eos E2, Eos Advisor, Success by U.S. Cost, MC2, MCAES, MFW, PACES, Composer Gold, Primavera, Microsoft Project and SureTrak.



Pete Bredehoeft, CEP

From recent experience on DB projects, our independent cost estimator, Pete Bredehoeft, understands the importance of early involvement to avoid surprises during the GMP Process.



Proactive Independent Cost Estimator Involvement Prevents GMP Surprises

1. Review scope of services and basis of the estimate to understand total scope and approach
2. Perform independent quantity takeoff and review with the DB Team
3. Use the same labor and equipment rates
4. Discuss productivity rates and construction methods
5. Review markup structure, subcontractors, mobilization/demobilization, sales tax, home office overhead, general conditions, profit, bonds, and insurance
6. Produce independent cost estimates
7. Review and compare prices with the Design-Builder
8. Review escalation rates
9. Review market volatility
10. Review non-construction costs/fees
11. Track change orders during construction review

IDENTIFYING MARKET-BASED PRICING AND SCHEDULES

One key component to obtaining LCFWASA leadership buy-in to a negotiated GMP is to provide assurance of market-based pricing. From prior experience, we have learned GMP contracts can be broken down into four main components: General Conditions (GCs), Cost of the Work, Contingency and Owner Allowance, and Overhead and Profit. Some of HDR's key lessons learned on each component are below:

HDR'S KEY LESSONS LEARNED FROM GMP CONTRACTS

MAIN GMP COMPONENT	HDR'S LESSONS LEARNED, SUCCESSFULLY APPLIED
General Conditions Costs required for resources to meet the general conditions terms of the contract.	• Compare metrics to other HDR Programs using our large database of CM labor and GCs required for similar contracts. • Require staffing projections to be included with proposals and evaluated as part of the cost of the work. • Negotiate early in GMP development to avoid delays once firm pricing comes in.
Cost of the Work Cost of the work is generally bid in an open-book manner, with transparency on pricing and selection of subcontractors. The main issue in determining market-based pricing is on 'self-performance' work. In the past, we have required contractors who want to self-perform to submit bids directly to us at the same time as other bidders. Recently, this approach has proven unsuccessful as subcontractors are leery to bid against the contractor.	• Agree in advance (with the DB Team) what might be suitable for self-performed work and negotiate these packages against independent estimates on an open-book basis. Should these negotiations prove unsuccessful, the Design-Builder will be required to bid these packages to the open market (without their participation).
Contingency and Owner Allowance Contingency is negotiated and is applicable to cover design issues (in a DB contract), quality control issues, rework, missed scope, and other areas under the contractor's control. Our experience tells us what an appropriate contingency amount is. Owner allowance is for things under the Owner's control, namely requested design changes and unforeseen conditions during construction.	• Determine upfront what "bucket" changes should come from – the Design-Builder will push for money to come from Owner allowance and the Owner will need seasoned negotiators to help guide the process.
Overhead and Profit Design-Builders desire to recover a reasonable overhead and profit. Schedule also plays a key component in pricing, and schedule (like GMP) will also be negotiated as design develops. There are a few keys to developing a workable and achievable schedule. Previously, the industry norm was to make Design-Builders work like engineers – recover overhead through a multiplier against their labor and then apply a flat profit for the work. However, contractors are not engineers and their pricing scheme is different.	• Require the Design-Builder to include with their proposal a flat mark-up on verifiable costs – labor + fringe, materials and equipment, and subcontractors. This mark-up should be the sole mechanism for recovery of overhead and profit. • Plan for commissioning. • Consider early procurement and start to reduce overall construction duration – items such as pipe procurement could be considered, but you need to maintain the ability to take an off-ramp should GMP pricing not come in as expected.

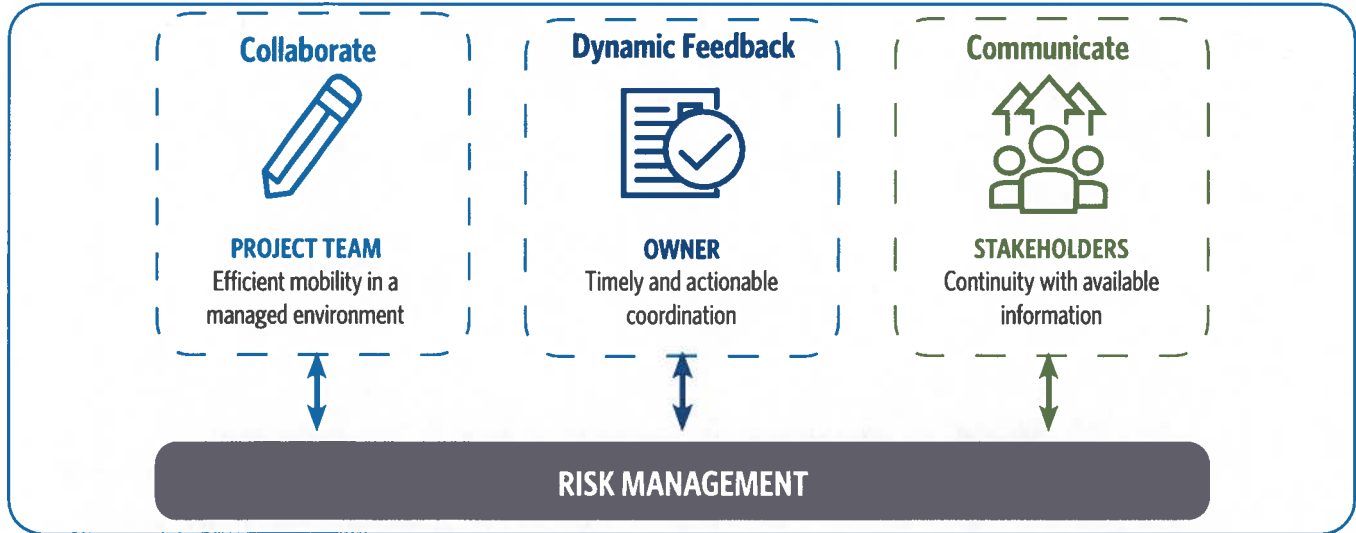


HDR's Experience: Cost & Constructability Advantage

NC-based HDR Team member, **Jeff Allen**, brings over 40 years of experience from a multi-perspective background as an engineer, contractor, and business manager, delivering real-world insight into cost, constructability, and independent cost validation through his experience in estimating and contract management. He applies this expertise to optimize materials, sequencing, and construction methods early in design—reducing cost, schedule, and constructability risks while advancing efficient, buildable solutions.

RISK MANAGEMENT

Our approach to risk management is proactive identification, assessment, mitigation, and communication. While the scope of this project may be well defined, having a plan to mitigate potential risks can reduce your exposure to change orders and schedule delays. Our risk management approach includes the development of a risk register to identify the top risks based on a risk consequence and likelihood of occurrence metric. Mitigation measures and responsible parties will be assigned to each risk and we will update the list throughout the project progression as a collaborative team.



HDR will partner with you during the first month to identify project risks that fit into three distinct buckets: contractual/financial, planning and design, and construction and commissioning.



HDR'S PROVEN EXPERIENCE: RISK MITIGATION

HDR brings deep reservoir planning, design, and construction-phase experience that enables early identification of project-specific risks and practical mitigation strategies. Our team understands complex challenges, from geotechnical variability and hydraulic performance to dam safety, constructability constraints, and regulatory coordination tied to state funding, allowing us to anticipate issues before they affect cost or schedule.

Drawing on lessons learned from similar multidisciplinary projects, HDR develops targeted risk registers aligned to delivery approach and site conditions, including risks related to OPC, Design-Builder interpretation, cost escalation, and coordination across design, permitting, and construction.

HDR'S PROVEN EXPERTISE: RESERVOIR EXPERIENCE

HDR Team members, **Richard LeBlanc** and **Loring Crowley**, bring specialized expertise in reservoir and dam systems. Leveraging experience on complex water infrastructure projects, they identify technical and constructability risks early and help refine OPC to reduce ambiguity and DB exposure. Their guidance during design reviews aligns project decisions with goals, regulatory requirements, and industry best practices, strengthening overall project outcomes.



c. Description of the Owner's Consultant Team's Quality Control Program

Our quality management will not only be focused on the quality of the service provided or product produced, but also on the means to achieve it. We will use planning, process controls, and verification to implement appropriate checks and balances to achieve quality. Quality Assurance (QA) and Quality Control (QC) processes are different for each phase of the Project (see table below). The responsibilities for these processes will be captured in a QMP under Project Manager, **Dave Cowell's**, direction. Regardless of the Project phase, the party completing each portion of the project is responsible for the quality control of that portion.

→ QUALITY CONTROL: Fulfilling Requirements ←			
Phase	Responsible Party	Defines QC Procedures	Example Procedures
DESIGN	Design-BUILDER's Engineer	Design Quality Control Plan	- Independent peer review of deliverables - Calculation checks - Inter-discipline reviews - Constructability reviews - QC comments resolved
CONSTRUCTION	Design-BUILDER	Construction Quality Control Plan	- Construction inspection - Special inspections - Material receipt inspection and proper handling - Materials testing - Documentation and resolution of non-conformance items
COMMISSIONING	Design-BUILDER	Commissioning Plan	- Individual test procedures - Manufacturer's certifications - Conduct and verify all tests - Equipment tests

→ QUALITY ASSURANCE: Providing Confidence ←			
Phase	Responsible Party	Defines QC Procedures	Example Procedures
DESIGN	LCFWASA/HDR	Quality Management Plan	- Review of Engineer's Quality Plan - Review of deliverables for consistency with LCFWASA requirements - Constructability reviews
CONSTRUCTION	LCFWASA/HDR	Quality Management Plan	- Review of DB Team's Quality Plan - Attend construction progress meetings - Special inspections - Construction inspection - Periodic testing using independent materials and testing agency - Verification of non-conformance resolution - Issue and respond to requests for information and/or change proposal requests - Review change orders
COMMISSIONING	LCFWASA/HDR	Quality Management Plan	- Test procedures - Review manufacturer's certifications - Witness all tests - Review equipment tests

d. Experience with Federal and/or State Grant Programs

FUNDING STRATEGIES

HDR has significant experience with a variety of water infrastructure funding programs that can make water infrastructure more affordable for the utility's customers. Our experience will assist LCFWASA navigate funding program requirements; that is, the federal requirements but also how each agency implements those regulations.

Our team has extensive experience in water infrastructure funding programs including:

- American Rescue Plan Act (ARPA)
- Community Development Block Grants
- Building Resilient Infrastructure and Communities
- Clean Water State Revolving Fund (CWSRF)
- Water Infrastructure Financing and Innovation Act
- North Carolina's Water Infrastructure Programs

Our role in funding can be tailored to LCFWASA's needs including evaluating funding options, funding planning, application preparation, review of federal conditions, engineering report preparation, and compliance through construction. With HDR's expertise and experience, our team will tailor the effort for funding based on the LCFWASA's needs and can adjust the level of effort as the project develops. Federal initiatives have made more infrastructure funding available in recent years including some non-traditional approaches. A review of these initiatives at the beginning of the project may inform how the project is approached.

If funding is obtained, HDR has the experience and expertise to guide the LCFWASA through the funding process including the engineering report, environmental information document, and final plans and specifications approval processes. For many agencies, these approval steps are built around the traditional design-bid-build procurement method. Understanding how to adjust that process for an alternate procurement method is important to keeping a project on schedule. Early conversations with funding agencies can help create a smooth funding process.



FUNDING ASSISTANCE will be led by Kim Colson who specializes in bridging regulatory requirements, water infrastructure management, and funding for infrastructure with a holistic approach. His professional experience spans three decades of service with the North Carolina Department of Environmental Quality (NCDEQ). When he retired from NCDEQ, Kim was Director of the Division of Water Infrastructure (Division) managing the CWSRF, Drinking Water State Revolving Fund, State Community Development Block Grant – Infrastructure, and various state water infrastructure programs. At that time, he was also Chair of the State Water Infrastructure Authority and President of the Council of Infrastructure Financing Authorities.

NORTH CAROLINA FUNDING EXPERIENCE

- **54" Raw Water Main** | Lower Cape Fear Water and Sewer Authority | **DWSRF, ARPA, State Directed Grant**
- **Southside WWTP Expansion** | Cape Fear Public Utility Authority | **CWSRF**
- **Gray's Creek Phase 1** | Cumberland County | **DWSRF, DWSRF-EC, ARPA**
- **Landfill Leachate PFAS Treatment** | Cumberland County | **CWSRF-EC**
- **Cub Creek III Stream Restoration** | Town of Wilkesboro | **LASII, FEMA BRIC**
- **Innovation Quarter 2 Master Plan** | WFIQ Holding, LLC | **US Department of Housing and Urban Development (HUD) Community Project Funding Grant (Congressional Directed Grant)**
- **Western Intake Partnership, Planning Grants** | City of Durham | **ARPA**
- **New Greenfield WRF** | Town of Clayton | **CWSRF, ARPA, State Directed Grant**
- **Water and Wastewater Master Plan** | Town of Clayton | **ARPA**
- **Cub Creek WWTP Expansion** | City of Wilkesboro | **CWSRF, State Grant**
- **Henry Fork WWTP Solids Handling Improvements** | City of Hickory | **CWSRF**
- **High Shoals Sewer Interconnect** | Gaston County | **CWSRF**





TANGIBLE FUNDING EXPERIENCE

HDR supported the Town of Clayton in navigating the funding requirements for the Sam's Branch Water Reclamation Facility (SBWRF) which included four separate construction contracts. The overall project received grants from two separate federal sources and utilized loans from both the CWSRF and the bond market. Due to time-related applicability related to ARPA grant and conflicts between federal procurement requirements and state law related to PDB procurement, certain funding sources were only applicable to certain contracts. HDR assisted in aligning funding sources to contracts based on eligibility and timing to use the ARPA grant funds within the federal timeframe.

CONSTRUCTION ADMINISTRATION

HDR offers construction-phase services and can support LCFWASA through an additional contract, if required. HDR's construction-phase services bring clarity, coordination, and risk reduction to every project, delivered through four integrated areas of expertise.

EFFECTIVE COMMUNICATION

- Stakeholder Engagement
- Regular Client Communication
- High-Quality Construction Communication
- Weekly Construction Briefs to Leadership
- Monthly Updates to Dashboard which shows Key Performance Indicators (KPIs)



COMPLIANCE & SCOPE

- Regulatory Compliance Expertise
- Deep Understanding of Scope and Construction Processes
- Turn-key Services from Design through Construction
- Coordination with Design Team



RISK, QUALITY, & CONSTRUCTABILITY

- Proactive Construction-Phase Management
- Risk Identification
- Constructability Reviews
- Value Engineering



SCHEDULE, PROCUREMENT, & FIELD EXECUTION

- Schedule Analysis and Coordination
- Identification of Long-lead Procurement Items
- Experienced, Certified Field Staff



2. Relevant Firm Experience with Design-Build Projects

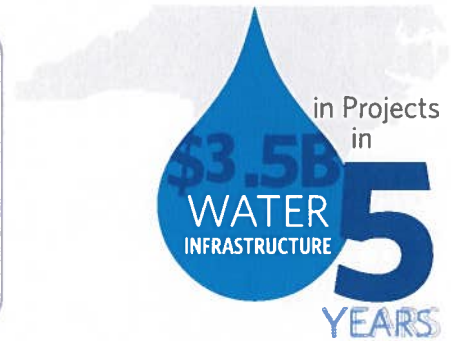
a. Projects of Similar Size and Scope

HDR'S TANGIBLE BENEFITS TO LCFWASA

Transferable lessons learned from procurement, contracting, and contract administration on previous OA and DB projects.

Understanding of LCFWASA's preferences from ongoing OA services on the Raw Water Transmission Main project.

Deep technical capability to support LCFWASA and the DB Team decisions.



EXPERIENCE WITH SIMILAR PROJECTS

The chart below summarizes HDR's relevant project experience across key service areas, demonstrating our readiness to support this project.

Projects in the shaded area are featured on the following pages.

Project Owner	HDR Role	Delivery Method (DM)	Owner Project Criteria	Contact Administration	Design	Design Review	Cost Estimating	Construction Services	Reservoir
OA for 54" Raw Water Transmission DB LCFWASA, NC	OA	PDB	●	●		●	●	●	
OA for Liberty Elevated Storage Tank City of Greensboro, NC	OA	PDB		●		●	●	●	
Owners Agent for WolfSpeed Water Extension DB City of Asheboro, NC	OA	PDB	●	●		●	●		
OA for Wallburg Road Lift Station Winston-Salem/Forsyth County Utilities, NC	OA	PDB	●	●		●	●	●	
West End Reservoir City of Billings, MT	EOR	DBB & CMAR		●	●		●	●	●
Reservoir No. 3 Design Peace River Manasota Regional Water Supply Authority, FL	EOR	DBB & CMAR	●		●		●	●	●
Western Intake Partnership City of Durham, NC	OA	PDB & DBB	●	●		●	●	●	
Mount Holly Pump Station and Forcemain Charlotte Water, NC	OA	PDB	●	●		●	●	●	●
Timothy G. Broome WTP Upgrade Johnston County, NC	OA	PDB	●	●		●	●	●	
Townsend WTP Advanced Treatment of Emerging Contaminants City of Greensboro, NC	OA	PDB	●	●		●	●	●	
Yadkin Regional Water Supply Program Union County, NC	OA	PDB	●	●		●	●	●	●
C-44 Reservoir and Stormwater Treatment Area USACE- Jacksonville District, FL	EOR	DBB & CMAR	●		●		●	●	●
Southside WRF Replacement and Capacity Upgrade DB Cape Fear Public Utility Authority, NC	OA	PDB	●	●		●	●	●	●
C-23/24 South Reservoir South Florida Water Management District, FL	EOR	DBB & CMAR	●		●		●	●	●

b. References and Descriptions of Similar Projects

OA for 54" Raw Water Transmission DB

Lower Cape Fear Water & Sewer Authority, NC

Owner Contact Information

Tim Holloman
Executive Director
Director@lcfwasa.gov
910.383.1919



Role: OA
Delivery Method (DM): PDB

SCOPE OF SERVICES

HDR is serving as the OA on a DB project for a new 54" raw water transmission main, which also includes an open cut crossing of the Cape Fear River. The new main will run parallel to an existing 48" raw water main, spanning approximately 10 miles (Phase 1 first 7 miles / Phase 2 last 3 miles) between Brunswick County's Northwest WTP and CFPWA's Meter Vault along US-421.

The new main will primarily be within the existing LCFWASA easement and will cross Brunswick, Pender, and New Hanover Counties. This collaborative project involves LCFWASA, Brunswick County, Pender County, and CFPWA and is funded by ARPA appropriations, funds from NC House Bill 529, and financial contributions from Pender County and CFPWA. As the OA, HDR provides project administration, funding assistance, permit tracking, contract development, project criteria development, design reviews, cost estimating, GMP negotiation, and construction administration.

OA for Liberty Elevated Storage Tank

City of Greensboro, NC

Owner Contact Information

Mike Borchers, PE
Director of Water Resources
mike.borchers@greensboro-nc.gov
336.373.2492



Role: OA
DM: DB

SCOPE OF SERVICES

HDR served as the OA to the City of Greensboro for the DB delivery of the 0.75 MG elevated water tank supporting the Greensboro-Randolph Megasite. HDR guided the City from project initiation through construction, leading the Design-Builder procurement process, supporting evaluation and selection, and establishing a clear framework for scope, schedule, and budget. After Landmark Structures and Black & Veatch were selected as the DB Team, HDR supported preliminary engineering and early project definition through review of design alternatives and evaluation of cost and schedule inputs to verify City requirements were incorporated. As the project progressed, HDR conducted design and cost reviews, supported GMP development and negotiation, coordinated permitting, and monitored schedule compliance. During construction, HDR provided construction administration, on-site observation, and materials testing, supporting the City to resolve field issues and support the successful delivery of this critical water infrastructure.

OA for WolfSpeed Water Extension DB

City of Asheboro, NC

Owner Contact Information

Michael Rhoney, PE
Water Resources Director
mrhoney@cl.asheboro.nc.us
336.626.1201 x 2358



Role: OA
DM: DB

SCOPE OF SERVICES

HDR was selected by the City of Asheboro (City) to serve as their OA on a PDB project to extend water service to the new WolfSpeed Chatham Advanced Manufacturing (CAM) site. The project requires the design and construction of a new 12-mile water main located between the eastern most limits of Asheboro and the western part of Siler City. The new main is primarily located within the US Hwy 64 corridor and passes through Franklinville, Ramseur, unincorporated areas of Randolph County and Chatham County, and possibly into Siler City. The City has received a direct allocation of \$55 million from the North Carolina Legislature to construct the new main and support the new WolfSpeed economic development project. As the OA, HDR is serving as an extension of the City's staff to align the DB Team with the Owner's priorities. Under this Contract, HDR is providing the following services:

- Project administration and general advisory support
- Funding assistance
- Permit tracking
- PDB contract development, RFQ advertisement, procurement, and negotiation support
- Project criteria development
- Project design reviews and technical support
- Independent cost estimating
- Construction administration and observation
- Start-up support
- Development of wheeled and wholesale rates

OA for Wallburg Road Lift Station

Winston-Salem/Forsyth County (WSFC) Utilities, NC

Owner Contact Information

Jordan Toney
Project Manager
jordant@cityofws.org
(336) 747-7320



Role: OA
DM: DB

SCOPE OF SERVICES

HDR is serving as the OA to WSFC Utilities for the Wallburg Road Lift Station project, which includes a new duplex submersible lift station, approximately 9,000 feet of gravity sewer, and 4,000 feet of force main. HDR is providing ongoing support so that the DB delivery method aligns with the goals, technical requirements, and budget. This includes comprehensive project administration, establishing project management tools, facilitating workshops and progress meetings, preparing monthly reporting, maintaining the master project schedule, and managing project documentation. Throughout design development, HDR is supporting WSFC Utilities by reviewing the DB Team's work at key milestones, including 30% and 60% design reviews, cost estimates, the quality control plan, early work packages, and the GMP proposal. HDR also leads value engineering efforts and maintains a project risk register to help the Owner proactively manage cost, schedule, and technical risks. HDR's role further includes assisting with DB procurement activities, such as developing RFQ content, reviewing proposals, participating in interviews, and supporting contract negotiations.

West End Reservoir

City of Billings, MT

Owner Contact Information

Randy Straus
Project Engineer
strausr@billingsmt.gov
406.657.8231



Role: EOR
DM: CMAR

SCOPE OF SERVICES

HDR is providing engineering services to support the City of Billings in developing existing gravel pits into raw water storage reservoirs that will enhance long-term water supply capacity and system redundancy. Services include preliminary design to evaluate and define key project elements such as raw water conveyance, seepage control strategies, groundwater impacts, and reservoir water quality. HDR is also preparing a master plan and conceptual designs for end-land use improvements, initiating permitting activities, and conducting a water treatment plant siting evaluation. Additionally, HDR provided the following services:

- Development of planning-level cost estimates
- Preparation of a preliminary design report and supporting drawings
- Design of the Duck Bridge intake

Following preliminary design, HDR will advance the project through final design, bidding, and construction administration to support successful project delivery and implementation.

Reservoir No. 3 Design

Peace River Manasota Regional Water Supply Authority, FL

Owner Contact Information

Mike Knowles, PE
Director of Engineering
mknowles@regionalwater.org
941.316.1776



Role: EOR
DM: CMAR/DBB

SCOPE OF SERVICES

HDR supported the Peace River Manasota Regional Water Supply Authority (Authority) by providing preliminary design and permitting services for the Peace River Regional Reservoir No. 3 (PR3) Project, which expanded raw water storage and supply capacity to meet growing regional demands. HDR's services included planning and engineering for a new 9.3-billion-gallon off-stream reservoir, a new 138 MGD Peace River intake pump station co-located with the existing facility, new raw water transmission pipelines, and a new 79 MGD reservoir pump station connecting the expanded reservoir system to the Peace River Water Treatment Facility. HDR also evaluated and integrated the new infrastructure with the Authority's existing reservoirs, treatment plant, and aquifer storage and recovery system, while addressing water use permit requirements that allowed increased river withdrawals and protected downstream environmental flows. HDR's comprehensive services encompassed engineering design, environmental studies, permitting support, and system integration to enhance long-term water supply reliability for the region.

c. Record of Project Success as an Owner's Advisor

As a national leader in OA services, HDR has immense experience. **In particular, HDR has served as an OA for North Carolina water and wastewater clients more than any other firm.** This breadth of experience gives us the tools to help deliver an affordable and timely project for the LCFWASA. Some of our keys to success are shown below.

- Establish a collaborative team relationship with the LCFWASA, OA, and DB Team.
- Establish a clear communication matrix and a plan for timely conflict resolution.
- Utilize a proactive OA Cost Estimator to prevent GMP surprises and assist in GMP negotiations.
- Establish a cost estimating and GMP format that coincides with each other and the DB Team's contract early in the preconstruction phase. Use this format throughout the project to avoid any misunderstandings on changes in costs.
- Utilize early work packages (or multi-step GMPs) when schedule is critical, but understand the associated risks.
- Clearly understand the trade-offs with risk shifts and additional cost.
- Request DB Team(s) proposers to submit their approach to GMP development.
- Require major equipment, materials, or significant work intended to be subcontracted to be bid out with the 60% and final GMP cost estimates.
- OA and DB Team should track any scope deviations and identify cost and schedule impacts, as well as discuss these as soon as possible with LCFWASA leadership.

RECORD OF SUCCESS

In over a decade of involvement in the Yadkin Regional Water Supply Program, HDR has provided continuity in senior management engagement, exceptional technical personnel appropriate for each stage of the project, and an unwavering commitment to the best interests of Union County. HDR has consistently demonstrated their ability to be flexible in their approach to the project. HDR manages personnel to ensure milestones and desired outcomes are met within established budgets while navigating complex challenges throughout the project."

John Shutak, PE, Project Manager, Union County



Yadkin Regional Water Supply Program - PDB

RECORD OF SUCCESS

HDR played a major role in the success of Charlotte Water's first progressive design-build project. By using a design workshop approach that included all the key project stakeholders, they were able to significantly reduce the overall duration of design. HDR's local depth of resources and leadership were vital to the overall success of this project."

- Kit Eller, PE | Charlotte Water



DEVELOPMENT OF OWNER'S PROJECT CRITERIA AND RFQ

HDR has developed OPC and assisted with PDB RFQ development for the following North Carolina clients: Johnston County, City of Greensboro, Town of Cary, Union County, WSFC Utilities, Cape Fear Public Utility Authority (CFPUA), and Charlotte Water. Some of our key lessons learned are outlined below:

KEY LESSONS LEARNED	
Project Criteria	- Strike the right balance between developing clear project criteria and not entering the design phase. » If the OA does not advance Project Criteria far enough, the DB Team will spend more time and money to define the project. » If the OA goes too far in developing Project Criteria you will not take advantage of the PDB process and potentially spend time and money revisiting the criteria.
	Determine any Owner special requirements such as BIM/REVIT, design & construction standards, asset management, etc.
	Clearly outline the DB Team's and Owner's role in obtaining permits.
	Define DB Team's cost estimating expectations at the various milestones.
	Establish GMP format.
RFQ/ DB Team Contract	Request that the proposing DB Team(s) provide any contract comments/requests with their proposals.
	Establish clear language on "off-ramp" provisions at different stages contingencies and allowance usage and ownership. Standard DBIA contract termination language for these items may be perceived as not clear. Consider customizing this language to the Owner's needs.
	Establish clear language on contingencies/allowance usage and ownership. Standard DBIA contract termination language for these items may be perceived as not clear. Consider customizing this language to the Owner's needs.
	Clearly define the DB Team's requirements for level of "open" book cost estimating.
	Clearly define invoicing requirements including organized subconsultant backup.
	For preconstruction services require scope & fee breakdown by contract title and task, that include assigned hours and dollars for review for design and preconstruction fees. Clarify that invoicing will be done in line with the provided breakdown of tasks and dollars.
	Allow float in the schedule to provide for value engineering/cost resolution as DB Team will leverage schedule pressure to their advantage in negotiations.
	Owner needs to understand pros/cons of shifting risk in contract to DB Team(s).
	Liquidated Damages (LDs) should be enough to cover likely cost that the Owner will incur if the DB Team is late.

HDR is seen as an industry national leader in DB within many infrastructure sectors including water, transportation, energy, and healthcare. We are active leaders in both DBIA and the Water Collaborative Delivery Association (formerly Water Design-Build Council). HDR is also a leader in a relatively new integrated project delivery model, and collaborative design process where parties (engineers, architects, contractors, and consultants) sign one contract and work together from the onset of a project.

Within North Carolina, we have been leaders in PDB dating back to the early 2000's when DB first emerged as a delivery model with the North Carolina Department of Transportation. In 2011, the Crowder-HDR team was selected by Charlotte Water utilizing special state legislation to deliver the McAlpine Creek WWMF Filters Expansion via PDB. The DBIA award-winning McAlpine Filters quickly became the preferred model for PDB in North Carolina.

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2013**

H

HOUSE DRH10302-LM-147 (03/25)

**H.B. 857
Apr 11, 2013
HOUSE PRINCIPAL CLERK
D**

Short Title: Public Contracts/Construction Methods/DB/P3. (Public)

Sponsors: Representatives Arp, Bryan, Moffitt, and Hager (Primary Sponsors).

Referred to:

A BILL TO BE ENTITLED

1 AN ACT PROVIDING THAT GOVERNMENTAL ENTITIES MAY USE THE

2 DESIGN-BUILD DELIVERY METHOD TO ERECT, CONSTRUCT, ALTER, OR

3 REPAIR PUBLIC BUILDINGS AND MAY ENTER INTO PUBLIC-PRIVATE

4 PARTNERSHIP CONSTRUCTION CONTRACTS.

5

In 2013 NC House Bill 857 was ratified expanding the use of DB to municipalities and utilities. Since 2013, HDR has helped several NC clients implement their first alternative delivery project including the Town of Cary, Town of Clayton, Winston-Salem/Forsyth County Utilities, Greensboro Water Resources, Charlotte Water, and Union County.



**Water Collaborative
Delivery Association**
Better Projects. Together.

HDR is not just a member of the
President of Water Collaborative

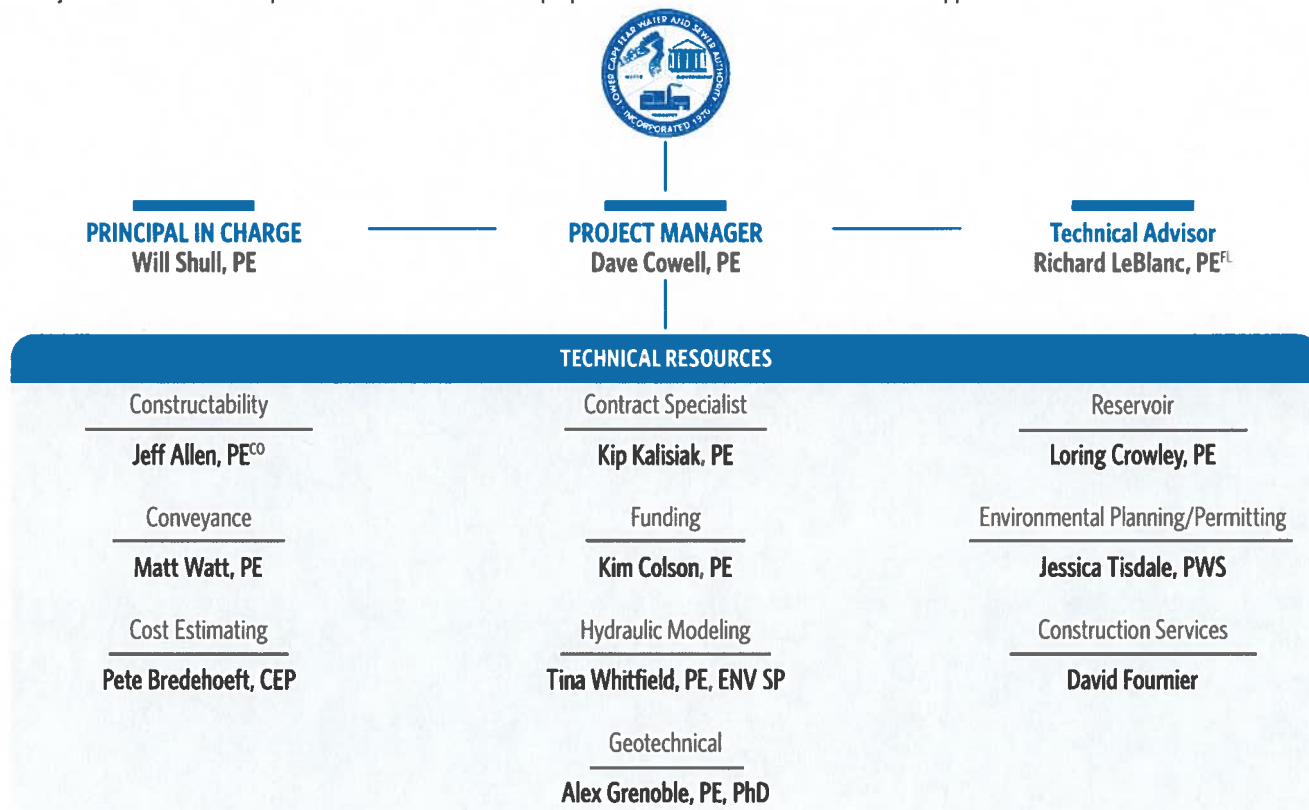


HDR is not just a member of these associations, we are leaders. For example, HDR's Guy Voss was selected as President of Water Collaborative Delivery Association.

3. Overall Staff Experience Proposed for this Project

ORGANIZATION CHART

The HDR team has been thoughtfully assembled to provide LCFWASA with outstanding industry expertise backed by deep North Carolina experience. Our team draws on the knowledge of experienced leadership and technical specialists who understand the complexities inherent in alternative delivery projects and are prepared to address them effectively. Together, we bring a collaborative approach, innovative thinking, and responsive project execution to support your objectives and deliver exceptional results. Resumes for all proposed team members are included in the Appendix.



PEs listed without states are licensed in North Carolina.

a. Principal in Charge of the Project



Will Shull, PE
Principal in Charge

As Principal in Charge, Will provides strategic oversight for the OA team, supporting alignment with LCFWASA's goals, effective risk management, and disciplined decision-making. His experience supporting LCFWASA on the 54" Raw Water Transmission, combined with DB and Federal/State funded projects, provides you with a partner who will drive your priorities and help deliver high quality outcomes. He has a proven track record of guiding multidisciplinary teams through evaluation, design, permitting, and construction administration, verifying alignment between owner priorities and project execution from start to finish.

Will's expertise with various project delivery models, including DB, equip him to help LCFWASA navigate project requirements, manage risk, and maximize available funding. Will understands how to structure projects for efficiency and collaboration, enabling streamlined decision-making and improved outcomes.

Will brings proactive leadership, a deep understanding of owner objectives, and a commitment to fostering collaboration among all stakeholders. He anticipates challenges early, facilitates clear communication, and drives value at every phase of the project. His client-focused approach and dedication to service will support LCFWASA in achieving both their immediate goals and long-term system resilience needs.

b. Individual Team Members for Each Discipline and Relevant Experience

Relevant experience for all proposed team members are included on the resumes in the Appendix.



Dave Cowell, PE
Project Manager

As Project Manager, Dave provides strong leadership across planning, engineering, and construction oversight for LCFWASA. Drawing on nearly two decades as City Engineer for the City of Wilmington, he excels at leading multidisciplinary teams, managing scope, schedule, and budget, and driving projects efficiently from initiation through closeout. Dave is based in Wilmington and brings local owner-side perspective and large-scale capital delivery expertise which enable effective OA support and successful outcomes for LCFWASA.



Richard LeBlanc, PE
Technical Advisor

Richard serves as Technical Advisor for the OA team, bringing specialized expertise in reservoirs, dams, levees, and civil works and the associated safety and risk requirements. Drawing on his extensive reservoir experience, Richard provides LCFWASA with practical, field-informed insight into design, constructability, and risk mitigation. Known for his collaborative approach and clear communication, he offers proactive technical guidance throughout the DB process. With strengths spanning design, permitting, cost estimating, and construction support, he provides strategic technical guidance, risk insight, and practical solutions to support LCFWASA.



Jeff Allen, PE
Constructability

Jeff serves as Constructability Lead, bringing deep expertise in heavy civil construction and complex water infrastructure. He has guided multidisciplinary teams through all phases of delivery, providing constructability insight, design input, and construction oversight on reservoir and dams projects nationwide. His practical, solutions-focused approach and strong understanding of DB enable LCFWASA to optimize construction strategies, manage risks, and maximize project value.



Kip Kalisiak, PE
Contract Specialist

Kip serves as Contract Specialist, bringing strong expertise in contract administration for large-scale water infrastructure projects, including LCFWASA's 54" Raw Water Main Project. Kip collaborated with LCFWASA legal counsel to develop the Kings Bluff contract documents. He is highly effective at supporting clear contract processes, proactive stakeholder coordination, and disciplined contract execution. Kip's collaborative, client-focused approach helps LCFWASA identify risk, streamline decision-making, and maintain transparency throughout the life of the project.



Loring Crowley, PE
Reservoir

Loring serves as Reservoir Lead, providing specialized expertise in dam and levee engineering for large-scale water infrastructure projects. Her strengths, including hydrology, hydraulics, seepage analyses, and instrumentation monitoring, support resilient, high-performance reservoir levee design and construction. Through a collaborative, quality-driven approach, Loring delivers reliable technical guidance to help LCFWASA achieve long-term success.



Matt Watt, PE
Conveyance

Matt is based in HDR's Wilmington office and will support Conveyance, bringing strong leadership in utility and conveyance system design. He is highly effective at guiding multidisciplinary teams through planning and design by checking that solutions align with regional requirements and client needs. Matt's collaborative and proactive approach helps support efficient DB delivery and the successful execution of LCFWASA's conveyance infrastructure.



Kim Colson, PE
Funding

Kim serves as Funding Lead, providing strategic guidance on regulatory coordination and financing for complex water infrastructure projects. He brings extensive expertise in navigating state and federal funding programs, including SRF and grant-based opportunities, and excels at aligning funding strategies with project and regulatory requirements. Kim's collaborative approach and strong knowledge of funding mechanisms supports LCFWASA in obtaining resources and advancing projects efficiently from planning through delivery.



Jessica Tisdale, PWS
Environmental Planning/Permitting

Jessica serves as Environmental Permitting Lead, bringing strong expertise in guiding complex infrastructure projects through local, state, and federal permitting requirements. She excels in wetland and stream permitting, endangered species coordination, and NEPA/SEPA compliance, with a collaborative approach that balances project delivery and environmental stewardship. Jessica's proactive communication and regulatory insight support efficient permitting and informed decision-making for LCFWASA.



Pete Bredehoeft, CEP
Cost Estimating

Pete serves as Cost Estimating Lead, bringing deep expertise in developing accurate, data-driven cost estimates for complex capital projects. He excels at delivering transparent, actionable cost insights across all project phases, integrating benchmarking, market trends, and risk analysis to support informed decision-making. Pete's disciplined approach helps LCFWASA manage cost certainty and mitigate financial risk throughout project delivery.



Tina Whitfield, PE, ENV SP
Hydraulic Modeling

Tina serves as the team's hydraulic modeling specialist, bringing deep expertise in water and wastewater system analysis. She leads model development, calibration, and system evaluation, using advanced modeling and GIS tools to deliver data-driven insights for planning and decision-making. Her capabilities in asset management, system optimization, and criticality analysis enable her to support efficient, resilient reservoir and infrastructure design.



David Fournier
Construction Services

Dave is based in HDR's Wilmington office and will support Construction Services, bringing hands-on expertise in water treatment operations, construction administration, and regulatory compliance. He is highly effective at guiding capital improvement projects through construction, addressing environmental health and safety requirements, and resolving field-level challenges. Dave's practical, collaborative approach helps verify constructability, compliance, and successful project outcomes for LCFWASA.



Alex Grenoble, PE, PhD
Geotechnical

Alex serves as Geotechnical Lead, bringing deep expertise in geotechnical engineering, dam safety, and hydropower infrastructure. He has directed the evaluation, design, and construction of high-capacity reservoirs and embankment dams, with strengths in stability analysis, seepage control, seismic remediation, and construction management. His experience assessing a wide range of dam types, including extensive safety inspections and stability evaluations, enables him to identify risks early and develop practical, data-driven solutions.

c. Location of Each Team Member to Facilitate Efficient Project Execution

Team Member	Role	Location
Will Shull	Principal in Charge	Charlotte, NC
Dave Cowell	Project Manager	Wilmington, NC
Richard LeBlanc	Technical Advisor	Tampa, FL
Jeff Allen	Constructability	Raleigh, NC
Kip Kalisiak	Contract Specialist	Raleigh, NC
Loring Crowley	Reservoir	Winston-Salem, NC
Matt Watt	Conveyance	Wilmington, NC
Kim Colson	Funding	Raleigh, NC
Jessica Tisdale	Environmental Planning/Permitting	Raleigh, NC
Pete Bredehoeft		Atlanta, GA
Tina Whitfield	Hydraulic Modeling	Winston-Salem, NC
David Fournier	Construction Services	Wilmington, NC
Alex Grenoble	Geotechnical	Charlotte, NC

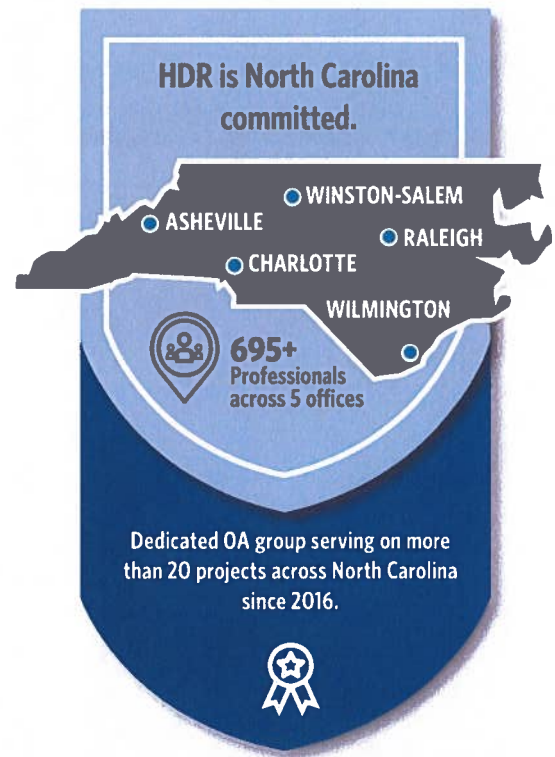
HDR'S RESOURCES

HDR is the only engineering firm in North Carolina with a dedicated OA group. Our North Carolina OA team is comprised of a group of professionals representing a wide range of technical discipline, with the majority bringing direct experience from local government utilities. The team is led by proposed Principal in Charge, **Will Shull**, and is further supported by professionals from our other services areas including water treatment, pump stations and pipelines, cost estimating, geotechnical, building engineering services, and construction services. In addition, HDR has a strong network of national technical advisors who can provide specialized expertise and in-depth analysis when requested.

HDR also has more than 695 staff based in our North Carolina offices who can readily support LCFWASA's staff and project teams. This includes technical reviewers and subject matter experts in structural, electrical, mechanical, architectural, plumbing, civil, and instrumentation and controls disciplines, as well as environmental scientists, geologists, transportation specialists, real estate professionals, and others.

Through our experience serving as OA on more than 20 projects across North Carolina since 2016, our dedicated OA team has developed proven project tools, standardized procedures, and best practices that enable us to operate efficiently and deliver value from day one, without the inefficiencies associated with firms that must develop these resources at project startup.

HDR supplements its core OA team with a deep bench of North Carolina-based staff and a nationwide network of technical advisors, providing specialized expertise and independent review when needed. This scalable resource model allows HDR to surge support during key milestones, strengthening project controls, technical quality, and risk management across the program.

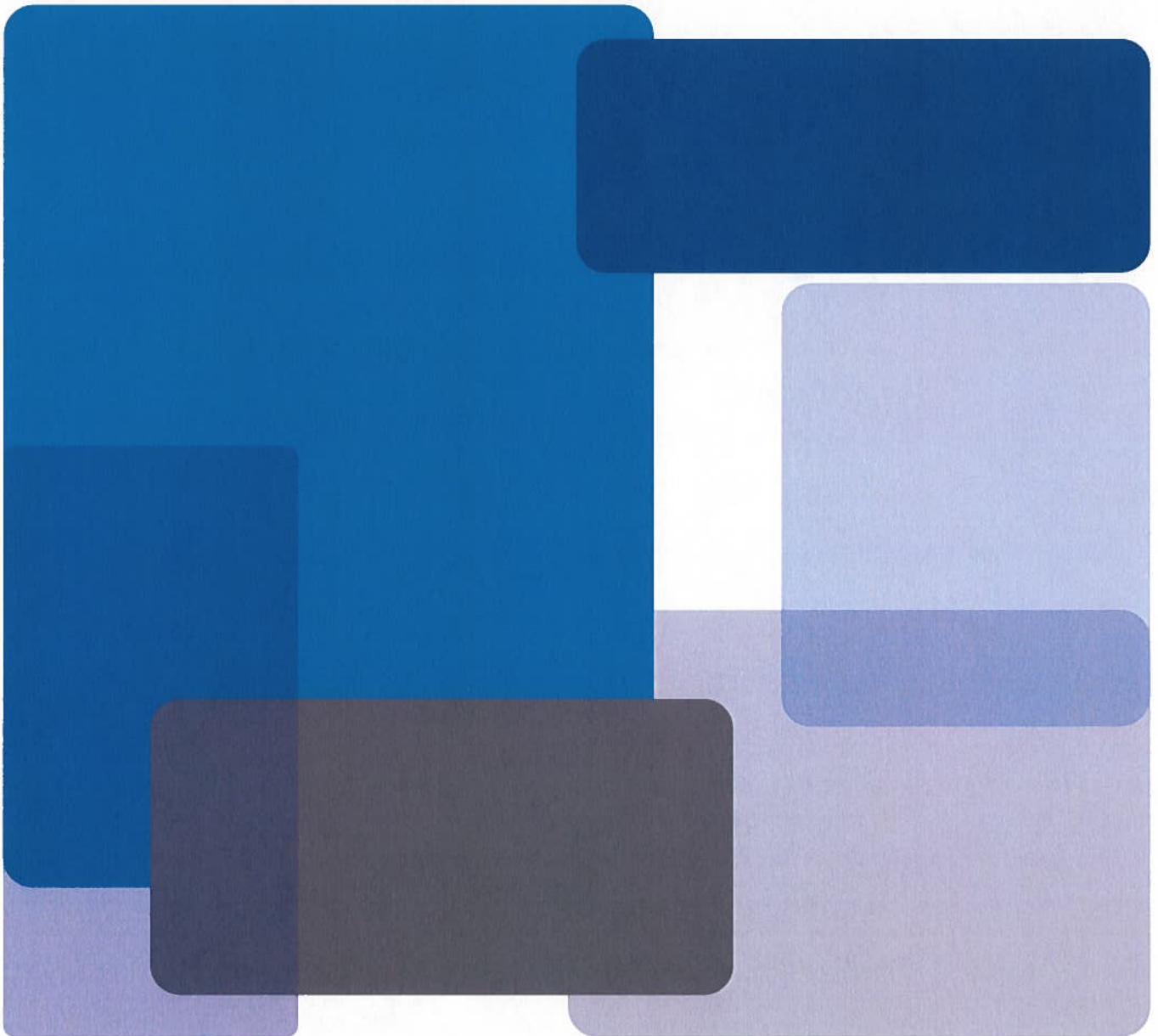


Appendix

Resumes

Preliminary Insurance Certificates

North Carolina Secretary of State Certificate of Existence



**Will Shull, PE**

Principal in Charge

**LOCATION**

Charlotte, NC

EDUCATION

MS, Civil Engineering

BS, Civil and Environmental Engineering

REGISTRATION

Professional Engineer, NC

INDUSTRY TENURE

14 years

FIRM TENURE

14 years

Will brings over 13 years of dedicated experience in water infrastructure to his role as Principal in Charge. Will has successfully guided multidisciplinary teams through evaluation, design, permitting, and construction administration. His expertise includes collaborative delivery approaches and leveraging SRF funding, positioning him to support LCFWASA in achieving project goals efficiently and collaboratively. He has partnered with leading municipal clients across the region, including Charlotte Water, CFPWA, and the City of Greensboro, delivering high-performance solutions tailored to each owner's needs. Will's proactive leadership and deep understanding of owner priorities empower him to anticipate challenges and drive value throughout every phase of the project.

Will's proven leadership and client-focused approach will help LCFWASA navigate the project, fostering collaboration, transparency, and technical excellence. His experience and commitment to service will support LCFWASA in achieving a successful outcome that meets both immediate and long-term community needs.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

- LCFWASA, NC, OA for 54" Raw Water Transmission Main DB, [Project Manager](#)
- CFPWA, NC, Southside WRF Replacement and Capacity Upgrade DB, [Project Manager](#)
- WSFC Utilities, NC, OA for Wallburg Road Lift Station, [Project Principal](#)
- City of Durham, NC, Western Intake Partnership, [Technical Advisor](#)
- City of Greensboro, NC, Townsend WTP Advanced Treatment of Emerging Contaminants, [Project Principal](#)
- Union County, NC, Yadkin Regional Water Supply Program, [Project Engineer](#)
- City of Shelby, NC, WTP Rehabilitation and Upgrade, [Project Manager](#)
- Piedmont Triad Regional Water Authority, NC, Miscellaneous Improvements, [Project Engineer](#)
- City of Belmont, NC, WTP Alum, [Project Engineer](#)
- City of Greensboro, NC, Mitchell WTP - Filter Building HVAC, [Project Engineer](#)

Dave Cowell, PE

Project Manager

**LOCATION**

Wilmington, NC

EDUCATION

BS, Construction Engineering and Management

REGISTRATIONS

Professional Engineer, NC, NJ, PA

INDUSTRY TENURE

42 years

FIRM TENURE

< 1 year

Dave brings more than 40 years of diverse experience in public infrastructure, encompassing planning, engineering, and construction oversight. For nearly 20 years, he served as City Engineer for the City of Wilmington, where he was responsible for the successful delivery of over \$300 million in capital improvement projects including streets, public utilities, riverfront, parks, buildings, trails, and bridges. His professional strengths span capital program leadership, water and wastewater systems, municipal engineering, and construction management. As Project Manager, Dave will strive to keep the project moving efficiently towards a successful outcome for LCFWASA. Throughout his career, Dave has led multidisciplinary teams from project inception through closeout, facilitating coordinated work sessions with consultants and stakeholders, maintaining control of scope, schedule, and budget, and implementing corrective actions to manage risk and maintain performance.

Dave's owner-side perspective and large-scale capital delivery experience position him to provide LCFWASA with effective OA support, strengthen coordination among project participants, and help guide informed decisions that support successful project execution.

RELEVANT PROJECTS EXPERIENCE

The projects listed below are from Dave's experience before working at HDR:

City of Wilmington, NC, Hilton Bulkhead & Riverwalk, [Project Manager](#)

City of Wilmington, NC, Love Grove Bridge, [Owner](#)

City of Wilmington, NC, Randall Parkway Widening, [Owner](#)

City of Wilmington, NC, Cross-City Trail, [Owner](#)

City of Wilmington, NC, Transportation Bond Program, [Owner](#)

City of Wilmington, NC, Water Street Park, [Owner](#)

City of Wilmington, NC, Riverwalk South, [Project Manager](#)

Richland Township Water Authority, PA, Facilities Master Plan, [Consulting Engineer](#)

Robbinsville Township, NJ, Wastewater Regulations & Standards, [Consulting Engineer](#)

Hopewell Township, NJ, Hopewell-Trenton Sewer System, [Project Engineer](#)

Morris County, NJ, Pump Station, Transmission Main, and Storage, [Project Engineer](#)

Stockton Borough, NJ, Well, Pump Station, Storage, and Distribution, [Project Engineer](#)

Jensen's Deep Run, NJ, Wells, Pump Station, Storage, and Distribution, [Project Engineer](#)



Richard LeBlanc, PE
Technical Advisor



LOCATION

Tampa, FL

EDUCATION

BS, Civil Engineering
AS, Civil Engineering

REGISTRATION

Professional Engineer, FL

INDUSTRY TENURE

21 years

FIRM TENURE

18 years

Richard brings over 20 years of specialized experience in reservoirs, dams, levees, and civil works to his role as Technical Advisor for the OA team. Richard has guided multidisciplinary teams on complex water infrastructure projects across the Southeast. His expertise spans the full project lifecycle, from site-civil and stormwater design to permitting, cost estimation, and construction support, making him a trusted resource for clients seeking resilient, high-performance solutions. He is known for his collaborative approach, clear communication, and commitment to delivering practical, sustainable outcomes. Richard's experience managing large-scale reservoir and infrastructure projects positions him to provide LCFWASA with strategic technical guidance, risk management insights, and proactive support throughout the DB process.

Richard's leadership and technical depth will help LCFWASA achieve project goals efficiently and confidently, supporting the delivery of a reliable, sustainable reservoir and infrastructure system that serves the community for generations.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

Peace River Manasota Regional Water Supply Authority, FL, Reservoir No. 3 Design, [Project Manager](#)

City of Billings, MT, Billings West End Water Reservoir, [QA/QC](#)

USACE - Jacksonville District, FL, C-44 Reservoir and Stormwater Treatment Area, [Project Manager](#)

USACE - Huntington District, FL, C-23/24 South Reservoir, [Deputy Project Manager](#)

Southwest Florida Water Management District, FL, S-551, [Project Manager](#)

Southwest Florida Water Management District, FL, S-161, [Project Manager](#)

Southwest Florida Water Management District, FL, Edward Medard Dam, [Project Manager](#)

● Grove Land Utilities LLC, FL, OA for Reservoir and Stormwater Treatment Area, [Independent Technical Reviewer](#)

Duke Energy, NC, London Creek Reservoir Pond, [Project Designer](#)

Sacramento Area Flood Control Agency, CA, Natomas Levee Improvement Program, [Project Designer](#)

Jeff Allen, PE

Constructability

**LOCATION**

Raleigh, NC

EDUCATION

BS, Civil Engineering

REGISTRATION

Professional Engineer, CO

INDUSTRY TENURE

43 years

FIRM TENURE

9 years

Jeff brings more than four decades of specialized experience in heavy civil construction, with a focus on reservoirs, dams, and complex water infrastructure projects. He has successfully guided multidisciplinary teams through all phases of project delivery, from constructability reviews and design input to construction oversight and dispute resolution. Jeff has supported over 130 clients on challenging infrastructure projects across the country. He is recognized for his collaborative leadership, innovative approach to problem-solving, and commitment to building strong, respectful relationships with clients and project partners. Jeff's expertise in constructability and his deep understanding of DB delivery will help LCFWASA maximize value, manage risk, and achieve project goals efficiently and effectively.

RELEVANT PROJECTS EXPERIENCE

Peace River Manasota Regional Water Supply Authority, FL, Reservoir No. 3 Design, [Constructability](#)

South Florida Water Management District, FL, C-44 Reservoir and Stormwater Treatment Area, [Civil Construction Advisor](#)

Imperial Irrigation District, CA, East Highline Reservoir, [Constructability](#)

Clean Water Services, OR, Scoggins Dam, Feasibility Design and Cost Estimates, [Cost and Constructability](#)

LePrele Dam Rehabilitation Final Design and CMAR Coordination, [Construction Specialist](#)

Kip Kalisiak, PE

Contract Specialist

**LOCATION**

Raleigh, NC

EDUCATION

BS, Civil Engineering

REGISTRATION

Professional Engineer, NC

INDUSTRY TENURE

26 years

FIRM TENURE

15 years

Kip brings over 25 years of deep understanding of contract management for large-scale water infrastructure projects. He has led diverse teams and partnered with public sector clients across the Southeast, supporting successful delivery of high-capacity water projects through collaborative delivery models. Kip's experience spans more than two dozen clients, including LCFWASA and CFPUA, where he has helped drive project success through clear contract administration and proactive engagement. As Contract Specialist for the team, Kip will leverage his multidisciplinary expertise and collaborative approach to support LCFWASA's goals, streamline contract processes, and foster transparent communication. Kip's proven track record and client-focused approach will help LCFWASA achieve project milestones efficiently and build strong partnerships, delivering value and confidence throughout the life of the project.

RELEVANT PROJECTS EXPERIENCE
 OA Projects

- LCFWASA, NC, OA for 54" Raw Water Transmission Main DB, [Project Principal](#)
- CFPUA, NC, Southside WRF Replacement and Capacity Upgrade DB, [Technical Advisor](#)
- Johnston County, NC, Lower Neuse Water Supply Program, [Program Manager](#)
- City of Asheboro, NC, OA for WolfSpeed Water Extension DB, [Project Principal](#)
- City of Durham, NC, Western Intake Partnership, [Project Principal](#)
- Union County, NC, Yadkin Regional Water Supply Program, [Project Principal](#)



LCFWASA | OA 100 MGD Reservoir

Loring Crowley, PE

Reservoir

**LOCATION**

Winston-Salem, NC

EDUCATION

MS, Civil Engineering

BS, Mathematics

REGISTRATION

Professional Engineer, NC

INDUSTRY TENURE

18 years

FIRM TENURE

6 years

Matt Watt, PE

Conveyance

**LOCATION**

Wilmington, NC

EDUCATION

BS, Civil Engineer

REGISTRATION

Professional Engineer, NC

INDUSTRY TENURE

19 years

FIRM TENURE

7 years

Loring brings over 15 years of specialized experience in reservoir, dam, and levee engineering to the team. Loring is a recognized expert in hydrology, hydraulics, seepage analyses, and instrumentation monitoring for large-scale water infrastructure projects. Loring has successfully delivered dam and levee solutions for clients such as Peace River Manasota Regional Water Supply Authority, consistently applying innovative modeling, monitoring, and construction oversight to complex projects. Her collaborative approach and commitment to quality help drive results that support both client goals and community needs. As Reservoir Lead, Loring will partner closely with LCFWASA to advance resilient, high-performance infrastructure that meets the demands of the 100 MGD Reservoir project. Loring's expertise and leadership will provide LCFWASA with targeted, reliable guidance for the reservoir design and construction, helping to deliver a robust, sustainable solution that supports the project's long-term success.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

Peace River Manasota Regional Water Supply Authority, FL, Reservoir No. 3 Design, [Project Engineer](#)

- Union County, NC, Yadkin Regional Water Supply Program, [Project Engineer](#)

City of Billings, MT, Billings West End Water Reservoir, [Project Engineer](#)

City of Raleigh, NC, Johnson Reservoir Embankment Repair, [Deputy Project Manager](#)

Nebraska Public Power District, NE, Sutherland Reservoir, [Project Engineer](#)

Matt brings 19 years of civil engineering experience to HDR's multidisciplinary team. He has guided utility design and conveyance projects across the Carolinas, leveraging his deep understanding of regional infrastructure needs and regulatory requirements. Matt has led multidisciplinary teams in the design and implementation of utility and conveyance systems for municipalities and agencies including the City of Greensboro and City of Raleigh. His expertise spans the full project lifecycle, from initial planning and design through construction oversight, verifying that each solution is tailored to the unique needs of the client and community. Matt's proactive leadership and collaborative approach will help LCFWASA navigate the complexities of DB delivery, driving value and innovation throughout the project lifecycle.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

- LCFWASA, NC, OA for 54" Raw Water Transmission Main DB, [Project Engineer](#)

Town of Cary, NC, Kildaire Farm Road Waterline, [Project Engineer](#)

City of Greensboro, NC, Southern Feeder Phase 2 Construction Administration, [Deputy Project Manager](#)

Cumberland County, NC, Professional Design Services for Public Water Systems, [Project Engineer](#)

City of Raleigh, NC, Water Supply Planning Assessment, [Project Engineer](#)

Kim Colson, PE

Funding

**LOCATION**

Raleigh, NC

EDUCATION

BS, Agricultural Engineering

REGISTRATION

Professional Engineer, NC

INDUSTRY TENURE

38 years

FIRM TENURE

4 years

Kim brings more than 35 years of specialized experience in regulatory and funding strategy to HDR's multidisciplinary team, serving as the Funding Lead. Kim leverages his extensive background with the NCDEQ, where he led programs spanning wastewater treatment, stormwater management, drinking water, wetlands, and industrial pretreatment. His expertise includes guiding clients through complex regulatory requirements and identifying innovative funding solutions, including Drinking Water SRF grants, Community Development Block Grant infrastructure programs, and wastewater loan and grant initiatives. Kim's proven track record includes successful partnerships, such as LCFWASA and CFPWA, where he has helped secure critical funding and advance high-impact water infrastructure projects. His collaborative style and deep knowledge of funding mechanisms position him to support LCFWASA in navigating the financial and regulatory landscape, driving project success from concept through completion.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

- LCFWASA, NC, OA for 54" Raw Water Transmission Main DB, [Funding/Regulatory](#)
- CFPWA, NC, Southside WRF Replacement and Capacity Upgrade DB, [Funding/Regulatory Support](#)
- Johnston County, NC, Lower Neuse Water Supply Program, [Funding](#)
- City of Durham, NC, Western Intake Partnership, [Funding/Regulatory](#)
- Johnston County, NC, Timothy G. Broome WTP Upgrade, [Funding/Regulatory](#)

Jessica Tisdale, PWS

Environmental Planning/Permitting

**LOCATION**

Raleigh, NC

EDUCATION

BS, Civil Engineer

BS, Environmental Sciences/Studies

REGISTRATION

Professional Wetland Scientist

INDUSTRY TENURE

23 years

FIRM TENURE

18 years

Jessica brings 23 years of environmental permitting and natural resource management experience to LCFWASA's team. Jessica has led permitting efforts for large-scale water, energy, and infrastructure projects across North Carolina and the Southeast. Her expertise spans wetland and stream delineations, endangered species surveys, Section 404/401 permitting, and NEPA/SEPA documentation. Jessica's advanced training in forestry and her collaborative leadership style enable her to deliver permitting solutions that balance project goals with environmental stewardship. She has managed multidisciplinary teams to develop innovative tools for environmental data collection and reporting, including digital applications for habitat assessments. Her proactive communication and deep understanding of local, state, and federal regulations will support the LCFWASA in navigating permitting requirements.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

- WSFC Utilities, NC, OA for Wallburg Road Lift Station, [Environmental](#)
- Town of Cary, NC, Raw Water Transmission Parallel Pipeline, [Environmental](#)
- City of Greensboro, NC, Randolph Megasite Water and Sewer Improvements, [Environmental](#)
- CFPWA, NC, Richardson Raw Water Supply, Chemistry, and Membranes, [Environmental](#)
- Cumberland County, NC, Professional Design Services for Public Water Systems, [Environmental](#)



LCFWASA | OA 100 MGD Reservoir

Pete Bredehoeft, CEP

Cost Estimating

**LOCATION**

Atlanta, GA

EDUCATION

BS, Construction Management

AS, Land Surveying

AS, Civil Engineering Technology

REGISTRATION

Certified Construction Estimator, GA

INDUSTRY TENURE

36 years

FIRM TENURE

5 years

Tina Whitfield, PE

Hydraulic Modeling

**LOCATION**

Winston-Salem, NC

EDUCATION

BS, Civil Engineering

REGISTRATION

Professional Engineer, NC, GA, MT

INDUSTRY TENURE

28 years

FIRM TENURE

23 years

Pete brings more than three decades of specialized experience in cost estimating and construction management to HDR's multidisciplinary team. Pete has completed thousands of cost estimates across all project phases, from conceptual planning to operations and maintenance. He is recognized for his expertise in developing accurate, actionable estimates for large capital improvement programs, including wastewater infrastructure. His leadership in implementing advanced benchmarking tools and integrating cost data with international standards positions him as a trusted advisor for complex, high-value projects. He leverages industry-leading software and automation to deliver transparent, data-driven cost insights, supporting informed decision-making and risk management. Pete's experience with location adjustment factors, escalation development, and commodity trends verifies that LCFWASA receives tailored, forward-looking estimates that reflect real-world conditions and market dynamics.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

Peace River Manasota Regional Water Supply Authority, FL, Reservoir No. 3 Design, [Cost Estimator](#)

- City of Durham, NC, Western Intake Partnership, [Cost Estimator](#)
- Charlotte Water, NC, OA for Stowe Regional WRRF, [Cost Estimator](#)
- CFPWA, NC, Southside WRF Replacement and Capacity Upgrade DB, [Cost Estimator](#)
- Cumberland County, NC, Water Supply Study, [Cost Estimator](#)

Tina brings 28 years of specialized experience in hydraulic modeling, utility planning, and water infrastructure management to LCFWASA's team. Tina has led the development and application of hydraulic models for water and wastewater systems serving both small communities and major urban centers. Her expertise spans model selection, data integration, calibration, and system analysis, leveraging the latest hydraulic modeling software and GIS applications to deliver actionable insights for capital improvement planning and project prioritization. Tina's technical capabilities extend to pipe break and valve criticality analyses, asset management, water quality, and operations optimization, skills that directly support a successful delivery. Tina's collaborative approach and commitment to client service have made her a trusted advisor for clients such as the City of Billings and Union County. She is dedicated to partnering with LCFWASA to deliver practical, data-driven solutions that support project success and long-term system resilience.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

- Union County, NC, Yadkin Regional Water Supply Program, [Technical Advisor](#)
- City of Billings, MA, Billings West End Water Reservoir, [Hydraulic Modeling Lead](#)
- Orange Water and Sewer Authority, Distribution System Prioritization Model, [Hydraulic Modeling Lead](#)
- Catawba-Wateree Water Management Group, NC, Raw Water Intake Contingency Plan Phase 2, [Modeler](#)
- Town of Clayton, NC, Sam's Branch Water Reclamation Facility, [Technical Advisor](#)

David Fournier

Construction Services

**LOCATION**

Raleigh, NC

EDUCATION

BS, Business Administration

INDUSTRY TENURE

37 years

FIRM TENURE

1 year

David brings more than three decades of hands-on experience in water treatment operations, construction administration, and regulatory compliance to LCFWASA's team. David has successfully managed and operated water systems, and led capital improvement initiatives. His extensive services with public utilities including LCFWASA, CFPWA, and Charlotte Water demonstrates his ability to deliver practical solutions and drive project success in complex environments. David is actively involved in supporting water improvement projects throughout North Carolina, leveraging his expertise in environmental health and safety, construction delivery, and regulatory best practices. His collaborative approach and attention to detail make him a valuable resource for multidisciplinary teams, helping clients navigate challenges and achieve their project objectives.

RELEVANT PROJECTS EXPERIENCE

● OA Projects

- LCFWASA, NC, OA for 54" Raw Water Transmission Main DB, [Construction Services](#)
- CFPWA, NC, Southside WRF Replacement and Capacity Upgrade DB, [Construction Services](#)
- Charlotte Water, NC, OA for Stowe Regional WRRF, [Construction Services](#)
- CFPWA, NC, Richardson WTP Improvements, [Construction Services](#)
- City of Concord, NC, Hillgrove WTP Granular Activated Carbon Contactors, [Construction Services](#)

Alex Grenoble, PE, PhD

Geotechnical

**LOCATION**

Charlotte, NC

EDUCATION

PhD, Civil Engineering

MS and BS, Mining and Mineral Engineering

REGISTRATION

Professional Engineer, NC, SC, NY, PA, KY, WA

INDUSTRY TENURE

35 years

FIRM TENURE

29 years

Alex brings over three decades of specialized experience in geotechnical engineering and dams and levee safety. Alex has led geotechnical and dams and levee safety efforts for major utilities and public agencies across the U.S. and internationally. He has directed complex projects involving the evaluation, design, and construction of high-capacity reservoirs, embankment dams, and associated infrastructure. Alex's expertise spans static and dynamic stability analyses, seismic remediation, seepage control, instrumentation, and construction management, with a strong focus on practical, data-driven solutions. He has conducted safety inspections and stability evaluations for more than 75 dams, including earthfill, rockfill, and concrete structures, and has developed and delivered dam safety training for utility staff nationwide. Alex's collaborative approach and deep technical knowledge position him to support LCFWASA through informed decision-making and resilient infrastructure outcomes.

RELEVANT PROJECTS EXPERIENCE

- City of Newport, OR, Water Supply Program, [Technical Advisor](#)
- Lewis County Dept. of Public Works, WA, Chehalis Basin Avoidance, [Technical Advisor](#)
- Brookfield Renewable Power Inc., NY, Corp Dam Safety Protocols, [Technical Advisor](#)
- Roza Irrigation District, WA, Re-Regulation Reservoir Feasibility Study, Design, and Construction Management, [Technical Advisor](#)
- California Dept. of Water Resources, CA, Owner's Dam Safety Program Audit, [Technical Advisor](#)



CERTIFICATE OF LIABILITY INSURANCE

 DATE (MM/DD/YYYY)
05/22/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis Towers Watson Midwest, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: WTW Certificate Center PHONE (A/C, No, Ext): 1-877-945-7378 FAX (A/C, No): 1-888-467-2378 E-MAIL: certificates@wtwco.com ADDRESS:														
INSURED HDR Engineering, Inc. of the Carolinas 1917 South 67th Street Omaha, NE 68106	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">INSURER(S) AFFORDING COVERAGE</th> <th style="text-align: left;">NAIC #</th> </tr> <tr> <td>INSURER A: Liberty Mutual Fire Insurance Company</td> <td>23035</td> </tr> <tr> <td>INSURER B: Ohio Casualty Insurance Company</td> <td>24074</td> </tr> <tr> <td>INSURER C: Liberty Insurance Corporation</td> <td>42404</td> </tr> <tr> <td>INSURER D: Zurich American Insurance Company</td> <td>16535</td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Liberty Mutual Fire Insurance Company	23035	INSURER B: Ohio Casualty Insurance Company	24074	INSURER C: Liberty Insurance Corporation	42404	INSURER D: Zurich American Insurance Company	16535	INSURER E:		INSURER F:	
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INSURER C: Liberty Insurance Corporation	42404														
INSURER D: Zurich American Insurance Company	16535														
INSURER E:															
INSURER F:															

COVERAGES **CERTIFICATE NUMBER:** W39072040 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY			TB2-641-444950-035	06/01/2025	06/01/2026	EACH OCCURRENCE \$ 2,000,000
	☐ CLAIMS-MADE ☒ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000
	☒ Contractual Liability						MED EXP (Any one person) \$ 10,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY \$ 2,000,000
	☐ POLICY ☒ PROJECT ☒ LOC						GENERAL AGGREGATE \$ 4,000,000
	OTHER:						PRODUCTS - COM/OP AGG \$ 4,000,000
A	AUTOMOBILE LIABILITY			AS2-641-444950-045	06/01/2025	06/01/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000
	☒ ANY AUTO						BODILY INJURY (Per person) \$
	☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ NON-OWNED AUTOS ONLY						BODILY INJURY (Per accident) \$
	☐ HIRED AUTOS ONLY						PROPERTY DAMAGE (Per accident) \$
B	UMBRELLA LIAB ☒ EXCESS LIAB			EUO (26) 57919363	06/01/2025	06/01/2026	EACH OCCURRENCE \$ 10,000,000
	☐ OCCUR ☐ CLAIMS-MADE						AGGREGATE \$ 10,000,000
	DED ☒ RETENTION \$ 0						\$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WA7-64D-444950-015	06/01/2025	06/01/2026	☒ PER STATUTE ☐ OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	☐ Yes ☒ No	N/A				E L EACH ACCIDENT \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E L DISEASE - EA EMPLOYEE \$ 1,000,000
							E L DISEASE - POLICY LIMIT \$ 1,000,000
D	Commercial Property			CPP 0284121 - 08	06/01/2025	06/01/2026	Includes BPP/BI/Val Papers

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Sample

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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SR ID: 27806887

BATCH: 3975229



CERTIFICATE OF LIABILITY INSURANCE

6/1/2026

DATE (MM/DD/YYYY)

5/15/2025

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IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Lockton Companies, LLC 444 W. 47th St., Ste. 900 Kansas City MO 64112-1906 (816) 960-9000 kcasu@lockton.com	CONTACT NAME:	
		PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED 429583	HDR ENGINEERING, INC. OF THE CAROLINAS 1917 SOUTH 67TH STREET OMAHA NE 68106	E-MAIL ADDRESS:	
		INSURER(S) AFFORDING COVERAGE	
		INSURER A: Lloyd's of London	
		INSURER B:	
		INSURER C:	
		INSURER D:	
INSURER E:		NAIC #	
INSURER F:			

COVERAGES **CERTIFICATE NUMBER:** 21808626 **REVISION NUMBER:** XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

SR	TR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
		COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☐ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC OTHER:			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX DAMAGE TO RENTED PREMISES (Ea occurrence) \$ XXXXXXXX MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ XXXXXXXX GENERAL AGGREGATE \$ XXXXXXXX PRODUCTS - COMP/OP AGG \$ XXXXXXXX \$
		AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY			NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident) \$ XXXXXXXX BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
		UMBRELLA LIAB ☐ OCCUR EXCESS LIAB ☐ CLAIMS-MADE DED RETENTION \$			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX AGGREGATE \$ XXXXXXXX \$ XXXXXXXX
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	NOT APPLICABLE			PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ XXXXXXXX E.L. DISEASE - EA EMPLOYEE \$ XXXXXXXX E.L. DISEASE - POLICY LIMIT \$ XXXXXXXX
A		ARCH & ENG PROFESSIONAL LIABILITY	N	N	P001412500	6/1/2025	6/1/2026	PER CLAIM: \$1,000,000 AGGREGATE: \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER	CANCELLATION See Attachment
21808626 SAMPLE	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE: <i>Joseph M. Agnello</i>

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NORTH CAROLINA

Department of the Secretary of State

CERTIFICATE OF EXISTENCE

I, ELAINE F. MARSHALL, Secretary of State of the State of North Carolina, do hereby certify that

HDR ENGINEERING, INC. OF THE CAROLINAS

is a corporation duly incorporated under the laws of the State of North Carolina, having been incorporated on the 20th day of July, 1948, with its period of duration being Perpetual.

I FURTHER certify that, as of the date set forth hereunder, the said corporation's articles of incorporation are not suspended for failure to comply with the Revenue Act of the State of North Carolina; that the said corporation is not administratively dissolved for failure to comply with the provisions of the North Carolina Business Corporation Act; that its most recent annual report required by N.C.G.S. 55-16-22 has been delivered to the Secretary of State; and that the said corporation has not filed articles of dissolution as of the date of this certificate.



Scan to verify online.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 18th day of May, 2026.

Elaine F. Marshall

Secretary of State

Certification# 128207222-1 Reference# 24577917- Page: 1 of 1
Verify this certificate online at <https://www.sosnc.gov/verification>

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HDR Engineering, Inc. of the Carolinas

101 N 3rd St., Suite 201

Wilmington, NC 28401

910.398.9020

hdrinc.com

N.C.B.E.L.S. License Number: F-0116

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Owner's Advisor Services for a New 100 MGD Reservoir Design-Build Project

May 21, 2026 / Lower Cape Fear Water and Sewer Authority



Carrollton Holding Pond Dam / Carrollton, GA



O 336.274.9456
11A Oak Branch Drive / Greensboro, NC 27407

schnabel-eng.com

May 21, 2026

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

Subject: Owner's Advisor for a new 100 MGD Reservoir

Dear Mr. Holloman:

More than 550,000 customers across five counties rely on the Lower Cape Fear Water and Sewer Authority (LCFWASA) to provide uninterrupted access to vital water and wastewater services. At **Schnabel Engineering South, PC (Schnabel)**, we understand how to work with owners and design-build team to deliver complex water infrastructure projects. You can count on our team to advise and deliver responsive, technically sound, and cost-effective solutions for your new reservoir project.

The following pages highlight the benefits that the Schnabel team will bring to your project:

- **The resources of a large firm with the client focus of a small firm.** Dams and water resources projects are our main business, and we provide specialized services working with owners on new dams and water supply projects across the entire project lifecycle, from assessment through construction.
- **Competence and experience in similar projects for owners like LCFWASA.** Our documented experience and successful track record in advising owners on dam and reservoir and other alternative delivery projects speaks for itself, but we encourage you to contact any of our references to get insight into our performance and client service.
- **A local presence less than 10 miles away from LCFWASA.** Led by staff based in our Greensboro and Wilmington offices, our project team is local, available, and committed for the entire project duration.

Thank you for the opportunity to present our qualifications. We truly enjoy our work, and our team is committed to serving as a trusted advisor to LCFWASA on this project. Please contact me at 336.274.9456 or ebinder@schnabel-eng.com should you have any questions or need additional information or clarification.

Sincerely,

SCHNABEL ENGINEERING SOUTH, PC

A handwritten signature in blue ink that reads "Evan Binder".

Evan Binder, PE
Senior Vice President

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APPENDIX B: NC BUSINESS LICENSE



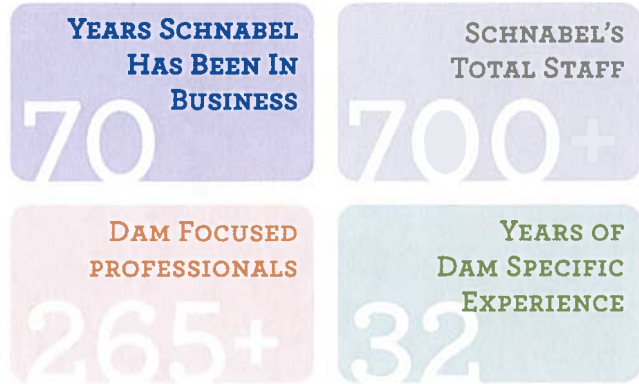
Firm Overview

HISTORY OF THE FIRM

With roots dating back to 1956, Schnabel provides professional engineering services from 32 locations throughout the United States. Our interdisciplinary staff offers highly specialized services in dams and levees, geotechnical engineering, geostuctural design, tunnel and underground engineering, environmental and geophysical services, construction monitoring, and resident engineering services.

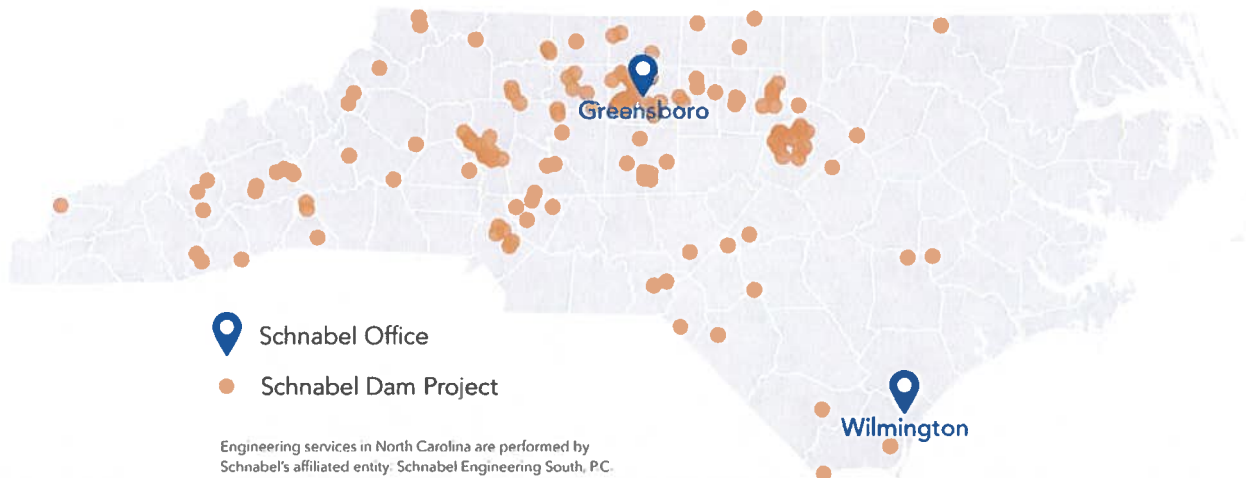
Schnabel has more than 265 professionals dedicated to dam, levee, and water resources projects. Since 1994, we have provided engineering assessment, design, and construction support services for more than 5,000 dam, levee, and water resources projects. From concept through construction, all key disciplines are represented, including hydrology and hydraulics, geotechnical and civil engineering, structural analysis and design, bidding and procurement, licensing, permitting assistance, construction phase services, instrumentation, and post-construction and inspection services.

As a national leader in dam and levee engineering for the past 32 years, more than 40% of Schnabel's total revenue is related to dams and levees and associated water resources infrastructure projects. Dam engineering work is a corporate commitment and a critical part of our long-term strategy and business plan. Schnabel's commitment to the industry is exemplified by our involvement in professional societies and industry development initiatives.



FIRM LOCATION AND INFORMATION

Schnabel's Greensboro, NC office will be the primary center of resources for this contract, with key support from our Wilmington, NC and Alpharetta, GA offices. Our team is well-positioned geographically to provide the engineering services required to serve as Owner's Advisor for the design and construction of the LCFWASA's proposed water supply reservoir. Our Greensboro office is home to nearly 50 full-time, multidisciplinary professionals dedicated to these types of projects.



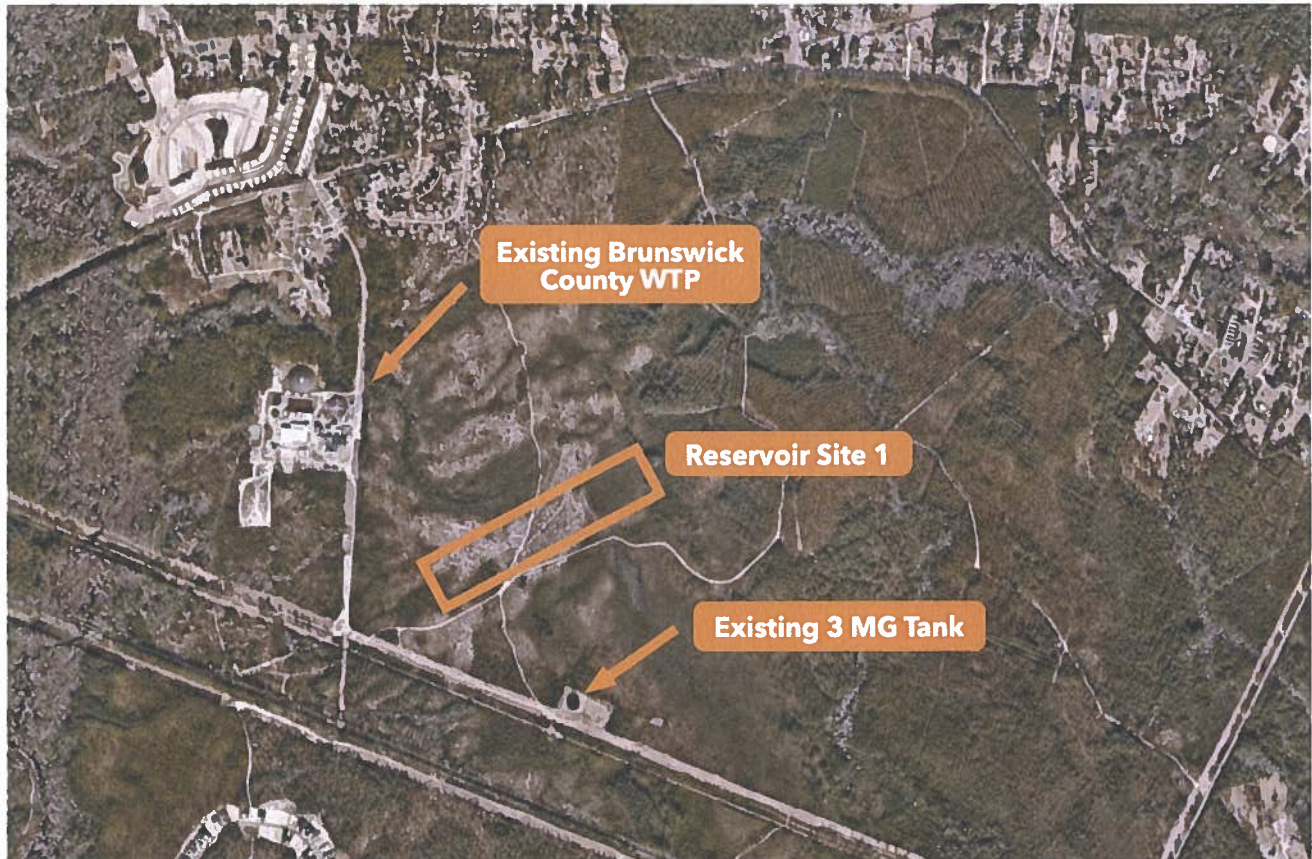
Greensboro Office: 11A Oak Branch Drive, Greensboro, NC 27407
Wilmington Office: 3902 Market Street, Wilmington, NC 28403

Principal in Charge: Evan Binder, PE
 336.274.9456
 ebinder@schnabel-eng.com

Project Understanding and Approach

UNDERSTANDING OF THE PROJECT

Schnabel has developed an understanding of the project based on a review of board meeting minutes and agenda packets posted on the LCFWASA website. Schnabel understands that LCFWASA desires to construct a surface water reservoir, impounded by a continuous earthen berm or ring dike, to increase the system's available water storage capacity due to anticipated future demand and provide a redundant source of water supply in the event of any emergency, such as a power outage, line break, or natural disaster. In 2024, a Ground Storage Reservoir Feasibility Evaluation was drafted by McKim & Creed, Inc. that included the evaluation of several reservoir sites in the vicinity of the Brunswick County Northwest Water Treatment Plant and an existing three-million-gallon tank. The site evaluation appears to have considered the locations of several delineated wetlands areas that were mapped as part of a separate project. The preliminary results of the evaluation indicate that an optimal location for the reservoir site be Site 1, generally located as shown below:



Schnabel understands that LCFWASA may be in the process of acquiring land, potentially in support of the reservoir project. Based on the size of the reservoir sites indicated in the meeting agenda packets, the reservoir site may be on the order of 30 to 40 acres in size. Schnabel surmises that a reservoir of this area would require an earthen embankment on the order of 15 to 25 vertical feet in height to impound a reservoir with a capacity of 100 million gallons (MG) or more. Schnabel understands that the total cost of the reservoir project has been estimated to be approximately \$80 million dollars, with a goal of project completion within the next seven years.

While the board meeting minutes and agenda packets suggest that some preliminary engineering work has been performed to evaluate potential reservoir sites, Schnabel understands that LCFWASA intends to engage an Owner's Advisor in order to navigate future phases of the project that likely involve the development of Owner's Project Criteria and support the identification of a qualified design-build team to perform additional engineering investigations and analyses to support the design of the reservoir; develop reservoir design documents (including construction plans and technical specifications); coordinate permitting with local, state, and federal agencies or groups; and construct the reservoir.

PROJECT APPROACH

As indicated above, LCFWASA is advancing a critical regional infrastructure project consisting of a 100 MGD reservoir and associated infrastructure to support long-term water supply for a growing multi-county service area. LCFWASA has elected to deliver this project using a progressive design-build approach beginning with DBIA Document 520 for preliminary services and transitioning to a final design-build agreement once scope, cost, and schedule are adequately defined.

Under this delivery model, the Design-Builder collaborates with the Owner during the preliminary phase to develop a schematic design and a proposal that includes cost, schedule, and ultimately a Guaranteed Maximum Price (GMP). This structure provides flexibility and opportunities for innovation, but it also requires disciplined oversight such that Owner priorities are clearly defined and preserved prior to committing to final construction costs. The Owner's Advisor therefore serves a pivotal role in guiding the process, ensuring that the Owner's Project Criteria (OPC) are fully developed and that the evolving design, cost, and schedule remain aligned with LCFWASA's objectives.

Schnabel's approach is centered on maintaining this alignment throughout the lifecycle of the project, combining technical expertise, independent validation, and proactive coordination to support sound decision-making and protect LCFWASA's long-term interests. Our proposed methodology is structured around the natural progression of the DBIA 520 process, providing continuous support from project initiation through construction. Rather than functioning as a reviewer at isolated milestones, we propose to serve as an integrated advisor who helps shape outcomes at each stage.

Project Initiation and Governance

The project begins with establishing a clear organizational and technical foundation. During this phase, we will work closely with LCFWASA to confirm project objectives, funding constraints, and critical success factors, while developing an understanding of existing planning efforts, site conditions, and regulatory considerations.

We will establish a formal Project Execution Plan that defines roles, communication protocols, decision-making authority, and document control procedures. At the same time, we will initiate a risk register that identifies key uncertainties and provides a structured framework for managing them throughout the project. This early alignment will promote a consistent understanding of expectations across each of the stakeholders and allow the project to proceed with clarity and accountability.

Owner's Project Criteria Development

The development of the Owner's Project Criteria is the most influential step in the entire design-build process and directly affects cost, risk allocation, and overall project success.

Our team will lead a structured process to translate LCFWASA's operational goals into clear, measurable, and enforceable requirements. Through facilitated workshops and technical coordination, we will define system capacity, reliability, redundancy, hydraulic performance, water quality considerations, and future expandability. These requirements are integrated with site constraints, environmental and permitting conditions, and long-term operational needs.

Consistent with best practices for design-build delivery, we emphasize performance-based criteria rather than prescriptive specifications. This approach allows the Design-Builder to innovate while ensuring that final outcomes meet LCFWASA's expectations. The result is a comprehensive OPC document that provides a clear basis for design development, cost estimating, and risk allocation.

Procurement and Design-Builder Selection Support

During procurement, our role is to help LCFWASA select a Design-Builder that offers the best combination of technical capability, cost realism, and alignment with project goals. We will support the development of evaluation criteria and scoring methodologies, perform detailed reviews of proposals, and assess constructability, completeness of scope, and technical approach. A key component of this phase is the preparation of an independent cost estimate, which allows us to benchmark the proposals and identify discrepancies, assumptions, or risks that may not be immediately apparent.

We will also assist LCFWASA during interviews and negotiations with prospective design-build teams, helping to clarify proposal elements and refine scope definitions. This process ensures that the selected Design-Builder enters into an initial agreement with a shared understanding of expectations and a realistic basis for advancing design and pricing.

Preliminary Design and GMP Development

Once the Design-Builder is engaged under DBIA 520, the focus shifts to advancing the design and establishing the GMP. During this phase, our team will provide oversight in an effort to keep the project aligned with the OPC. We will review design submittals at key milestones, including the required 60 percent design review, evaluating the basis of design, equipment selections, and technical assumptions. At the same time, we will maintain an independent cost model that is updated as the design progresses, allowing us to routinely assess cost trends and identify potential deviations from the project budget.

As the GMP is developed, we will perform a detailed evaluation of the Design-Builder's proposal, including the cost of work, fee structure, contingencies, allowances, and schedule assumptions. This assessment considers both the completeness of scope and the allocation of risk. At the conclusion of this phase, we will provide LCFWASA with a detailed GMP validation report and recommendation to support an informed decision on proceeding with the final design and construction.



Construction Phase Support

Following execution of the final design-build agreement, our services continue into construction under a separate amendment, as anticipated in the RFQ. During construction, we will focus on maintaining alignment with the approved design, schedule, and GMP. Our experienced construction personnel will monitor progress against the project schedule, review submittals and requests for information, and evaluate pay applications within the open-book structure typical of design-build projects. We will also provide detailed analysis of change orders so that adjustments to cost or schedule are appropriate and justified. Our involvement will continue through commissioning and closeout, supporting a completed project that meets the identified project requirements and LCFWASA's expectations.

APPROACH TO BUDGET, SCHEDULE CONTROLS, AND RISK MANAGEMENT

Cost and Schedule Controls

Cost and schedule control are integrated throughout our approach rather than treated as standalone activities. As previously discussed, we will establish an independent cost baseline early in the project and regularly reconcile it with the Design-Builder's estimates as the design evolves. This ongoing comparison allows us to identify cost pressures, validate contingencies, and provide early warning of potential budget impacts.

Similarly, we will develop and maintain a master project schedule that incorporates design milestones, procurement activities, and construction sequencing. By regularly reviewing the Design-Builder's schedule and tracking critical path activities, we can help keep the project on track and make sure that potential delays are identified and addressed proactively.

Risk Management

Our approach to risk management is aligned with DBIA principles, which emphasize assigning risks to the party best able to manage them. Throughout the project, we will maintain and update a detailed risk register that captures technical, financial, and schedule-related risks.

Key risks for this project include site and geotechnical uncertainties, permitting challenges, market-driven cost escalation, and potential gaps in scope definition. We will address these risks through clear OPC development, careful review of design and pricing assumptions, and early implementation of mitigation strategies. By actively managing risk rather than reacting to it, we will help reduce potential impacts on project outcomes.

DESCRIPTION OF THE OWNER'S CONSULTANT TEAM'S QUALITY CONTROL PROGRAM

Quality assurance (QA) and quality control (QC) are fully integrated into our overall approach as Owner's Advisor, guiding every phase of our services from project initiation through design and construction. Rather than functioning as a standalone activity, QA/QC is embedded within our project management, technical review, and oversight processes to ensure that all work—whether performed by our team or the Design-Builder—is accurate, consistent, and aligned with the OPC.

Our approach begins with establishing clear expectations for quality at the outset of the project. During the kickoff phase, we define scopes of work, communication protocols, deliverables, and review milestones for all disciplines and team members. This early alignment ensures that quality objectives are understood across the entire project team and sets the foundation for coordinated execution.

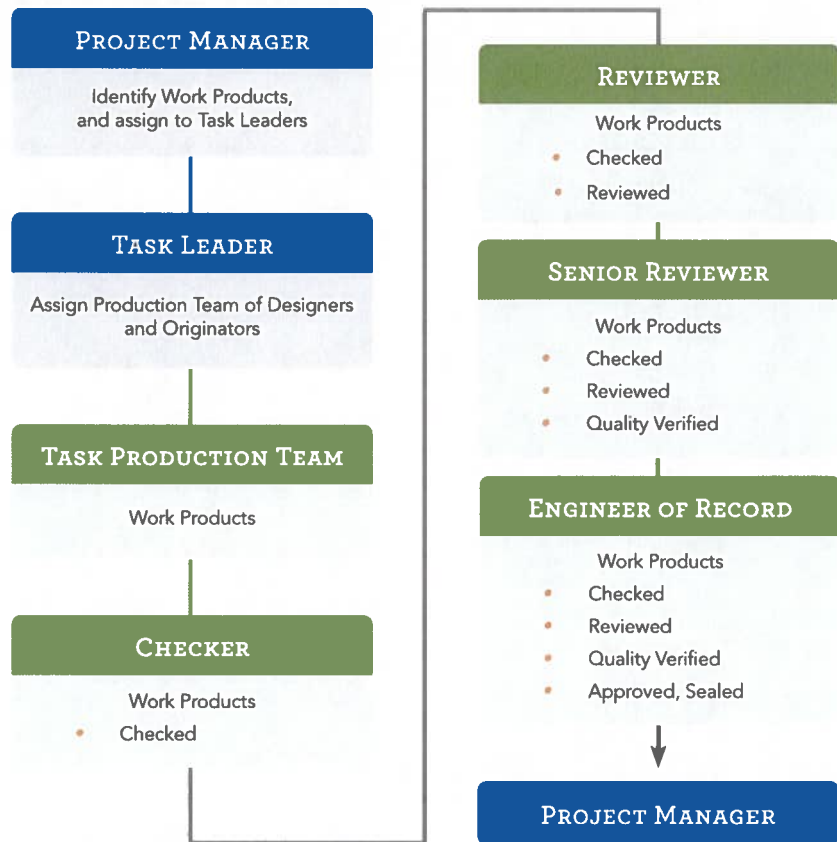
Throughout the design phase, we implement a structured and tiered QA/QC process that combines ongoing technical oversight with formal milestone reviews. Design criteria, including analytical methods and assumptions, are reviewed early and revisited as the design progresses to confirm continued applicability. Reasonableness checks are performed frequently, supported by detailed verification of calculations, software use, and engineering assumptions. For critical elements—such as the reservoir and hydraulic systems—these efforts are supplemented by independent internal technical peer reviews, as needed, to promote a high level of rigor and objectivity.

Our QA/QC program emphasizes coordination and consistency across all project documents. Drawings, specifications, calculations, and reports are reviewed not only for technical accuracy but also for clarity, completeness, and alignment with one another. We conduct interdisciplinary conflict reviews to identify and resolve discrepancies between documents, ensuring that design intent is consistently and correctly represented. At each stage, reviews are performed by qualified personnel who are independent of the original preparer, in accordance with our firm-wide Technical Process Guidance and Procedures.

Document control and record management are also integral components of our QA/QC approach. We maintain organized digital and physical project files, ensuring proper version control, accessibility, and long-term archiving in accordance with project and regulatory requirements.

As part of our role as Owner's Advisor, we extend these quality controls beyond our internal work to include active oversight of the Design-Builder's QA/QC processes. We monitor their procedures, documentation, and implementation to confirm consistency with project requirements and industry standards. This includes reviewing their quality plans, observing their review processes, and verifying that identified issues are appropriately addressed. By maintaining this level of oversight, we help ensure that quality is built into both the design and construction phases, rather than inspected after the fact.

Ultimately, our QA/QC approach is proactive, systematic, and fully integrated with our responsibilities as Owner's Advisor. By combining disciplined internal controls with active oversight of the Design-Builder, we provide the Owner with confidence that all aspects of the project meet established quality standards, regulatory requirements, and performance expectations.



EXPERIENCE WITH FEDERAL AND/OR STATE GRANT PROGRAMS

State Funding Coordination

Given the importance of state funding to this project, we will provide dedicated support to ensure compliance with all applicable requirements. This includes establishing a compliance framework, coordinating with funding agencies, and maintaining complete and well-organized documentation. Our approach is designed to ensure that all records are audit-ready and that funding eligibility is maintained throughout the project lifecycle.

Project Experience with Federal and/or State Funding

Schnabel has extensive experience with state and federally funded dam and water resources design and construction projects, in addition to other projects receiving state and/or federal funding in which Schnabel has been involved. Within the past five years alone, we have managed the design and construction of several FEMA-funded dam remediation projects across the Southeast US, prepared designs and provided construction phase engineering for numerous NRCS funded dam rehabilitation projects in various states, performed engineering designs for US Bureau of Reclamation (USBR) owned projects, and participated in the review of the USACE Dam Safety Program. Schnabel has also provided design and construction phase engineering for dam and water resources engineering projects receiving funds from various state agencies. In addition, Schnabel routinely hires and consults with former federal and state employees, which provides us with a unique perspective and understanding of federal and state processes. Through this extensive recent experience and knowledge obtained from former federal and state employees, Schnabel continues to expand our unparalleled knowledge and understanding of the processes that are utilized by these agencies as projects progress from design through construction. This vast knowledge base allows projects to be completed on-time and on-budget without interruption to the Owner. Specific recent examples of projects, which receive either federal or state funding, are highlighted below.

- Schnabel has worked with the Town of Lake Lure, NC to **receive four cycles of dam rehabilitation funding through the FEMA Rehabilitation of High Hazard Potential Dams (HHPD) Program**, which is locally facilitated by the Department of Environmental Quality (NC DEQ). The funding is being used to design and construct a new reservoir drain through the base of this 120-foot-tall, concrete multiple arch-buttress dam and design a new replacement dam. In addition to federal funding, Schnabel has worked with the Town to meet various state funding requirements.
- Schnabel is the engineer of record for dam safety work for the Boiling Spring Lakes Dams project in southeast North Carolina. The project is **funded by FEMA, the NC Legislature, the County of Brunswick, and the Defense Community Infrastructure Pilot (DCIP) program**. Design was completed in late 2021 and construction is scheduled for completion in early 2027.
- Schnabel served as the lead design engineer for the Hard Labor Creek Regional Reservoir Dam in Walton County, Georgia. This water supply reservoir project was **funded in part using resources from the Georgia Environmental Finance Authority (GEFA)**.
- With Schnabel's assistance, Aiken County, South Carolina received **federal funding from FEMA to remediate Langley Dam**, a century old structure that was in jeopardy of failing. The funding, which equated to approximately 50 percent of the construction cost, required unique management on Schnabel's part in that all pay requests from the contractor had to be allocated between grant funding and non-grant funding. Through diligent recording keeping and understanding of the eligible portions of the project, each pay request was reviewed and approved by Aiken County and the funding agency without hesitation.



Lake Lure Dam



Hard Labor Creek Regional Reservoir Dam

- Schnabel has performed numerous assessments, planning studies, detailed designs, and construction phase engineering on the behalf of the state and local conservation districts and the NRCS. Many of these projects were **funded, at least partly, by the NRCS and involved cost-sharing agreements between federal agencies and local sponsoring organizations**. As required by the agreements and requested by the owners, Schnabel assisted with the management of the projects and progress and budget tracking for cost-sharing purposes.
- After Hurricane Florence, Governor Cooper established the North Carolina Office of Recovery and Resiliency (NCORR), a division of the NC Department of Public Safety, to provide disaster recovery programs statewide and help communities and disaster survivors recover and rebuild smarter and stronger. In late 2017, the NC DEQ, Division of Energy, Mineral and Land Resources (DEMLR), was **awarded a \$500,000 grant to gather necessary information and perform hydrologic and hydraulic (H&H) analysis on the dams located within the Neuse River Basin** to better understand hydraulic capacity and performance of the structures during storms like Florence and be better prepared for future hurricane events. By May 2019, NCDEQ had 182 dams left that required H&H analyses to be performed by June 10, 2019. Schnabel was retained by NCDEQ to provide support, perform H&H analyses, and determine spillway capacity and flood attenuation for the current condition of 25 of the 182 dams.
- Schnabel provided technical assistance to the Pearl River Valley Water Supply District for the Ross Barnett Reservoir Dam located near Jackson, MS. Schnabel staff performed hydrologic and hydraulic analyses, site inspections, potential failure modes analyses and a semi-quantitative risk assessment for the high hazard dam. The **funding for the study was obtained through the Mississippi Rehabilitation of High Hazard Potential Dams Grant Program**, which included federal support from the U.S. Department of Homeland Security.
- Greenbrier Creek Dam (Mt. Sterling, KY) Interim Risk Reduction Measures, which were needed to stabilize this key water supply infrastructure, is being **funded via the Kentucky Infrastructure Authority Fund B Loan Type**. Earlier efforts were funded via a "Cleaner Water Grant" administered by the Kentucky Infrastructure Authority.
- Lake George Dam (Marion, Kentucky) Interim Risk Reduction Measures, which were needed to stabilize this key water supply infrastructure, were **fully funded under a Governor's Emergency Declaration by the Kentucky Emergency Management division**. Schnabel also provided an Environmental Report and Preliminary Engineering Report to support a grant application through USDA Rural Development.



Neuse River Basin Flood Study



Greenbrier Creek Dam

COMMITMENT TO PROJECT SUCCESS

Our team is committed to serving as a trusted, independent advisor to LCFWASA. We bring a collaborative approach that aligns with the principles of design-build delivery, while providing objective, data-driven insight that supports informed decision-making. By maintaining continuous alignment of scope, cost, schedule, and quality, we will help promote a project that achieves its intended outcomes and delivers long-term value to LCFWASA and the communities it serves.

Relevant Firm Experience with Design Build and Similar Water Supply Projects

Schnabel brings extensive, proven experience in the successful delivery of complex infrastructure projects through both design-build and traditional delivery methods, with a particular focus on water supply systems and dam-related infrastructure. As a trusted Owner's Advisor, Schnabel has supported clients on a wide range of design-build and alternative delivery projects, providing strategic guidance, technical oversight, and risk management to help ensure performance objectives are achieved. This work is built upon a strong foundation of serving as the Owner's representative on numerous design-bid-build projects, where Schnabel has developed a deep understanding of design development, construction execution, and quality management. This combined experience allows Schnabel to effectively bridge traditional and collaborative delivery approaches, helping Owners maintain control while benefiting from the efficiencies of design-build. The following sections highlight representative projects and additional experience that demonstrates Schnabel's consistent record of success in delivering high-quality water supply and infrastructure solutions. References for each project are provided in the following section.

PROJECTS OF SIMILAR SIZE AND SCOPE

Carrollton Holding Pond Dam / Carrollton, GA



SERVICES

- Hydrology and Hydraulic Analyses
- Geotechnical Investigation and Engineering
- Design Phase Services
- Permitting Support
- Bid Phase Services
- Construction Phase Services
- Funding Assistance

OWNER / CLIENT

City of Carrollton

The City of Carrollton, Georgia constructed a new holding pond to serve as a supplemental source of raw water and as a settling pond to improve operations of their water treatment facility. The dam impounding the holding pond is a zoned earthen embankment with a maximum height of 50 feet and a length of 3,600 feet. At the normal operating level, the dam impounds 134 MG of water for use by the City. The dam is considered a high hazard structure and is regulated by the Georgia Safe Dams Program. A 24-inch-diameter conduit supplies water to the holding pond from the City's adjacent Little Tallapoosa River intake structure. A 36-inch-diameter conduit conveys water from the holding pond to the nearby water treatment facility.

Schnabel provided design phase services including initial project planning, subsurface explorations, hydrologic and hydraulic analyses, dam breach inundation analyses, geotechnical analyses, and the development of construction plans and technical specifications. The City utilized a loan through the Georgia Environmental Financing Authority for construction of the project. Schnabel assisted the City with the loan application which included coordination with subconsultants to develop an Environmental Impact Document including wetlands delineation, archaeological resources survey, and support during public meetings. After successfully obtaining the GEFA loan, Schnabel assisted with bid phase services and the development of construction contracts.

Construction of the project began in February 2023 and was substantially complete in January 2024. Schnabel provided onsite representatives for Quality Control and Quality Assurance throughout construction. Materials testing included compaction testing of earthfill and drainfill materials, testing of fresh samples of concrete, laboratory compressive strength testing of concrete, and visual observations of pipeline construction, riprap placement and final site stabilization.

Byrd Park Reservoir / Richmond, VA

Byrd Park Reservoir or Tank is an above-grade, approximately 53 MG water supply storage impoundment owned and operated by the City of Richmond, Virginia. The tank was built in 1887 by constructing a 20-foot-high earthen embankment on all four sides. The tank is divided into two cells of equal dimensions by an earthen embankment that runs north to south through the middle of the tank. The bottom of the tank and interior (i.e., upstream) slopes of the tank are lined with brick and concrete. A roof made up of pre-stressed structural concrete members and supported by structural concrete columns bearing on spread footings was constructed over top of the tank in 1971.

Since 2012, Schnabel has provided geotechnical engineering, dam engineering consultation services, and environmental services to support various upgrades to the reservoir including addressing impoundment leakage, demolition of the existing impoundment roof, and reconstructing the impoundment roof. These services are ongoing. Schnabel has also supported coordination with the Virginia Department of Conservation and Recreation, the state's dam safety regulatory agency.

SERVICES

Environmental Compliance and Testing
Geotechnical Investigation and Engineering
Dam Engineering Consultation
Construction Phase Services

OWNER / CLIENT

City of Richmond / TY Lin

Virgil R. Hazelett Reservoir at Cobbs Creek / Columbia, VA



In 2011, Schnabel commenced work on the new \$280 million Cobbs Creek Regional Water Supply Reservoir, located on 1,800 acres in Cumberland County. In planning by owner Henrico County since 2002, the regional water supply project – with a 14.8-billion-gallon raw water storage capacity within a 1,100-acre normal pool – is intended to meet customer needs for the next 50 years. Raw water is pumped to the reservoir from the James River when river flows are adequate, and controlled releases from the reservoir are made when the flows in the James River are inadequate to support regional demands. Water is then captured 50 miles east in Henrico County from the James River—i.e., the river becomes the water conveyance.

SERVICES

Dam Engineering
Hydrology and Hydraulic Analyses
Geotechnical and Geological Investigations and Analyses
Structural Engineering
Hydromechanical Engineering
Design Phase Services
Permitting Support
Bid Phase Services
Construction Phase Services
Instrumentation Monitoring
Reservoir Filling and Post-Construction Inspections

OWNER / CLIENT

County of Henrico / Arcadis



Schnabel provided full design services for the 160-foot-high, 3,850-foot-long primary embankment dam; a 30-foot-high, 800-foot-long saddle dam; and associated spillway, outlet works, and maintenance vehicle access bridges. Schnabel also provided full-time construction quality assurance testing and observation for the dams and associated seepage barriers (slurry walls and grout curtains). Construction was completed in 2024.

Our services also included geotechnical engineering to support the design of the river intake, pump station, and transfer pipeline; bid support; and monitoring and inspections of the dam during the first filling of the reservoir. We are currently providing instrumentation monitoring of the dams and quarterly post-construction inspections.

Lower Little Tallapoosa River Watershed Structure No. 25A (Indian Creek) / Carroll County, GA



SERVICES

Alternatives Analysis
 Downstream Flood Analysis
 Economic Impact Analysis
 Social Impact Analysis
 Hydrology and Hydraulic Analyses
 Structural Engineering
 Design Phase Services
 Permitting Support
 Bid Phase Services (Planned)
 Construction Phase Services (Planned)

OWNER / CLIENT

Carroll County Water Authority

Following the evaluation of potential sites for development of a raw water supply reservoir, the Carroll County Water Authority (CCWA) requested evaluation and planning efforts on the Indian Creek site for constructing a multi-purpose dam that would provide a safe yield of six million gallons for raw water, as well as maintain flood control benefits currently provided by an existing structure at the site of the proposed dam. CCWA sought support in preparing a combined Supplemental Watershed Plan and Environmental Impact Statement (Plan-EIS), along with all necessary supporting data, to serve as a Supplemental Watershed Plan for the Indian Creek site.

Schnabel assisted CCWA and the Georgia NRCS in preparing the Plan-EIS for the proposed reservoir site. The Plan-EIS describes the most technically, economically, socially, and environmentally preferred alternative to bring the proposed dam into compliance with Natural Resources Conservation Service and Georgia Safe Dams Program current dam safety and performance standards and support the proposed water supply expansion. The Plan-EIS is part of the process for requesting and obtaining federal funding for the planning, design, and construction of the proposed reservoir. As part of the planning process, Schnabel also performed a preliminary geotechnical exploration, associated lab testing, and engineering analyses to support the evaluation of alternatives for the Plan-EA.

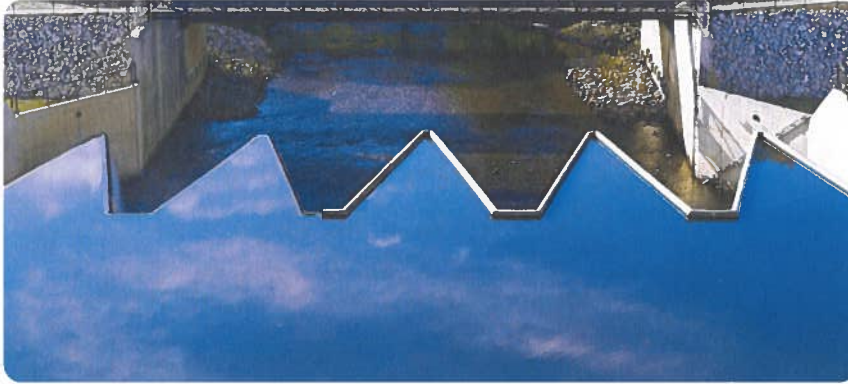
The existing dam, Lower Little Tallapoosa River Dam No. 25, was constructed in 1974 as a flood control structure. The scope of the current project is to construct a much larger dam at the current site which will now include approximately



15,000 acre-feet of raw water storage, while continuing to provide flood control benefits downstream of the dam.

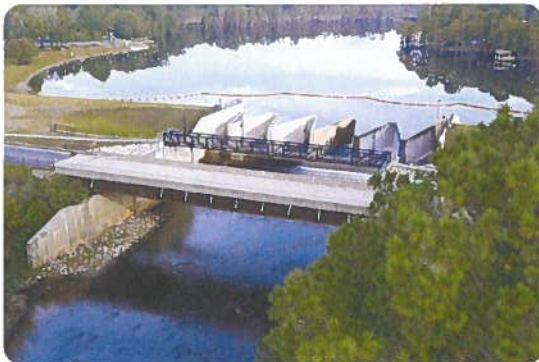
The Plan-EIS was authorized for Federal Assistance by the NRCS Chief in January 2026. Schnabel is currently finalizing the design of the dam, a 125-foot-tall earthen embankment that will impound a 401-acre reservoir upon completion. Spillway outlet works for the dam include a nearly horizontal reinforced-concrete box conduit connected to a 125-foot-tall reinforced-concrete riser outlet structure. The 90% design for the project is currently under review by the NRCS National Design, Construction, and Soil Mechanics Center in Fort Worth, Texas and the Georgia Safe Dams Program. Bidding and construction of the dam are anticipated to begin in 2027.

Hope Mills Lake Dam / Hope Mills, NC



The original Hope Mills Dam was built in the late 1830s to provide power to four nearby cotton mills. It was breached by a flood in 1923 and rebuilt in 1924. This second dam overtopped and failed in 2003. A third dam constructed in 2008 failed after two years of service and emptied the lake. The 2010 loss was particularly painful because it came at a time when the Town was planning a heritage park, a local history museum, and improvements to the downtown historic area bordering the lake. Town leaders and citizens stepped up in an unwavering effort to restore the dam.

In 2014, the Board of Commissioners awarded a design-build contract to Schnabel Engineering and ASI Construction to restore the lake. In a collaborative process, the design-build team and the Town's representatives identified the top project goals of a smaller footprint, a more attractive and less obtrusive design, reduction of vibration, higher water level, mitigation of potential causes of seepage, and more lakeside recreation areas.



The design solution was also considered sensitive to the Town's plans for downtown revitalization. Based on project objectives and the construction and design issues that caused the 2010 dam failure, we recommended a complete replacement. The new dam consists of a concrete five-cycle labyrinth spillway, earthen embankments on both sides of the spillway, a cutoff wall beneath the entire dam, and a seepage collection system. Additionally, the stream channel and bridge abutment walls in the spillway outlet were improved for long-term performance.

This project was awarded the 2018 ASDSO National Rehabilitation Project of the Year award and an Envision Bronze award for sustainability - the first dam to earn an Envision award.

SERVICES

- Community Outreach
- Dam Failure Forensic Study
- Hydrology and Hydraulic Analyses
- Geotechnical and Geological Investigations and Analyses
- Structural Engineering
- Design Phase Services
- Permitting Support
- Construction Phase Services

OWNER / CLIENT

Town of Hope Mills

AWARDS

- 2019 Institute for Sustainable Infrastructure's Envision Bronze Award
- 2018 Association of State Dam Safety Officials, Rehabilitation Project of the Year
- NC ACEC Engineering Excellence Award

Confidential Project / Southwest USA

A confidential owner is developing a new pumped storage hydropower facility that will supply roughly 2,000 MW and 10 hours of energy storage. The project, being advanced via a design-build model, will provide long-duration energy storage and increase supply of reliable, sustainable energy to help meet growing energy demands. Schnabel was a key member of a design-build team under subcontract to Lead Designer Knight Piesold.

In this phase of design, Schnabel's role has been to progress the design of three dams and a spillway from 30% to 60%. The current project configuration includes two, roughly 300-foot-tall, concrete-faced rockfill dams (CFRD). These two large dams are separated by a small peninsula. The two CFRD dams and a roughly 30-foot-tall saddle dam will form the upper reservoir. All three dams will be constructed of rockfill excavated from the proposed Interconnect Channel, an

SERVICES

- Dam Design
- Spillway Design
- Pumped Storage Hydropower Design

OWNER / CLIENT

Confidential Owner / Knight Piesold

excavation connecting the two natural drainages within the proposed reservoir. Dam design included evaluation of borrow area materials, embankment settlement, stability, and seepage evaluations, foundation stability and seepage evaluations, concrete plinth design, subsurface cutoff system (grout curtain and slurry wall) design, concrete dam facing slab design, and concrete crest parapet wall design.

The proposed spillway will be located east of the CFRD dams, within the limits of the proposed saddle dam. The saddle dam will be constructed of rockfill materials and utilize an internal concrete T-wall as a hydraulic barrier. The spillway will consist of an ogee-crested labyrinth founded on residual materials.

An upper Inlet/Outlet (I/O) will be constructed on the left abutment of the dams to transmit water through the water conveyance tunnels and into the underground powerhouse. Water will exit through a lower I/O into an existing lake, which will serve as the lower reservoir. As a result of power production, the reservoir is estimated to fluctuate roughly 130 feet per day.

The next and final phase of design, advancing design from the current level through construction, is being awarded summer of 2026. If selected, Schnabel would complete the dam and spillway designs and take the project through construction.

Confidential Project / Southeast US

This unique hydroelectric and water supply project was completed in 1930 to serve the surrounding region. The five concrete intake towers are each 223 feet tall and contain a total of 14 headgates for isolating each of the five penstocks that deliver water to the powerhouse and downstream power plant. Towers 1-4 are 30 feet in diameter and each house two headgates that are nine feet wide by 14 feet tall, while Tower 5 is 50 feet in diameter and contains six headgates that are each 10 feet wide by 10 feet tall. All gates are vertical lift Broome gates with roller chains and an inclined seating surface. Each of the five towers has three levels above the normal water surface that support the wire rope hoists and provide access to the gates for maintenance and inspection when they are in the fully raised position.

Schnabel was retained as part of an alternative project delivery team to serve as the lead design firm for replacing the 14 headgates, hoists, and completing comprehensive safety upgrades and structural repairs throughout the intake towers. The scope of work included detailed engineering design, FERC permitting, technically challenging marine construction, and full-time resident engineering during construction. Prior to design, Schnabel spent eight weeks onsite completing a comprehensive inspection of the existing structures. The work included NDT of concrete and steel, terrestrial lidar scanning, diver and underwater ROV inspection, and underwater lidar scanning of the embedded gate guides to verify seat dimensions for the new gates.

In addition to replacing the 14 headgates, Schnabel completed numerous ancillary engineering and design tasks. Major components included designing 149-foot-tall structural steel gate guides, new vent and filler piping including a retrofit connection to the existing concrete penetrations, structural analysis of steel girders and the concrete towers for completing modifications, and designing new embedded gate guides to replace corroded carbon steel sections. The majority of the work involves underwater construction using divers, with depths of up to 198 feet and requiring mixed gas diving. Because of this, Schnabel worked closely with the contractor during the design phase of the project to minimize risks and detail new construction in the most efficient manner possible given the highly technical and challenging nature of underwater construction.

To maintain continuity throughout the project, Schnabel has a team of full-time resident project representatives onsite to support the 24-hour per day, six day per week construction schedule. Successful commissioning and leakage testing of the first tower is complete, with the new gates operating well upon first installation and passing the leakage test without requiring any adjustment.

SERVICES

Above Water and Underwater Field Inspections
Underwater Lidar Scanning
Terrestrial Lidar Scanning
Broome Gate and Headgate Replacement
Wire Rope Hoist Replacement
Design of Gate Guides
Intake Tower Repairs
Structural Analysis
Underwater Construction
Construction Observation
FERC Permitting

OWNER / CLIENT

Confidential Owner

REFERENCES AND DESCRIPTIONS OF SIMILAR PROJECTS

We are dedicated to providing technical excellence, value, environmental stewardship, and innovation on every project. Schnabel considers client satisfaction our most important mission. We endeavor to exceed expectations on every project, and through regular client satisfaction surveys, clients assure us that they consider Schnabel to be superior in technical quality and service as compared to our competitors. Knowing that our clients are the best source of information in regard to our past performance, we have listed individuals who have direct knowledge of our capabilities pertaining to the projects discussed above (with the exception of the confidential projects listed), and we encourage you to reach out to them to get their input on our service and the value we brought.

Project Name	Reference	Agency Contact Information
Carrollton Holding Pond	Tony Richardson City of Carrollton	770.830.2017 trichardson@carrollton-ga.gov
Byrd Park Reservoir	Roger Cronin, PE TY Lin	804.355.9993 roger.cronin@tylin.com
Virgil R. Hazelett Reservoir at Cobbs Creek	Paul Peterson Arcadis	757.873.4347 paul.peterson@arcadis-us.com
Lower Little Tallapoosa River Watershed Structure No. 25A	Matt Windom, PE Carroll County Water Authority	678.890.0061 mwindom@ccwageorgia.com
Hope Mills Lake Dam	Melissa Adams Town of Hope Mills	910.426.4114 mpadams@townofhopemills.com

ADDITIONAL ALTERNATIVE DELIVERY PROJECT EXPERIENCE

In addition to the project examples and references above, the table below lists some of Schnabel's additional alternative delivery project experience on dams and water resources projects.

Project Information			Project Delivery Type	
Project Name	Owner	Location	Design-Build (DB)	Early Contractor Involvement (ECI)
Hope Mills Dam	Town of Hope Mills	Hope Mills, NC	✓	
Canton Dam Gate Replacement	USACE	Canton, OK	✓	
Confidential Project	Confidential Owner	Southeast US	✓	
Gene Wash Dam LLO	Metropolitan Water District of Southern California	San Bernardino County, CA	✓	
Crystal Creek Dam Improvements	Gracon, LLC	Green Mountain Falls, CO	✓	
Ralston Dam Improvements	Gracon, LLC	Golden, CO	✓	
Big Hill Lake Gate Replacement	USACE	Labette County, KS	✓	
Pine Creek Dam Crane Placement Plan	USACE	McCurtain County, OK	✓	
Stillhouse Hollow Dam Slide Gate Replacement	USACE	Belton, TX	✓	
Hoover Dam Penstock Drain Valve Replacement	USBR	Clark County NV	✓	
Gavins Point Dam Air Cooler Piping Replacement	American Mine Services	Yankton, SD	✓	

Project Information			Project Delivery Type	
Project Name	Owner	Location	Design-Build (DB)	Early Contractor Involvement (ECI)
Fort Randall Dam Strainer Replacement	American Mine Services	Pickstown, SD	✓	
Poe Dam	Pacific Gas & Electric	Oroville, CA	✓	
Hardy Dam	Consumers Energy Company	Newaygo County, MI		✓
Lake Vermilion Dam	Aqua Illinois, Inc	Danville, IL		✓
Lower Baker Seepage Reduction	Puget Sound Energy, Inc.	Concrete, WA		✓

RECORD OF PROJECT SUCCESS AS AN OWNER'S ADVISOR

As demonstrated above, Schnabel has established a strong reputation as a trusted Owner's Advisor, delivering consistent value across design-build; Engineering, Procurement, and Construction (EPC); and other alternative delivery projects. Drawing on decades of experience in traditional design-bid-build (DBB) delivery as an Owner's representative, Schnabel brings a uniquely comprehensive perspective that helps clients navigate the complexities of modern project delivery while maintaining clarity, control, and confidence from concept through completion.

On alternative delivery projects, Schnabel's success is grounded in its ability to align stakeholder expectations early and sustain that alignment throughout the lifecycle of the project. Acting as an extension of the Owner's team, Schnabel provides strategic guidance during procurement, helping clients structure Requests for Qualifications (RFQs) and Requests for Proposals (RFPs) that clearly define performance criteria, technical requirements, and evaluation standards. This early-phase leadership ensures that design-build teams are selected not only on qualifications, but also on their ability to collaborate, innovate, and deliver value consistent with the Owner's goals.

Once a design-build team is engaged, Schnabel excels at facilitating communication and managing risk. The firm provides independent technical oversight, reviewing design submittals, validating engineering assumptions, and making sure that the design intent and contractual requirements remain aligned. Schnabel's deep technical expertise, particularly in geotechnical, dam, and infrastructure engineering, allows us to identify potential issues early, reducing costly redesigns or construction delays. At the same time, our role as Owner's Advisor ensures that decisions are made with a full understanding of cost, schedule, and long-term performance implications.

Schnabel's experience as an Owner's representative on numerous DBB projects strengthens our effectiveness in alternative delivery environments. Having managed and delivered hundreds of projects in the traditional DBB framework, Schnabel understands the importance of clear documentation, disciplined construction administration, and rigorous quality control. These foundational principles carry forward into our advisory role on design-build projects, where Schnabel helps Owners maintain appropriate oversight without undermining the efficiency and flexibility that alternative delivery methods are intended to provide.

This dual perspective—rooted in both traditional and collaborative delivery methods—enables Schnabel to bridge gaps that can arise between Owners and design-build teams. Schnabel focuses on clearly articulating and protecting Owner's interests, while also fostering a cooperative environment that encourages innovation and problem-solving. The firm's ability to translate complex technical issues into actionable insights empowers Owners to make informed decisions quickly, keeping projects moving forward while reducing risk.

Across a wide range of infrastructure and water resources projects, Schnabel has demonstrated its ability to deliver measurable outcomes: improved cost certainty, reduced schedule risk, enhanced design quality, and stronger team collaboration. Whether serving as Owner's Advisor on a fast-paced design-build project or as Owner's representative in a traditional DBB setting, Schnabel consistently brings disciplined project management, technical excellence, and a commitment to the Owner's success.

Ultimately, Schnabel's track record reflects more than just experience—it reflects a proactive, solutions-oriented approach that adapts to the evolving demands of the industry while remaining firmly focused on delivering value to our clients, value that our client references listed herein can attest to readily.

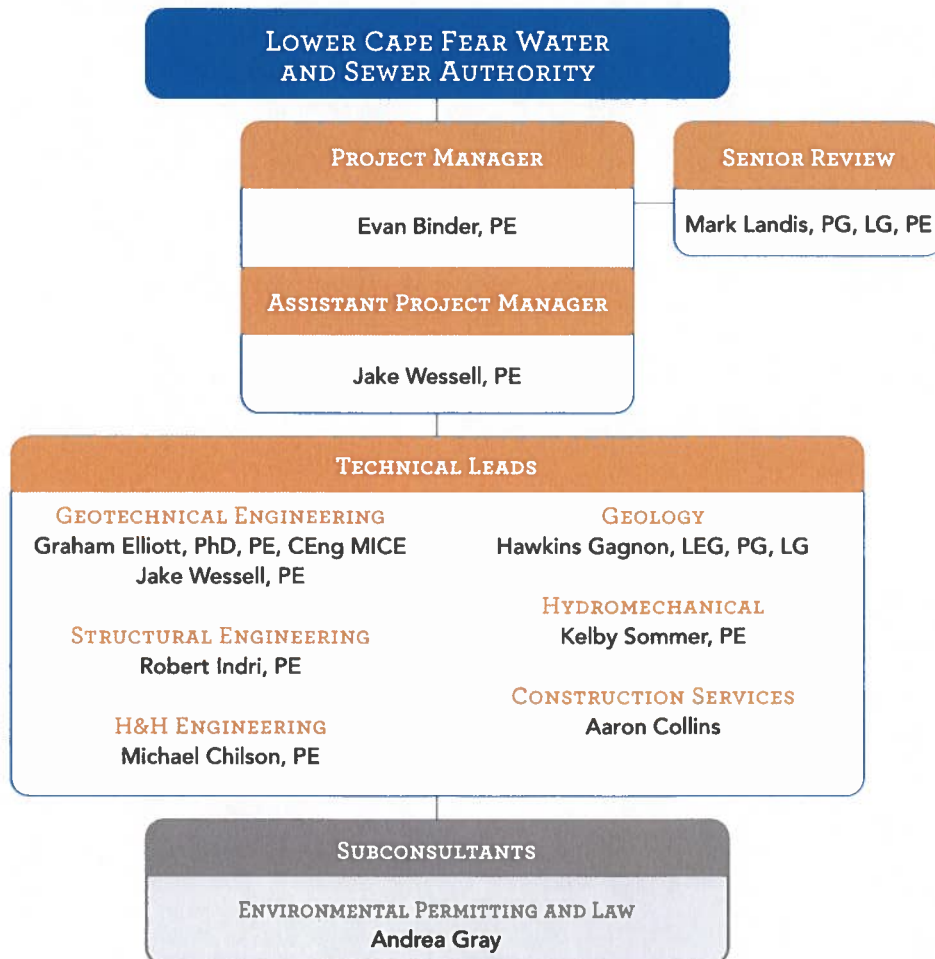
Project Team

PROJECT MANAGER AND PRINCIPAL IN CHARGE OF THE PROJECT

Evan Binder, PE, our proposed project manager, specializes in the evaluation and design of water resources projects, including 18 years of experience with dams and water supply projects. Evan also has experience in hydraulic and hydrologic modeling of dams and reservoirs, embankment seepage and slope stability analyses, and cost estimating and design for both dam rehabilitation and new dam and water supply projects. Evan has served or is serving as project manager and/or lead engineer on numerous dam and water supply projects for municipalities and water supply agencies in North Carolina, Pennsylvania, and other states. Evan is currently serving as an owner's advisor to Consumers Energy Company, helping to lead their Risk Management Program. He has also been involved in several complex design projects that included Early Contractor Involvement. This experience in addition to his technical and overall project management experience positions Evan to be a great partner for LCFWASA on this project. In addition to his role as project manager, Evan leads our Greensboro, NC office, which will serve as the lead office for this project, allowing him to also effectively serve as principal-in-charge.

INDIVIDUAL TEAM MEMBERS FOR EACH DISCIPLINE AND RELEVANT EXPERIENCE

Schnabel has assembled a dedicated team of qualified and experienced professionals to perform the full range of requested engineering support services for this project from initial coordination through construction and commissioning. The organization chart presented below shows the individual roles and responsibilities of our team members. Resumes for our key project personnel are provided in Appendix A.



As a key subconsultant, Schnabel has brought on Andrea P. Gray, attorney at law, to provide environmental permitting and law guidance as needed for the LCFWASA. Andrea brings focused legal expertise and practical experience to water supply and water resources projects, particularly through her work in environmental permitting, zoning, and local government representation. With over 20 years of experience, she has played a key role in advancing complex infrastructure and development initiatives by guiding projects through regulatory approvals and land use processes. Her involvement in projects, such as the NRCS dam expansion at the Indian Creek Reservoir (with Schnabel), demonstrates her ability to support critical water supply infrastructure. In these efforts, she works closely with public agencies, developers, and stakeholders to navigate permitting requirements, coordinate with regulatory authorities, and resolve land use and entitlement challenges.

LOCATION OF EACH TEAM MEMBER TO FACILITATE EFFICIENT PROJECT EXECUTION

Schnabel is committed to delivering responsive client service and proactive engagement on every assignment. This dedication to accessibility, clear communication, and timely decision-making is fundamental to Schnabel's reputation and has been key to building and maintaining strong, long-term client relationships. As previously discussed, the majority of our project team members are located in our Greensboro, NC office, which is focused on dams and water resources projects, and located only about three hours from the project. We also have an office in Wilmington, NC, that is home to our Assistant Project Manager, Jake Wessell, PE, giving us a local presence that can respond immediately to local project needs, as needed.

TEAM COMMITMENT

Schnabel maintains a project workload averaging 75% of our capacity, allowing the flexibility to take on new work at any time while continuing to meet clients' schedule commitments. Our staff is accustomed to undertaking multiple concurrent projects ranging in size and complexity. The proposed project team will be available throughout the duration of the contract. In addition to the assigned team members, Schnabel has a deep bench of technical experts to be called on as needed for the successful execution of this project.

INSURANCE AND FIRM REGISTRATION REQUIREMENTS

Schnabel is able to meet the insurance requirements listed in the RFP and is properly registered with the North Carolina Office of the Secretary of State. A copy of our NC business license is attached in Appendix B.

Our Clients Say it Best...



Hope Mills Lake Dam

"It's a sustainable design, meaning it should last for many years. It has already withstood two hurricanes and a whole bunch of bad weather. I think it has taken the test already (that) you might not have expected it to take for lots of years!"

Mayor Jackie Warner
Town of Hope Mills, NC



Virgil R. Hazelett Reservoir at Cobbs Creek

"Schnabel Engineering has been an integral part of the design and construction of Henrico County Department of Public Utilities' Cobbs Creek Regional Water Supply Project. I greatly appreciate the Schnabel team's expertise and knowledge with design, permitting, and construction."

Emily B. McConnell, PE, Capital Projects Manager
County of Henrico Dept. of Public Utilities

Appendix A

Key Personnel Resumes

Evan Binder, PE

PROJECT MANAGER



EXPERTISE

Hydraulic, Hydrologic, Geotechnical Design,
Assessment as Related to Dam Engineering

EDUCATION

Master of Science, Civil Engineering,
Villanova University

Bachelor of Science, Civil Engineering,
University of Michigan

REGISTRATIONS

Professional Engineer / NC, PA, MI, VA, WI

AFFILIATIONS

ASDSO, USSD

YEARS WITH SCHNABEL/TOTAL

18/18

Evan specializes in the evaluation and design of water resources projects, including 18 years of experience with earth dams, levees and embankments, and roller compacted concrete (RCC) dams. Field experience includes construction oversight of grouting rehabilitations, observation and logging of test borings, and installation and monitoring of piezometers. He also has experience in hydraulic and hydrologic modeling of dams and reservoirs, embankment seepage and slope stability analyses, and cost estimating and design for dam rehabilitation projects. Evan has been a project manager on projects in Michigan, Maryland, North Carolina, Pennsylvania, Virginia, and West Virginia.

Consumers Energy Owner's Advisor on Risk Management Program / Jackson, MI
Owner's advisor to Consumers Energy on their Risk Management Program. Evan's activities in this role include managing the owner's consultants, facilitating meetings with consultants and regulators, reviewing the work of consultants, developing scope of work documents for consultants to prepare proposals, tracking and managing project deadlines, and drafting correspondence for Consumers Energy with FERC and other regulators. In addition, guidance is provided on portfolio management of how to manage the risks of all the dam sites.

Virgil R. Hazelett Reservoir at Cobbs Creek / Columbia, VA

Evan assisted with the design for this new offline storage reservoir, with pumping from and releases to the James River in Cumberland County. The project consists of a 160-foot-high, over 4,000-foot-long primary dam and concrete spillway, outlet works, and associated bridges on Cobbs Creek; a 30 foot-high, over 800-foot-long perimeter saddle dam; and a pumped storage facility providing 15 billion gallons of raw water storage within a 1,100-acre reservoir at normal pool. The intake will have a capacity of 150 mgd, the largest in the country.

City of High Point City Lake Dam Design / High Point, NC

Project Manager. City Lake Dam is a 100-year-old high hazard water supply dam. Rehabilitation of the dam is necessary to provide additional spillway capacity. The selected alternative is a Piano Key weir constructed on top of a new RCC Gravity section downstream of the existing dam. Additional features include a new intake tower and associated water line reconfigurations, site civil improvements, and demolition of select portions of the existing dam. Project is in the Preliminary Design phase with design scheduled to be completed by the end of 2026, with construction starting in 2027.

Roaring Gap Dam Alternatives / Roaring Gap, NC

Project Manager and Engineer of Record (EOR). Evan was responsible for oversight of the geotechnical exploration of this 60-foot-tall, high hazard earthen embankment dam to meet NC DEQ Dam Safety Requirements. The scope of work in addition to the geotechnical exploration included a dam inspection, review of available data, performing hydrologic and hydraulic analyses, and developing spillway upgrade alternatives and associated cost estimates. The selected alternative consisted of construction of a new labyrinth spillway, embankment toe drain and downstream slope improvements, installation of a low-level siphon, and reconstruction of an outlet channel.

Evan Binder, PE

PROJECT MANAGER

Pinehurst Resort and Country Club - Lake Pinehurst Dam Evaluation / Pinehurst, NC

Project Manager and Lead Engineer. The scope of services included a visual inspection of the embankment and spillway, video inspections of the spillway conduits, and an evaluation of the condition of the dam. An evaluation report was issued that included a summary of the dam inspection and recommendations to bring the dam into regulatory compliance. Lake Pinehurst Dam is categorized as a high hazard dam, used primarily for water supply and recreation.

Consumers Energy Hardy Dam Auxiliary Spillway Design / Newaygo County, MI

Project Manager. The scope of services included development of a drilling program plan (DPP) for FERC approval; subsurface investigations; optimization of the selected design concept; performing a risk register; preparation of 30%, 60%, 90% and final plans; specifications, schedule, cost estimates, and design report. All submittals are reviewed by an independent Board of Consultants and FERC. The proposed auxiliary spillway consists of a labyrinth control section, converging concrete chute, Type III Stilling Basin with supercavitating baffle blocks, articulated concrete block armored outlet channel, and RCC stepped terminal structure to transition flows into the Muskegon River below the site. Design challenges include evaluation of construction risks and long-term performance issues associated with complex geology and artesian conditions at the dam. SQRA methodologies were used to evaluate various complex PFMs to inform design and construction decisions. Evan also held the role of documentarian and lead report writer for the Construction PFMA, Risk Register, and Focused Design Modification PFMA.

Dominion Energy Bath County Pumped Storage Station Part 12D Periodic Inspection / Bath County, VA

Co-Independent Consultant for the 2025 FERC Part 12D Periodic Inspection for the Bath County Pumped Storage Station, owned and operated by Dominion Energy. Co-led the development of the PIP and PIPR in accordance with FERC requirements. The field inspection was completed in August 2025. The project includes a 460-foot tall, zoned earthen embankment Upper Dam, including inlet/outlet structures and a fuse plug auxiliary spillway; a 135-foot-tall, zoned earthen embankment Lower Dam with a concrete chute spillway with two radial gates and low-level outlet works; penstocks and multiple power and drainage tunnels and appurtenances; a powerhouse; and multiple sediment and recreations ponds and dams.

North Buffalo Creek Levee Rehabilitation Alternatives and Annual Inspections / Greensboro, NC

Project Manager for Alternatives and Task Lead for Annual Inspections. Lead development of conceptual level levee rehabilitation alternatives to provide an increased level of protection during the design storm while maintaining slope stability. Design included analyses, alternatives analysis report, schematic design drawings, and a construction cost estimate. Has performed the annual inspection of the levee 3 times and prepared the inspection reports.

Fairview Street Wetland Design / Greensboro, NC

Project Manager. Fairview Street Dam, also known as Revolution Park Dam, is an embankment dam owned by the City of Greensboro. The 14-foot-high, 175-foot-long earthen embankment is retained by a concrete wall on the downstream side of the embankment. The dam is currently not listed as part of the North Carolina Department of Environmental Quality Dam Safety (NC Dam Safety) Inventory, and its current dam hazard classification is unknown. The city would like to develop the impoundment in such a way that it could provide additional benefits, such as water quality improvements. The objective of our services is to manage the Fairview Street Dam Reservoir Improvement Design project, coordinate with subcontractors, evaluate the storm water quality improvement feasibility, develop retrofit design options, and design of the selected improvement alternative.

WV NRCS Brush Creek Sites 14 and 15 / Mercer County, WV

Project Manager. Responsible for the rehabilitation design of Sites 14 and 15 to upgrade the dams to meet current NRCS dam safety criteria. Both dams are multiple-purpose flood control and recreation structures. Rehabilitation designs are being performed to address hydraulic deficiencies and geotechnical issues at each dam and include replacement of earthen auxiliary spillway with a RCC cutoff wall and a new toe drain system and embankment stability berm.

Jake Wessel, PE

ASSISTANT PROJECT MANAGER / GEOTECHNICAL ENGINEERING SUPPORT



EXPERTISE

Geotechnical Engineering, Environmental Engineering

EDUCATION

Master of Science, Civil Engineering,
North Carolina State University

Bachelor of Science, Civil Engineering,
Duke University

REGISTRATIONS

Professional Engineer / NC, GA, SC, VA

AFFILIATIONS

ASCE, ACEC, SAME, NSPE

YEARS WITH SCHNABEL/TOTAL

9/25

Jake is a skilled technical leader in the management of all aspects of geotechnical and geoenvironmental projects, including client management and budgeting to complex technical analyses and recommendations, bringing over 25 years' experience to more than 300 projects throughout the Southeast United States. Jake was the Geotechnical Engineer of Record (EOR) on various Federal Department of Defense projects utilizing Design-Bid-Build and Design-Build delivery methods, including the \$800M Energy Conservation Measures Project at Naval Station Guantanamo Bay, Cuba, as well as the \$170-million Civil Engineer and Logistics Readiness Squadron Complex at Tyndall Air Force Base, Florida. Jake has a wealth of project experience with Power and Energy Utility Authorities, State Transportation Agencies, and Federal Department of Defense agencies and currently serves on the Board of Directors of the Cape Fear Post of Society of American Military Engineers (SAME). As a native of Eastern North Carolina, Jake has an intimate knowledge of the unique nature of Coastal Plain geology in the Carolinas.

USACE Wilmington District - Karlman Lane Roadway and Culvert Repairs / Military Ocean Terminal Sunny Point, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services to replace two culverts and repair the failing roadway approaches along Karlman Lane at MOTSU in Southport, North Carolina. The culvert replacements required temporary diversion of tidal creeks, along with undercut of unsuitable embankment soils and replacement with select fill and a geotextile wrapped aggregate pad to support the new reinforced concrete box culverts. Services included evaluation of historical geotechnical information, performance of a subsurface exploration utilizing Cone Penetration Test (CPT) soundings and hand augers with Kessler Dynamic Cone Penetrometer (DCP) soundings, laboratory testing, and foundation and pavement recommendations.

USACE Wilmington District - Construct Equipment Shelter at Reclaim Yard / Military Ocean Terminal Sunny Point, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services to design and construct an equipment shelter at an existing reclaim yard at MOTSU in Southport, North Carolina. The equipment shelter consisted of a pre-engineered metal building (PEMB) housing large material equipment handling vehicles. A heavy-duty traffic rated apron was also constructed around the perimeter of the PEMB. Services included performance of a subsurface exploration utilizing cone penetration test soundings and hand augers with Kessler Dynamic Cone Penetrometer (DCP) soundings, laboratory testing, and foundation and pavement recommendations.

USACE Louisville Armed Forces Reserve Center / Wilmington, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services. The project included various new building structures, some with large crane loads, and parking/driveways. Services included subsurface exploration, field engineering, soil laboratory testing, foundation and excavation recommendations, and a geotechnical engineering report. Due to poor soils and

Jake Wessel, PE

ASSISTANT PROJECT MANAGER / GEOTECHNICAL ENGINEERING SUPPORT

potential excessive foundation settlements, a ground improvement system was recommended and implemented, with significant savings over traditional deep foundation systems.

City of Wilmington Fire Station No. 3 / Wilmington, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for a new fire station facility on Cinema Drive in Wilmington, North Carolina. The new multi-story fire station included large truck bays, heavy duty concrete and asphalt pavements, and stormwater features. Services consisted of subsurface exploration, laboratory testing, and foundation recommendations for the structure, along with pavement designs for associated parking and driveways, earthwork considerations for underground utilities, and stormwater management features.

City of Wilmington Bradley Creek Kayak Launch / Wilmington, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for a new public dock and kayak launch in Wilmington, North Carolina. The new dock includes a fixed walkway and a floating dock for launching kayaks into Bradley Creek. Services consisted of subsurface exploration, laboratory testing, and foundation recommendations for the structure.

New Hanover County Schools Northern Transportation Center / Wilmington, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for a new school bus storage and transportation complex for New Hanover County Schools, located on Dairy Farm Road in northern New Hanover County. The new facility was constructed on heavily wooded property with very soft subgrade soils and shallow groundwater issues, requiring extensive drainage and undercut/replacement to improve the subgrades for expansive asphalt pavements and stormwater features. Services consisted of subsurface exploration, laboratory testing, and foundation recommendations for the structure, along with pavement and subgrade recommendations for the large bus parking and driveways, earthwork considerations for underground utilities, and stormwater management features.

NE Brunswick Regional Wastewater Transmission Facilities Upgrades / Navassa, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for the upgrade and expansion of sewer transmission force main facilities for Brunswick County, including several miles of new direct bury pipeline, as well as various trenchless roadway and creek/river crossings (directional bores). Services included subsurface exploration, field engineering, soil laboratory testing, corrosivity evaluation, and a geotechnical engineering report.

Brunswick County Public Utilities, Proposed NW WTP Upgrade / Navassa, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for upgrades to an existing water treatment plant in Brunswick County. Upgrades to the plant included various new building structures (chemical storage), four-million-gallon ground supported tank (200-foot-diameter clarifier), holding basin, parking/driveways, and underground piping. Services included subsurface exploration, field engineering, soil laboratory testing, foundation and excavation recommendations, and a geotechnical engineering report.

NE Interceptor, Segment 1 Improvements (Kenan Creek) / Wrightsville Beach, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for improvements to the Wrightsville Beach portion of the NE Interceptor project, including an Engineer's Certification for a directional bore to cross Kenan Creek. Services included subsurface exploration, field engineering, soil laboratory testing, and a geotechnical engineering report.

NE Interceptor Northside Force Main (Smith Creek) / Wilmington, NC

Project Manager and Geotechnical EOR responsible for providing geotechnical engineering services for improvements to the Wilmington portion of the NE Interceptor project, including an Engineer's Certification for a directional bore to cross Smith Creek. Services included subsurface exploration, field engineering, soil laboratory testing, and a geotechnical engineering report.

Mark E. Landis, PG, LG, PE

SENIOR REVIEW



EXPERTISE

Dam Design, Geotechnical Evaluations, Construction Management, Soil Improvement, Coal Ash Pond Dike Enhancement, Geology, Geophysics, Hydrogeology, and Landfill Design

EDUCATION

Master of Civil Engineering, Civil Engineering,
North Carolina State University

Bachelor of Science, Geology,
University of North Carolina Chapel Hill

RISK COURSES

FERC 2-day Short Course / Portland, OR (2016)

USACE 2-day Short Course / Denver, CO (2017)

REGISTRATIONS

Professional Geologist / VA

Licensed Geologist / NC

Professional Engineer / NC, SC, VA

CERTIFICATIONS

OSHA - Confined Space Operations/Safety

AFFILIATIONS

ASDSO

AEG: Former Carolinas Chairman

NCBLG: Former Chair

USSD: Foundation Committee

YEARS WITH SCHNABEL/TOTAL

20/43

Mark is a principal geotechnical engineer and Schnabel's Dams and Levees Business Unit Design and Quality Leader, with more than 43 years of experience on projects involving geotechnical engineering; geological and hydrogeological evaluations; geophysics; design; construction; and rehabilitation for dams, dikes, major earthworks, and water resource projects. He has performed evaluations, design, and routine dam inspections for earthen and concrete (conventional and RCC) dams including evaluations, design, and construction of grout curtains, secant walls, sheet piling, slurry walls and other cutoff and seepage mitigation technologies in coastal plain settings, karstic, sedimentary, metamorphic, volcanic, and igneous rock geologic environments. Mark's recent focus has been associated with investigations and concept reviews of new hydroelectric pumped storage projects across the country. In addition, he has participated in reviews and PFMA's on IEPR/SAR teams and senior reviewer for USACE, USBR, BIA, and FERC (IC) projects. With his design and construction team, Mark managed the completion of the new Cobbs Creek Regional Water Supply Dam, one of the largest offline pumped storage projects on the east coast.

Virgil R. Hazelett Reservoir at Cobbs Creek / Columbia, VA

Project Manager and Engineer of Record for this new offline storage reservoir from the James River. The dam is 4,850 feet long and 160 feet high, and includes 3,200,000 cy of zoned earth fill, a 160 foot-high reinforced concrete inlet/outlet tower, and two saddle dikes for the 1,100-acre reservoir. Seepage controls include a double-row grout curtain in the rock foundation and a slag cement, cement-bentonite slurry wall in the overburden. Extensive seepage modeling was performed to evaluate other rim conditions that could lead to seepage loss. This reservoir was filled from pumping from the James River during high flows and during drought or high water demand, water will be released as a river flow augmentation for water supply for several counties surrounding Henrico County. Our dam design team performed all geotechnical, geological, and geophysical investigations; prepared the design drawings and specifications; and prepared the permitting package to Virginia DCR. Schnabel managed construction quality assurance and performed QA/QC testing and monitoring of dam construction. Schnabel also monitored the grout curtain and slurry wall installations. Schnabel performed the geotechnical investigations for the pump station adjacent to the James River, the intake in the James River, and pipeline conveyances to the reservoir, which were designed by ARCADIS.

Mark managed over 30 personnel in all aspects of the design of the dam including structural, hydrological, hydraulic, geotechnical, and geological. He led the alternatives evaluation and value engineering efforts to address cost saving measures while meeting regulatory and site geological constraints. He managed construction and QA personnel for the seven-year construction period. He assisted in the Potential Failure Mode Analysis (PFMA) on the 60% design level and adjusted design components to address identified significant failure modes. He also provided senior geotechnical review for the investigations for the pump station, intake, and pipeline from the James River to the dam.

Mark E. Landis, PG, LG, PE

SENIOR REVIEW

Hope Mills Lake Dam / Hope Mills, NC

Project Manager and Engineer of Record. Schnabel was responsible for designing and rebuilding a failed labyrinth structure designed by others. The dam was constructed in 2008 and failed in June 2010. The town selected Schnabel and ASI Constructors, Inc. as the design-build team. Mark managed all design aspects of demolition of the old dam, design of the new structure, and construction of the new zoned earth dam and labyrinth spillway. The dam consists of a five-cycle labyrinth weir with earthen tie-outs and a soil-cement-bentonite slurry wall to cutoff seepage through the foundation irregularities of the old stream channel. The project received the 2018 ASDSO National Rehabilitation Project of the Year award.

Boiling Springs Lake Dams / Boiling Springs, NC

Senior Technical Reviewer. Mark reviewed 60% and 90% designs for the rehabilitation and re-construction of one large dam and three ancillary dams that were destroyed during Hurricane Florence. The upstream dams were each breached and will be reconstructed of earthfill and drop inlet structures. The main dam is the centerpiece of Boiling Springs and will require a seepage cutoff wall into semi-karstic foundation, shear walls in the uppermost silty sands, and reconstruction of the earthen dam and drop inlet spillway. Design is complete and construction began in summer 2023. Mark is providing Senior Engineering and technical consultation during construction.

Woodlake Dam / Moore County, NC

Senior Reviewer for the emergency evaluation and breach design of the old spillway system at Lake Sur in Moore County, North Carolina. The spillway at the project site was severely damaged during Hurricane Matthew requiring the state to provide mandatory evaluation of 600 residents downstream. The state requested our assistance to evaluate the condition of the spillway after the lake levels were drawn down, and subsequently hired Schnabel to provide a breach design in the spillway. Mark provided owner and state coordination and senior review over all aspects of design and construction. The spillway was demolished and a riprap lined channel was constructed to provide safe passage of the PMF storm event. Schnabel performed geotechnical evaluations for a new five-cycle labyrinth spillway. Construction began in 2025 and Mark is providing senior consultation.

Duke Energy Roxboro Afterbay Dam / Person County, NC

EOR and Project Manager. Mark managed the investigation and design for a new auxiliary spillway and rehabilitation of the existing principal spillway. He completed the geotechnical investigation including borings, Packer testing, and seismic refraction. Design includes a 10-cycle labyrinth spillway with a 350-foot-wide footprint and 95-foot-deep cycles to provide additional capacity for the design storm. Mark evaluated the principal spillway for structural stability of the four Tainter gates and global stability of the concrete bays. The principal spillway evaluation included rope access inspections, dive inspections, concrete coring, and shear wave analysis of the concrete. Construction began in summer 2023. Mark is providing engineering consultation for the 48-month long construction period ongoing.

Bureau of Reclamation Folsom Dam / Folsom, CA

Member of the Consultant Review Board (CRB) for the USBR modifications to the Folsom Right Wing Dam North Fork Ditch Bypass Modification project to mitigate PFMs related to internal and contact erosion along an old, abandoned conduit. Mark provided reviews at 60 and 90% leading to the final documents for construction.

Bureau of Reclamation Kachess Dam / Kittitas, WA

Member on the CRB for the USBR modifications to the Kachess Dam Seepage Risk Reduction Modification project to mitigate PFMs related to internal and contact erosion along the outlet works conduit. Mark provided onsite review during initial construction and again at completion.

Graham Elliott, PhD, PE, M. ASCE, CEng MICE

GEOTECHNICAL ENGINEERING LEAD



EXPERTISE

Geotechnical Engineering

EDUCATION

PhD, Postgraduate Research Institute for Sedimentology, University of Reading

Master of Science, Soil Mechanics and Environmental Geotechnics, Imperial College of Science, Technology & Medicine, University of London

Bachelor of Science (Hons), Geography, University College of Swansea

REGISTRATIONS

Professional Engineer / NC, CO, DE, FL, GA, SC, TN, TX, VA, WA

Chartered Civil Engineer CEng

MICE

AFFILIATIONS

MASCE, MICE, DFI, ASTM

Georgia ACEC / GDOT GPTQ Bridge Subcommittee (2023 - current)

ASCE Geo-Institute Georgia Chapter, Chair (2024 - current), Treasurer (2022 - 2024)

International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) Technical Committee 303 - Floods - Coastal and River Disaster Mitigation and Rehabilitation (2026-Current)

Member, Editorial Advisory Panel for Proceedings of the ICE: Geotechnical Engineering (2009 - 2012)

Institution of Civil Engineers Representative for the Southeast Region of the USA (2013 - 2016)

YEARS WITH SCHNABEL/TOTAL

8/27

Graham has over 27 years in geotechnical engineering practice, with a focus in water and transportation infrastructure. He has served as lead geotechnical engineer on major projects and has led subsurface exploration programs on land and over water in various geological conditions. Graham has provided geotechnical design and advice on embankment dam projects, involving expansive clay, dispersive clay, lime stabilization, aeolian sand, soil cement, slope stability and seepage analyses, filter design, ground improvements, seepage control barriers, grouting, trench drain systems, and geotechnical instrumentation and monitoring. His work has been performed under traditional and alternative delivery forms of procurement. For the prior 18 months, Graham has led Schnabel's team for the geotechnical/geostructural exploration and design of the roller-compacted concrete buttress and interlocking pipe pile retaining walls for the reconstruction of I-40 in the Pigeon River gorge in western North Carolina, following Hurricane Helene in September 2024.

Lower Little Tallapoosa River Watershed Structure No. 25A (Indian Creek) / Carroll County, GA

Principal, Lead Geotechnical Engineer. Responsible for the leadership, senior review, and technical oversight of the geotechnical subsurface exploration, laboratory testing, and geotechnical design analyses for the design of a new 120 foot-high earthen embankment dam in the Piedmont physiographic province of west Georgia. Planned a program of SPT borings, vertical and inclined rock cored borings, optical televiwer, water pressure testing, test pit explorations of potential borrow sources, and geophysical surveys to identify depth to rock and rippability characteristics. Performed pressuremeter tests to evaluate stiffness of the soils to inform settlement analyses. Led preparation of the Soil Mechanics Report (SMR) per NRCS TR 210-60 requirements.

USACE Weston Dam Improvements Project - Design of Construction Dewatering / Fort Jackson, Columbia, SC

Engineer of Record for temporary dewatering design. Construction dewatering required for a deep open cut excavation through a toe berm of an existing embankment dam founded on sandy soils. The excavation was required to install a new seepage control drainage system. Design tasks included subsurface exploration, geotechnical laboratory testing, seepage modelling, and preparation of plans and specifications for a temporary wellpoint dewatering system in "Sand Hills" geology under artesian conditions. Provided responses to USACE comments (Wilmington district and Risk Management Center) and geotechnical special inspections during construction. Monitoring of drawdown, piezometers, flow rates and engineering considerations for improved system operation.

Afterbay Reservoir Improvements - Abutments for Temporary Access Bridge / Confidential Site

Senior Geotechnical Reviewer. Abutment design for a temporary bridge truss to span a river downstream of the existing spillway. Reviewed the subsurface exploration and recommended additional SPT borings and laboratory testing to characterize the soft compressible clayey soils on the left bank. Conceptualized a Column Supported Embankment (CSE) using timber piles and a Load Transfer Platform (LTP), with a

Graham Elliott, PhD, PE, M. ASCE, CEng MICE

GEOTECHNICAL ENGINEERING LEAD

geogrid reinforced embankment and a GRS abutment. Evaluated global stability, bearing capacity, settlement, LTP design, and timber pile design per AASHTO LRFD code requirements. Reviewed the contractor's submittal for timber piles. Provided advice on revisions to the layout of the abutments to provide adequate turning radii for construction truck traffic to access the bridge. Geotechnical special inspection performed during the installation of test piles. Inspected the abutments during construction.

NCDOT I-40 Pigeon River Gorge Reconstruction, Hurricane Helene / Haywood County, NC

Principal-in-Charge, Senior Reviewer, and an Engineer of Record, for permanent geostructural designs to reconstruct over five miles of I-40 in the Pigeon River Gorge that was devastated by extreme flooding during Hurricane Helene in September 2024. This mega-scale emergency project was let under a CM/GC procurement. Graham's leadership of Schnabel's team includes the following responsibilities:

- Team organization, scoping, budget, and negotiation of the subconsultant agreement during the fast-paced pursuit phase, and throughout the post-award during scope changes. Principal point-of-content for Schnabel's teaming with the Prime A/E firm project executives.
- Coordination with NCDOT leadership across multiple units, including Division 14, Materials and Tests Unit (M&T), Geotechnical Engineering Unit (GEU), Structures Management Unit (SMU), Hydraulics Unit, and Construction.
- Technical approach for rapid subsurface exploration, comprising geophysics, air-track drilling of rock probes, geotechnical coring, televiewer logging, field reconnaissance, and laboratory testing.
- Implementation of an in-house GIS-based data management system (MORTAR) to integrate diverse data sets along the project alignment to facilitate rapid design decisions.
- Established the Basis of Design (BOD) criteria for the project, incorporating NCDOT's resiliency goals to withstand future extreme event loading from high velocity flows, debris impact, rapid drawdown, and scour.
- Design development of geostructural retaining walls comprising Interlocking Pipe Piles (IPP) with post-tensioned grouted anchors, and a RCC buttress.
- Responses on Value Engineering (VE) proposals by a third-party panel to comply with FHWA funding requirements.
- Senior Review of multiple design plan submittals, and calculation packages.
- Development of Project Special Provisions.
- Coordination of an internal Independent Technical Review (ITR) panel as part of the project QA/QC system.
- Development and delivery of training courses on RCC, IPP and Grouted Anchors to inform NCDOT and the third party CEI team on these elements of the project.
- Responses to Requests for Information (RFI) during the construction of the RCC Test Section and Pilot Program.
- Review of the Contractors' Shop Drawings for the IPP and RCC project elements.

SELECTED PUBLICATIONS

Elliott, G., Dodd, B.W., Gibson, C.W.W. and Wargo, R.H. (2026) Wellpoint dewatering at Weston Lake Dam, Fort Jackson, South Carolina. In: Montgomery, J. and Cox, B. (Eds) *Selected Papers from Sessions of Geo-Congress 2026, Salt Lake City, Utah, March 9 -12, 2026, ASCE Geotechnical Special Publication*, 378, 509 – 520.

Elliott, G., Landis, M., Shull, B.P., and Wilde Grant, K. (2026) Timber piled load transfer platform and GRS abutments on soft ground for temporary panel Bridge. In: Montgomery, J. and Cox, B. (Eds) *Selected Papers from Sessions of Geo-Congress 2026, Salt Lake City, Utah, March 9 -12, 2026, ASCE Geotechnical Special Publication*, 377, 252 – 265.

Elliott, G., Wood, J.T., and Brown, E.R. (2026) Anchored bridge abutments and soil nail walls in Upper Coastal Plain soils: College Street Bridge, Macon, Georgia. In: Montgomery, J. and Cox, B. (Eds) *Selected Papers from Sessions of Geo-Congress 2026, Salt Lake City, Utah, March 9 -12, 2026, ASCE Geotechnical Special Publication*, 377, 287 – 300.

Elliott, G., Dean, J.T., and Monroe, J.S. (2022) Rebuilding dams in the Sand Hills: challenges of seepage control and embankment stability. *Proceedings of the 6th International Conference on Grouting and Deep Mixing, New Orleans, Louisiana, January 15 – 18, 2023. Deep Foundations Institute*, 474 – 483.

Robert Indri, PE

STRUCTURAL ENGINEERING LEAD



EXPERTISE

Dam Engineering, Structural Engineering,
Design and Inspection of Steel and Concrete
Hydraulic Structures

EDUCATION

Bachelor of Science, Civil Engineering,
New Jersey Institute of Technology

REGISTRATIONS

NCEES Holder

Professional Engineer / NC, AK, AZ, ID, IN, KY,
MI, MT, OR, TN, TX, VA, WA, WI, TN

AFFILIATIONS

ASDSO, NWSHA, USSD, Vice Chair for the USSD
Hydromechanical Committee

YEARS WITH SCHNABEL/TOTAL

21/22

Robert is a dam engineering specialist with expertise in the analysis, design, inspection, and construction of hydraulic structures and has been the lead design engineer and Engineer of Record for a variety of dam rehabilitations and new dam projects. He is a FERC-approved Independent Consultant and has participated in numerous dam safety inspections, PFMA's and Risk Analysis workshops. In addition to his structural specialization, Rob has performed investigations, alternative analyses, general civil layout, cost estimating, scheduling, and project management in support of dam design and construction projects. His construction phase service contributions include contractor support, construction oversight, contract administration, and management of field personnel. Prior to becoming an engineer, Rob worked in the heavy construction industry for 10 years; his experience with construction means and methods has been invaluable to Schnabel's engineering work.

Virgil R. Hazelett Reservoir at Cobbs Creek / Columbia, VA

Provided structural review and constructability review for the design of the outlet riser and conduit, and the principal spillway and bridge. The outlet riser consists of a 150-foot-tall, rectangular, dry tower used for filling of the reservoir and for withdrawals. Seismic design of the tower considered updated seismicity criteria as a result of the Mineral Springs, Virginia earthquake in 2011. The principal spillway consists of a reinforced concrete drop inlet with chute.

Confidential Pump Storage Project / Southwest, United States

Co-Engineer of Record (structural) for the 60% design development of a new pump storage dam for the upper reservoir in the southwest United States.

Lake Townsend Dam / Greensboro, NC

Design Engineer. Responsible for the replacement of a 35-foot-high water supply dam for the city. The existing gated spillway exhibited severe ASR and had insufficient hydraulic capacity. The proposed spillway consists of a 7-cycle labyrinth with a 20-foot-high weir and 42-foot-wide cycles. Performed the structural analysis and reinforced concrete design of the proposed structure using finite element modeling. Additional contributions included site layout, grading design, development of construction sequencing and the conceptual control of water plan, development of the construction cost estimate, and design of the erosion and sediment control system.

North Fork Dam Spillway Alternatives, Conduit and Gate Evaluations, and EAP Training / Asheville, NC

Assistant Project Manager and Lead Design Engineer. Responsible for the evaluation of the spillway capacity deficiencies and the inspection and structural evaluation of the existing spillway gates and outlet works conduit at North Fork Dam. The dam is a high hazard, 150-foot-high earth embankment dam located in the mountains of North Carolina. North Fork Reservoir serves as the primary water supply for the city and surrounding communities. Work included evaluating alternatives to address the inadequate spillway capacity, structural evaluation of the outlet works conduit, evaluating the three spillway radial gates by performing an inspection and structural analysis of the gates, and conducting Emergency Action Plan training for staff.

Robert Indri, PE

STRUCTURAL ENGINEERING LEAD

City of Burlington Dams Remediation Design / Burlington, NC

Assistant Project Engineer and Lead Design Engineer. Responsible for the remediation of two water supply dams for the city: Stony Creek Dam and Lake Cammack Dam. Both dams were unstable for the design storm. Remediation features included post-tensioned anchors at both sites. At Stony Creek Dam, inadequate spillway capacity was addressed by reinforcing the left and right earth abutments. The right abutment reinforcing consisted of a 4-foot-diameter secant pile wall reinforced with steel beams socketed into rock. The left abutment was reinforced with a concrete gravity section. Other miscellaneous deficiencies were in the design including retrofitting an existing conduit at Stony Creek to serve as a low-level outlet, and installing a drain system behind the downstream training walls at Lake Cammack.

North Fork Dam Spillway and Embankment Improvements / Asheville, NC

Structural Design Team Leader and Assistant Project Manager. Responsible for a \$30 million spillway capacity, seismic stability, and dam safety rehabilitation design at North Fork Dam. Improvements include addition of a seismic stability berm to both the saddle and main dams; overlay of the existing principal chute spillway; modification of the existing gated spillway control section by replacing the three existing radial gates with fixed crest weirs and a new crest gate; addition of a new 218-foot-wide by 440-foot-long concrete lined auxiliary spillway with a fusegate control section; extension of the outlets work conduit and associated raw water pipeline; and installation of a new, integrated, dam safety monitoring instrumentation.

Lake Townsend Dam / Greensboro, NC

Design Engineer. Responsible for the replacement of a 35-foot-high water supply dam for the city. The existing gated spillway exhibited severe ASR and had insufficient hydraulic capacity. The proposed spillway consists of a 7-cycle labyrinth with a 20-foot-high weir and 42-foot-wide cycles. Performed the structural analysis and reinforced concrete design of the proposed structure using finite element modeling. Additional contributions included site layout, grading design, development of construction sequencing and the conceptual control of water plan, development of the construction cost estimate, and design of the erosion and sediment control system. (June 2005 to December 2010)

Salem Lake Dam Replacement Dam Design / Winston-Salem, NC

Design Engineer. Responsible for the investigation, design, and construction of a replacement water supply dam for the city. The replacement dam consisted of a 50-foot-high mass concrete gravity section with a 200-foot-long, two-stage, stepped spillway, earth embankment tie outs, and a new water supply intake tower and outlet works upstream of the concrete gravity section.)

City of Burlington Dams Remediation Design / Burlington, NC

Assistant Project Engineer and Lead Design Engineer. Responsible for the remediation of two water supply dams for the city: Stony Creek Dam and Lake Cammack Dam. Both dams were unstable for the design storm. Remediation features included post-tensioned anchors at both sites. At Stony Creek Dam, inadequate spillway capacity was addressed by reinforcing the left and right earth abutments. The right abutment reinforcing consisted of a 4-foot-diameter secant pile wall reinforced with steel beams socketed into rock. The left abutment was reinforced with a concrete gravity section. Other miscellaneous deficiencies were in the design including retrofitting an existing conduit at Stony Creek to serve as a low-level outlet, and installing a drain system behind the downstream training walls at Lake Cammack.

City Lake Dam Replacement Design / Guilford County, NC

Structural Senior Reviewer. Schnabel is under contract to design a replacement dam for the existing City Lake Dam to meet current NC DEQ Dam Safety requirements. City Lake Dam and the associated reservoir is an important component of the City of High Points water supply system. Schnabel's proposed alternative is replacing the existing dam with a Roller Compacted Concrete (RCC) dam immediately downstream of the existing dam with a piano key weir spillway on top of the proposed RCC gravity structure.

Michael T. Chilson, PE

HYDROLOGY AND HYDRAULICS LEAD



EXPERTISE

Dam Engineering and Assessment, Risk Management, Stormwater Management, Erosion and Sediment Control, NPDES Permitting

EDUCATION

Master of Science, Civil Engineering,
Florida Atlantic University

Bachelor of Science, Biology
(Minor in Environmental Science),
Northern Illinois University

REGISTRATIONS

Professional Engineer / NC, FL, GA, MN

CERTIFICATIONS

GSWCC Level II Certified Design Professional
Georgia Safe Dams Program Engineer of Record
MSHA Part 46 Certified

YEARS WITH SCHNABEL/TOTAL

1.5/21

Michael is a Senior Associate Engineer with 21 years of experience, specializing in hydraulic structure design including spillway and dam rehabilitation. He has direct work experience in the design and evaluation of earthen spillways, concrete chutes, RCC and labyrinth weirs. Additional work experience includes risk management and inspection of dams, watershed analysis, stormwater system design, streambank stabilization, and environmental permitting. He brings an expert knowledge of hydrologic and hydraulic processes and many modeling software packages, and a working knowledge of geotechnical processes in dams and embankment design.

NRCS East Fork Clarks River Structure 28A / Marshal County, KY

Hydraulic Lead. Michael led the hydraulic modeling effort in support of the design of a reinforced concrete cutoff wall for an earthen spillway channel. Dam No. 28A experienced severe rainfall and spillway activation resulting in erosion and breaching in 2025. Services provided in support of repair and cutoff wall design included spillway breach modeling using the NRCS WinDAM model employed to understand the erodibility of site soils and predict the required depth and performance of a proposed buried cutoff wall to be constructed at the spillway control section.

Manatee County Lake Manatee Dam / Manatee County, FL

Technical lead for the hydrologic and hydraulic assessment of Manatee Lake Dam in support of long-term maintenance and risk assessment. Services Michael provided include the development of a watershed runoff, reservoir routing and spillway hydraulic models used to evaluate the operational circumstances of the earthen fuse plug spillway system. The project in coastal Florida presented a unique opportunity to evaluate a low-gradient watershed, reservoir and spillway systems with model calibration to the three most recent hurricane events (Debbie, Irma and Ivan). Michael presented the project as part of the 2026 Florida Dam Safety Technical Seminar.

City of Atlanta, Niskey Lake Water Works Dam Rehabilitation / Atlanta, GA

Project Manager and Design Engineer. This was a design-build project partnering with Ruby Collins. Niskey Lake Dam is a 35-foot-high, high hazard earthen embankment dam built in 1929 and regulated by the State of Georgia. Michael's rehabilitation design included a 66-foot-wide concrete overtopping spillway through a series of six large cast-in-place culverts which allowed passage of a residential street over the dam crest. Services provided included full design for construction, geotechnical investigation, emergency action plan, operations and maintenance plan, and permitting with the Georgia Safe Dams Program, GA EPD NPDES and SBV, and the USACE 404. Construction was completed in July 2024.

Tennessee Valley Authority Beech River Watershed Dams/ Henderson County, TN

Project Manager for the evaluation of earthen spillways at four dams in the Beech River watershed operated by TVA: Beech, Pine, Redbud, and Pin Oak Dams. The investigation stage included a geotechnical investigation with SPT bore holes and geophysics investigation using multi-channel surface waves (MASW). The analysis stage included modeling using the USDA WinDAM program and HEC-RAS 2D. Follow-up work in 2022 and Phase 1 design in 2023 included spillway breach

Michael T. Chilson, PE

HYDROLOGY AND HYDRAULICS LEAD

hydrograph development for risk analysis, participation in the SQRA process and development of concept-level spillway stabilization measures. As part of the hazard assessment, developed spillway breach hydrographs using USDA WinDAM.

Phase 2 design for construction followed in 2024. Michael served as the project manager and design engineer for Phase 2 design and preparation of drawings for construction which included a spillway regrading plan, articulating concrete block lining and various other site stormwater management improvements. Used a combination of HEC-RAS 2D and SpillwayPro as the basis of design. Construction is ongoing in 2026.

Orchard Park Green Lake Dam / Orchard Park, NY

Project Manager and Design Engineer. Michael completed the hydraulic design and prepared a design for construction of a labyrinth weir retrofit to a 100-year-old earthfill dam. The final design was a 65-foot-wide, four-cycle labyrinth weir and concrete chute spillway. Construction was completed in 2017. Services were provided to the City as a subconsultant to Kheops.

Gwinnett County DWR Lake Claiborne Sediment Analysis / Gwinnett County, GA

Project Manager. The County dredged and rehabilitated Lake Claiborne in 2011. Ten years later it was found that the lake had once again filled with sediment. Services performed include a historic desktop analysis evaluating past land disturbance in the watershed, field stream walk documenting instances of ongoing bank erosion, RUSLE modeling and HEC-RAS SIAM modeling evaluating current sediment load, 3D flow modeling through the reservoir to evaluate sediment distribution in the lake, and development of short-term and long-term maintenance and improvement plans. Completed work included a sediment removal and rehabilitation plan for returning the site to its pre-existing 2011 condition.

Georgia Soil & Water Conservation Commission and NRCS Dam Rehabilitation Program / Statewide

Project Manager and Technical Lead. Served as Project Manager for the full assessment of 14 NRCS dams in 2018, 2019 and 2020. Work included field inspections, H&H evaluations for state and NRCS compliance using the NRCS SITES program, hazard classifications using BOSS DAMBRK, and 1D and 2D HEC-RAS. Developed conceptual rehabilitation options including spillway widening, RCC overtopping protection and labyrinth weirs.

American Electric Power Enhanced Risk Assessment / OK & AR

Technical Lead and Subject Matter Expert. Performed an enhanced risk assessment (ERA) and potential failure mode analysis (PFMA) per FERC's Chapter 14 Engineering Guidelines for a coal ash storage facility and two large cooling lakes. The process involved detailing the history, construction and operation of the units, detailed site inspections, and onsite working sessions with site personnel. The achieved goal was to identify and document the potential weaknesses in the operation, management, and safety of the systems, and identify improvements to minimize the ultimate risk of operation.

J. Hawkins Gagnon, LEG, PG, LG

GEOLOGY LEAD



EXPERTISE

Engineering Geology, Geotechnical Investigations, Risk Analyses, Project Management, 3D Geologic Modeling, Hydrogeology

EDUCATION

Master of Science, Geology, UNC Wilmington

Bachelor of Science, Geology, UNC Chapel Hill

REGISTRATIONS

Licensed Engineering Geologist / WA

Professional Geologist / GA, KY, TX, VA, WA

Licensed Geologist / NC

CERTIFICATIONS

SPRAT Level 1: Society of Professional Rope Access Technicians

MSHA: Mine Safety Course

OSHA: Hazardous Waste Operations and Emergency Response (HAZWOPER)

AFFILIATIONS

AEG, ASCE, ASDSO

YEARS WITH SCHNABEL/TOTAL

14/14

Hawkins is a licensed engineering geologist and project manager whose wide range of work makes him essential for addressing the diverse needs of Schnabel's clients. Hawkins specializes in geotechnical investigations, geologic site characterization, and risk assessments (PFMA and L2RA) for dam and hydropower projects with an emphasis on pumped storage hydropower. Hawkins is currently managing investigations for the proposed Lewis Ridge Pumped Storage Hydropower Facility in southeastern Kentucky and ongoing work at the Bath County Pumped Storage Station in Virginia. Hawkins has authored and managed the execution of several FERC-required Drilling Program Plans (DPP)s including the proposed Auxiliary Spillway Replacement at the Hardy Hydroelectric Plant in Newaygo, Michigan. He has performed several kinematic studies for rock blocks in existing and proposed dam foundations. He was the primary author of a DPP to investigate the susceptibility of Wells Dam on the Columbia River to internal erosion and liquefaction. Hawkins and his team have created several 3D geologic models for critical infrastructure projects. He has experience performing difficult rope-access programs and controlled-stage grouting. He has worked for clients in the hydropower, power and energy, mining, and tunneling industries.

Confidential Project / Southwest, US

Senior Associate Geologist. Hawkins is the project manager for the design of two new 300-foot-tall concrete-faced rockfill dams (CFRD), as well as a roughly 30-foot-tall rockfill saddle dam, and a labyrinth spillway. These project components are part of a new 2,000 MW pumped storage hydropower facility in the southwestern United States. Hawkins' primary role is to manage Schnabel's design team and to coordinate with other design leads, the contractor, and the Owner in this design-build project. Hawkins' other role is to serve as a geology subject matter expert (SME) for the design.

Rye Development Proposed Lewis Ridge Pumped Storage Hydropower Facility / Middlesborough, KY

Senior Associate Geologist. Responsibilities include project management, execution of a geotechnical investigation, geologic field reconnaissance, site characterization, and project optimization for this proposed pumped storage hydropower facility. Tasks include sonic drilling, rock coring, packer testing, instrumentation installation, seismic refraction to identify top of rock, geologic field reconnaissance for site optimization and reservoir rim stability analyses, and Surface Deformation Prediction System (SDPS) analyses to estimate potential settlement and strain as a result of coal mining in the foundation. The proposed Lewis Ridge Project will include two new reservoirs connected by steel penstocks, laid on the ground surface, and a powerhouse along the shoreline of the lower reservoir.

Yadkin Hydroelectric Project Narrows Development (FERC No. P-2197) Comprehensive Assessment / Montgomery and Stanley Counties, NC

Geology SME. The project is a concrete structure that consists of a left non-overflow section, bypass spillway, intake and penstocks, powerhouse and tailrace, main dam and spillway, and a right non-overflow section. Hawkins' role was to review, interpret, and communicate geologic conditions at the site and within the foundation of the

J. Hawkins Gagnon, LEG, PG, LG

GEOLOGY LEAD

dam. Hawkins participated in the site field inspection, PFMA workshop, and L2RA workshop in person. He helped develop and estimate PFMs and performed minor studies to inform nodal estimates for the L2RA.

Alabama Power Logan Martin Dam Comprehensive Assessment (FERC No. 2146) / Talladega County, AL

Geology SME for this FERC comprehensive assessment. Hawkins' role was to characterize the karst foundation. Hawkins participated in the site field inspection, PFMA workshop, and L2RA workshop in person. He helped develop and estimate PFMs and performed minor studies to inform nodal estimates for the L2RA. The project consists of a concrete gated spillway section, integral intake section supplying water for the powerhouse, concrete non-overflow sections and earth embankments founded on karst. The east embankment is about 4,650 feet long and the west embankment is about 870 feet long, maximum embankment height is about 97 feet, and the dam is considered high hazard.

Lower Little Tallapoosa River Watershed Structure No. 25A (Indian Creek) / Carroll County, GA

Associate Geologist. Hawkins' responsibilities included senior review of geotechnical data report, geologic mapping of rock outcrops downstream of the existing dam, senior review of rock core logs, investigation support, and general design support with regards to geologic conditions. This proposed 120-foot-tall, pumped storage water supply dam will provide water storage for Carroll County.

Virgil R. Hazelett Reservoir at Cobbs Creek / Columbia, VA

Project Geologist. Hawkins' responsibilities include geologic field mapping of the rock foundation prior to and during construction, geotechnical drilling oversight during site investigations, in-situ field testing, and reporting for this newly constructed pumped storage water supply dam that is providing storage for Henrico County via pumping to and from the James River.

Restoration of Hope Mills Dam / Hope Mills, NC

Engineering Geologist. Hawkins was responsible for exploration planning, logging soils, sample collection, in-situ testing, well installation, and report writing.

Duke Energy Roxboro Station – CCP ROX-505 Labyrinth Weir Project / Roxboro, NC

Senior Geologist. Hawkins' responsibilities include planning, project management, and reporting for two geotechnical investigations on the site. The first geotechnical investigation was performed in the left abutment of the existing dam to inform the design of a new labyrinth weir. The second investigation is being performed in the existing gated concrete gravity spillway to evaluate in situ conditions and to design rehabilitations, should they be necessary.

Little River Settlement Evaluation and Little River Dam Evaluation / Durham, NC

Project Geologist. Hawkins' responsibilities include the planning, execution, and reporting of two geotechnical investigations. The first was focused on characterizing and quantifying settlement of an existing embankment dam through the implementation of geotechnical borings, in situ testing, and the installation of probe extensometers, survey monuments, and a new survey control point. The results of this investigation have led to a second ongoing investigation to further evaluate potential seepage within the embankment.

Lake Brandt Piezometer Installation and Seepage Analysis / Greensboro, NC

Project Geologist. Hawkins' responsibilities include planning a geotechnical investigation and instrumentation installation program for this existing dam.

North Fork Dam Spillway Upgrade / Asheville, NC

Senior Staff Geologist. Hawkins' responsibilities included planning and observation of a drilling program for a proposed spillway and preparation of a geotechnical data report.

Kelby Sommer, PE

HYDROMECHANICAL LEAD



EXPERTISE

Pump Stations, Hydraulic Structures, Water Supply, Construction Management

EDUCATION

Bachelor of Science, Civil Engineering, University of Idaho

REGISTRATIONS

Professional Engineer / ID, CO, MT, OK, SC, TX, UT

AFFILIATIONS

ASCE, NWAHA, ASDSO, AWWA

YEARS WITH SCHNABEL/TOTAL

11/11

Kelby has spent more than a decade working on hydraulic structures, water supply, facility inspection, and construction management. He has experience in facility planning, intake and pump station siting, hydraulics, hydrology, fish screens, pumps, and pipelines up to 126 inches in diameter. Kelby has led and worked as a team member on a wide variety of water projects, including fish hatchery water supply and distribution; municipal water supply; fish screens and intake structures on rivers, lakes, dams, and reservoirs; and dam outlet works. He also has extensive facility inspection and condition assessment experience for water infrastructure including hydropower facilities, penstocks, pump stations, transmission pipelines, steel and concrete structures, and dams.

City Lake Dam Replacement / High Point, NC

Technical lead engineer for the civil and mechanical design of a new raw water intake tower and dam low level outlet for the replacement of City Lake Dam. The reinforced concrete tower will be integral with the new roller-compacted concrete (RCC) dam. The new 50-foot-tall tower includes two discrete gate wells to supply different raw water pipelines; three, multi-level tee screen intakes with an airburst cleaning system; a gated, low level outlet for the reservoir; and two raw water pipelines in the dam to connect to existing infrastructure downstream of the dam. The tower also includes a gate house, mounted to the top of the tower to house gate actuators, the airburst cleaning system, and instrumentation equipment for control and monitoring of the facility.

Middle South Platte Reservoir Water Conveyance Facilities / Weld County, CO

Lead water conveyance facility design engineer and Project Manager. Responsible for the siting and design of the river intake structures, diversion canal, gravity settling basins, intake and pump station, and a 7.2-mile pipeline to convey water from the South Platte River to a new, 26,000 ac-ft, off-channel water storage reservoir. The siting included coordination with various landowners, the client, and coordination with environmental survey activities. Kelby developed preliminary designs for all features for a range of flows from 30 cfs to 200 cfs. The final pump station configuration will include a canned pump station, with a total connected load in excess of 6,000 hp. The preliminary analysis included construction costs for the alternatives to supplement the owner's economic analysis for final flow rate selections. Kelby also leads the design for the new intake and outlet structure on the new 3-mile-long embankment dam. This reservoir and intake outlet structure will include an infiltration gallery and 25 cfs pump station to capture water stored below grade in the eolian sands at the site.

Wolf Creek Reservoir Feasibility Design/ Rio Blanco County, CO

Senior Engineer for the feasibility design and alternatives analysis for the water supply facilities for a new 90,000 acre-feet water storage reservoir on the White River in Colorado. Kelby conducted site investigations to locate the pumping station and intake and examine potential pipeline routes. He developed initial concepts for a 400 cfs intake, gravity settling basins, and pumping station to convey water from the White River through a 96-inch diameter pipeline to the new reservoir.

Kelby Sommer, PE

HYDROMECHANICAL LEAD

Arcadia Lake Intake and Pump Station / Edmond, OK

Project Engineer for the design of a new raw water intake and pump station for the City of Edmond, Oklahoma. The facility consisted of three 60-inch diameter microtunnel intakes, each with a 72-inch square isolation gate, a 50-foot diameter by 78 foot-deep wet well shaft, and a 30 mgd, 1,050 hp pump station, with the ability to upgrade to 65 mgd and 2,000 hp at the buildout capacity of the facility. Kelby designed site civil features for the paving, grading, and drainage. He also provided the mechanical and hydraulic design of the pumps, piping, gates, intake tee screens and appurtenant equipment. The design required analysis and wide-ranged design conditions to ensure the facility could accommodate larger future equipment to meet increased water demands for the city and accommodate fluctuations in the reservoir water surface elevation. Kelby also performed hydraulic design for portions of two 42-inch diameter HDPE discharge pipelines to connect with the main transmission lines to the City's water treatment plant.

Lake McMurtry Intake and Outfall / Stillwater, OK

Project Manager for the intake rehabilitation design and the new outfall structure design at the City of Stillwater's Lake McMurtry. Kelby was the lead engineer for the rehabilitation design of a 24 million gallon per day (MGD) intake tower in Lake McMurtry. The design included hydraulic analysis, trash rack design, gate design, and development of engineering drawings and technical specifications for the rehabilitation work. Elements of the work required design for underwater construction activities, and provisions for mitigation of invasive mussel impacts. The new, submerged outfall structure design included design for various pipe materials, backflow prevention, buoyancy & uplift protection, and hydraulic design for a riprap energy dissipation basin and rundown channel. The selected approach considered limited ability to dewater, and provided methods for constructing the facilities in the wet.

Sacramento River Water Treatment Plant Intake / Sacramento, CA / 2022 - Present

Project Engineer for the surface water intake expansion planning for the Sacramento River Water Treatment Plant. The work involved the development and evaluation of alternatives to increase the capacity of the City's raw water supply from an existing capacity of 160 mgd to 300 mgd. Alternatives include the evaluation of different wet well and pump station locations along Interstate 5 in Sacramento. Schnabel prepared preliminary design drawings for a submerged cylindrical Tee screen intake set along the bed of the Sacramento River and a pump station on the river bank, adjacent to a levee. As part of this work, Kelby's responsibilities include intake screen sizing and design, wet well sizing, pump sizing and selection, and preliminary hydraulic analyses for these components.

Dominion Energy Urquhart Station Cooling Water Intake Project / Beech Island, SC

Project Manager and Senior Engineer for the alternatives analysis and design of improvements to the Urquhart Station Cooling Water Intake Structure (CWIS) on the Savannah River. Kelby led the engineering team in the alternatives analysis process to determine the most effective and economical approach to modify the 195 mgd CWIS to meet Clean Water Act Section 316(b) criteria for the protection of aquatic organisms. After completing the alternatives analysis phase, Kelby led the team in the final engineering design of the selected improvements. The design included a new river intake trash rack and automated cleaning rake. Kelby led the design for new traveling water screens (TWS), with 316(b) Best Technology Available (BTA) features for protection of aquatic organisms and a fish return pipeline to return them to the source water. The new TWS system also included a new 1,500 gpm pump station for backwash water and a 1,700 gpm pump station for fish return pipeline water.

Rio Grande Dam Low-Level Outlet Rehabilitation / Creede, CO

Resident Engineer. Kelby served as the resident engineer during construction of this \$22 million project for the San Luis Valley Irrigation District. The work included construction of a new intake structure, shotcrete tunnel lining, a tunnel bypass around an existing gate structure, 126-inch diameter steel pipe placement, and the installation of three new fixed cone valves up to 84 inches in diameter within a new concrete valve house. Kelby's services included the monitoring of concrete mixing and placement, steel pipe welding and installation, review of valve lifting procedures, shop inspection of equipment, and commissioning of the facility. Kelby also reviewed contractor submittals for civil, structural, and mechanical equipment and components for conformance with the contract documents.

Aaron Collins

CONSTRUCTION SERVICES LEAD



EXPERTISE

Construction Management and Oversight,
Dam Design, Site Development, Surveying

EDUCATION

Bachelor of Civil Engineering, Civil Engineering
Technology, Old Dominion University

Associates, Civil Engineering Technology,
Virginia Western Community College

CERTIFICATIONS

ACI: Concrete Field Testing

CSI: Construction Documents Technologist

NRCS: Roller Compacted Concrete

AFFILIATIONS

ASCE, ASDSO, CSI

YEARS WITH SCHNABEL/TOTAL

18/21

Aaron has extensive experience in site layout, contract administration, project management, and cost estimating. He has contributed to several successful design projects, including Cobbs Creek Dam and Hope Mills Dam. Aaron has overseen the construction of several high hazard dams including Deep Creek Dam in Yadkinville, North Carolina; Reidsville Lake Dam in Reidsville, North Carolina; and North Fork Reservoir in Asheville, North Carolina. He is valued as a project representative throughout the dam construction industry for his extensive knowledge of dam construction and specialty in RCC.

Duke Energy Afterbay Auxiliary Spillway / Roxboro, NC

Senior Engineer and Senior Resident Project Representative. Responsible for all civil layout, cost estimating, and bid document preparation for the project. Aaron now oversees construction for the project that went to construction in summer 2023 and is scheduled for completion in summer 2027.

Little River Dam Embankment Settlement and Seepage Improvements / Durham, NC

Senior Engineer responsible for planning, and design of repairs for the City of Durham's Little River Dam at a preliminary design level. Preliminary design repairs include the grouting of cracks within the existing raw water intake tunnel, known seepage issue repairs, concrete ditch repairs, spillway bridge approach repairs and structural sidewall repairs. The final design will be completed in summer 2026.

City of Asheville North Fork Dam / Asheville, NC

Senior Resident Project Representative and Contract Administrator. Oversaw construction of the new \$40 million project that includes a new auxiliary spillway, main dam and saddle dam buttressing, principal spillway repair, and a water main conduit extension. Construction began in the fall of 2017 and concluded in the Summer of 2020.

Town of Hope Mills Hope Mills Dam Rehabilitation / Hope Mills, NC

Assistant Project Manager. Responsible for the site layout, erosion and sediment control design, cost estimating, and construction sequencing for the design of a new labyrinth structure to replace a dam that failed due to improper design and construction. Construction began in March 2016 and was completed in August 2017.

Virgil R. Hazelett Reservoir at Cobbs Creek / Columbia, VA

Project Engineer. Responsible for the site layout, erosion and sediment control design, construction sequencing, and cost estimating for the design of a new 160-foot-high, 3,850-foot-long earth embankment, 1,200-foot-long saddle dam earth embankment, and concrete auxiliary spillway. As construction has been wrapping up, Aaron has worked with the Contractor and other Schnabel staff to complete record drawings so that the dam can be approved for impoundment.

Aaron Collins

CONSTRUCTION SERVICES LEAD

Durham Dams Inspection and Maintenance / Durham, NC

Senior Engineer responsible for planning, inspections, and design of repairs for the City of Durham's two dams. Inspections included the cleaning and survey of the intake tunnel at Little River Dam, a full site survey of Little River Dam, and inspection of seepage issues. Aaron is also responsible for oversight of the installation of buoy systems at both dams and repairs of cracks on the piers. Schnabel recently completed preliminary design of repairs for numerous other items at both dam locations in an ongoing effort to bring the dams up to current standards.

High Point Upper Piedmont Dredging / High Point, NC

Senior Engineer responsible for construction oversight and contract administration for removing sediment from a drainage pond. The dredged sediment took three weeks to remove, and during the process it was necessary to change dredged material disposal locations due to inadequate storage at the previously approved facility. Schnabel was able to facilitate the changes quickly and the second site was approved, saving the client time and money in the process.

Stones Lake Dam / Brevard, NC

Senior Engineer responsible for oversight of the riser repair, sliplining of an existing concrete conduit, and installing an outlet pipe diaphragm. The client, Stone's Lake Property Owners Association, Inc., was pleased with the final product, which was completed in an efficient manner that will stabilize their dam for years to come.

City of Reidsville Troublesome Creek Dam / Reidsville, NC

Resident Project Representative and Contract Administrator. Oversaw construction of the 280-foot-wide concrete reinforced chute spillway. The new spillway was constructed within the footprint of the old spillway and used a two-stage ogee crested control section. Construction began in April 2012 and was completed in March 2013.

Town of Yadkinville, Yadkinville Dam Rehabilitation / Yadkinville, NC

Resident Project Representative and Contract Administrator. Oversaw the remediation of the existing earth embankment. The dam was experiencing heavy seepage at its toe so new drains were installed and a low permeable liner was installed in the reservoir.

City of Durham Williams Terminal Water Treatment Plant Apron Replacement / Durham, NC

Assistant Project Manager. Responsible for the site layout, erosion and sediment control design, cost estimating, and construction sequencing for the design of a new concrete apron, rim wall, and toe wall. The new concrete replaced a deteriorated structure that was showing signs of failure.

SAS Institute, Inc. Goodnight Dam Repair / Cary, NC

Assistant Project Manager. Responsible for the site layout, erosion and sediment control design, cost estimating, and construction sequencing for the repair of an existing reservoir drainpipe and concrete spillway. The work was designed to address erosion under the existing concrete spillway and to create a functioning drain so the existing reservoir can be lowered. The repairs were completed in the winter of 2016.

Andrea P. Gray



Andrea P. Gray, LLC
Attorney at Law

ENVIRONMENTAL PERMITTING AND LAW



EXPERTISE

Environmental Permitting, Local Government Matters, Estate Planning

EDUCATION

Juris Doctor, University of Georgia School of Law

Bachelor of Arts., Economics, Emory University

ADMISSIONS

Georgia Northern District Court

Supreme Court of Georgia

Georgia Court of Appeals

Superior, Magistrate and Probate Courts of Georgia

AFFILIATIONS

Local Government and Environmental Sections of State Bar of Georgia

Walton County Chamber of Commerce

YEARS WITH ANDREA P. GRAY, LLC/

TOTAL

11/ 21

Andrea has been practicing law since 2005. She earned a B.A. in Economics from Emory University in 2002 and her J.D. from the University of Georgia in 2005. After more than a decade with firms focused on local government representation and environmental law, Ms. Gray founded her own firm, Andrea P. Gray, LLC, in 2015.

Through her representation of counties, cities, development authorities, and water authorities, she has extensive experience in navigating government regulations and policy, with particular expertise in permitting under the Clean Water Act for drinking water reservoirs. Andrea provides project management for large-scale water supply initiatives, including reservoirs and direct withdrawals, and has advised on projects across multiple states. She has also guided development authorities through several major economic development projects in the Southeast, including large-scale industrial and data center developments.

ENVIRONMENTAL PERMITTING

Environmental consultant for large-impact Clean Water Act permitting projects including drinking water reservoirs and large commercial developments. Prepare and obtain approval of Reservoir Management Plans. Negotiate with state and federal agencies including U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and the Georgia Department of Natural Resources. Manage legal and technical aspects of permitting projects including: engineering, impacts to streams and wetlands, impacts to cultural resources, and impacts to endangered species. Prepare permit documentation including: alternatives analysis, needs analysis, joint public notice, and comment responses. Prepare and oversee budgets and project schedules. Negotiate purchase of real estate and prepare contracts, closing documents, easements and deeds. Manage professional consultants including engineers, environmental scientists, attorneys, and archeologists. Negotiate mitigation credit purchase agreements and prepare same.

Reservoir Projects

- Indian Creek Reservoir (Carroll County Water Authority)
- Direct withdrawal from Chattahoochee River (Middle Chattahoochee Regional Water & Sewer Authority)
- Yahoola Creek Reservoir expansion (City of Dahlonega)
- Bear Creek Reservoir (South Fulton Municipal Regional Water Authority)
- Glade Farm Reservoir (Hall County)
- Bear Creek Reservoir (Newton County)
- Beech Creek Reservoir (Haralson County)
- Hickory Log Creek Reservoir (Canton/Cobb County-Marietta Water Authority)
- Owsley Fork Reservoir (City of Berea, Kentucky)
- Settingdown Creek watershed dams EAs for NRCS, and Blue Creek Reservoir (West Virginia)

Andrea P. Gray



Andrea P. Gray LLC
Attorney at Law

ENVIRONMENTAL PERMITTING AND LAW

LOCAL GOVERNMENT REPRESENTATION

Joint Development Authority of Jasper, Newton, Morgan and Walton Counties

Prepare documentation and monitor meetings to ensure compliance with Open Meetings, Open Records Acts, and Development Authority's Act. Draft contracts and closing documents for real estate transactions. Negotiate with local utilities regarding service. Negotiate intergovernmental agreement for revenue sharing between four counties, four school districts and the Authority. Drafted Inducement Agreement between Authority and Baxter Healthcare Corporation to locate \$1 billion facility with more than 1,500 jobs in Stanton Springs. Served as legal counsel in negotiations and document drafting for two Facebook Data Centers resulting in up to a \$84 billion investment with more than 400 jobs. Served as legal counsel in negotiations, land acquisition, litigation management and document drafting for Rivian automotive project resulting in a \$5 billion investment with 7,500 jobs. Prepare and present tax abatement agreements. Prepare and present intergovernmental agreements. Manage GEFA loan administration. Represent Authority in bond validation proceedings totaling over \$100 billion.

Savannah Harbor Interstate-16 Corridor Joint Development Authority

Assist in negotiations and draft Revenue Sharing Intergovernmental Agreement between four counties, school districts, tax assessors and tax commissioners for the largest economic development project in State history- Hyundai Automotive.

Mid-Georgia Gateway Joint Development Authority

Prepare all resolutions and formation documents to create the JDA for Macon-Bibb, Peach and Houston Counties. Assist in negotiations and draft Revenue Sharing Agreement among parties.

Loganville Development Authority

Prepare real estate contracts and closing documents relating to land purchases. Prepare documentation and monitor meetings to ensure compliance with Open Meetings, Open Records, and the Development Authority's Acts. Assist with documentation relating to Georgia Cities Foundation loans.

Morgan County Hospital Authority

Provide general legal representation including contract review, land acquisition, and advising on local government procedures under the Open Meetings and Open Records Acts.

City of Bostwick, Georgia

Provide general legal representation including drafting Ordinances, easements, and advising on local government procedures under the Open Meetings and Open Records Acts.

Azalea Regional Library System

Provide general legal representation including drafting and negotiating intergovernmental agreements and review of policy and contracts.

Newton County Board of Commissioners

Facilitate planning of county building projects. Prepare documents in connection with land and right-of-way acquisition matters. Prepare legal memorandums. Review and present contracts and resolutions for Board of Commissioners approval. Advise department heads. Manage condemnation and nuisance abatement actions. Draft and facilitate revisions to ordinances. Defend lawsuits filed against county. Serve as issuer's counsel for bond validation proceedings. Prepare service delivery agreement updates. Negotiate with local utilities regarding service. Negotiate and prepare intergovernmental agreements. Participate in re-apportionment of county districts. Participate in development of master utility plans including rate studies. Advise Board of Elections. Negotiate with railroad regarding land acquisition and trails. Serve as Solicitor for county ordinance violations. Represent planning commission. Assess implementation of impact fees and successfully defend lawsuit challenging impact fee ordinance. Investigate personnel issues and defend EEOC complaints against county. Prepare and present tax abatement agreements.

Appendix B

NC Business License



NORTH CAROLINA

Department of the Secretary of State

To all whom these presents shall come, Greetings:

I, ELAINE F. MARSHALL, Secretary of State of the State of North Carolina, do hereby certify the following and hereto attached to be a true copy of

APPLICATION FOR CERTIFICATE OF AUTHORITY

OF

SCHNABEL, INC.

the original of which was filed in this office on the 19th day of January, 2024.



Scan to verify online.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 19th day of January, 2024.

Elaine F. Marshall

Secretary of State

SOSID: 2773360
 Date Filed: 1/19/2024 9:03:00 AM
 Elaine F. Marshall
 North Carolina Secretary of State
 C2023 341 01225

State of North Carolina
 Department of the Secretary of State

APPLICATION FOR CERTIFICATE OF AUTHORITY

Pursuant to §55-15-03 of the General Statutes of North Carolina, the undersigned corporation hereby applies for a Certificate of Authority to transact business in the State of North Carolina, and for that purpose submits the following:

1. The name of the corporation is Schnabel, Inc.
 and if the corporate name is unavailable for use in the State of North Carolina, the name the corporation wishes to use is:

2. The state or country under whose laws the corporation was organized is: Virginia

3. The date of incorporation was 12/18/2002

4. Its period of duration is: ☒ perpetual or ☐ to date certain (mm/dd/yyyy) _____

5. Principal office information (Select either a or b.)

- a. ☒ The corporation has a principal office.

The street address and county of the principal office of the corporation is:

Number and Street 9800 JHB Stuart Parkway, Ste 200

City, State, Zip Code Glen Allen, VA 23059 County Henrico

The mailing address, if different from the street address, of the principal office of the corporation is:

Number and Street _____

City, State, Zip Code _____ County _____

- b. ☐ The corporation does not have a principal office.

6. The street address and county of the registered office in the State of North Carolina is:

Number and Street 160 Mine Lake Ct., Ste. 200

City: Raleigh State NC, Zip Code: 27615-6417 County: Wake

7. The mailing address, if different from the street address, of the registered office in the State of North Carolina is:

Number and Street _____

City: _____ State NC, Zip Code: _____ County: _____

8. The name of the registered agent in the State of North Carolina is: CT Corporation System

BUSINESS REGISTRATION DIVISION
 (Revised July 2017)

P. O. BOX 29622

RALEIGH, NC 27626-0622
 (Form B-09)

NC0231 - 1/19/2017 Website Revised Online

9. The names, titles, and usual business addresses of the current officers of the corporation are (attach if necessary):

<u>Name</u>	<u>Title</u>	<u>Business Address</u>
Walter Rabe	President/CEO/Director	9800 JEB Stuart Pkway, Ste 200, Glen Allen, VA 23059
Joseph Monroe	EVP/Secretary/Director	9800 JEB Stuart Pkway, Ste 200, Glen Allen, VA 23059
David Ralston	Treasurer	9800 JEB Stuart Pkway, Ste 200, Glen Allen, VA 23059

10. Attached is a Certificate of Existence (or document of similar import) duly authenticated by the Secretary of State or other official having custody of corporate records in the state or country of incorporation. The Certificate of Existence must be an original and less than six months old.

11. If the corporation is required to use a fictitious name in order to transact business in this State, a copy of the resolution of its board of directors, certified by its secretary, adopting the fictitious name is attached.

12. This application will be effective upon filing, unless a delayed date and/or time is specified: _____

This is the 8th day of November, 2023.

Schnabel, Inc.

NAME OF CORPORATION



Signature

Michael Steele, Vice President

Type or Print Name and Title

NOTES:

1. Filing fee is \$250. This document must be filed with the Secretary of State.

BUSINESS REGISTRATION DIVISION
(Revised July 2017)

P. O. BOX 29622

RALEIGH, NC 27626-0622
(Form B-09)

NC021 - 1/16/2017 Webform Registry Update

Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Schnabel, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the corporation was incorporated on December 18, 2002;

That the corporation's period of duration is perpetual; and

That the corporation is in existence and in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.



Signed and Sealed at Richmond on this Date:

November 13, 2023

Bernard J. Logan, Clerk of the Commission

CERTIFICATE NUMBER : 2023111318471384

Schnabel, Inc.
LIST OF OFFICERS

Chairman
Joseph Monroe

President/Chief Executive Officer
Walter Rabe

Treasurer
Chris Potter

Executive Vice President
Michael Canino
Paul Diggs
Thomas Fitzgerald
Chad Mayers
Joseph Monroe
George Teetes

Secretary
Chad Mayers

Senior Vice President
Scott Narron
Randal Reaves
Jennifer Wolfson
Todd Ramkey

Vice President
Michael Steele

Appointment Term
July 2023 - July 2024



NORTH CAROLINA

Department of the Secretary of State

CERTIFICATE OF AUTHORITY

I, ELAINE F. MARSHALL, Secretary of State of the State of North Carolina, do hereby certify that

SCHNABEL, INC.

having filed on this date an application conforming to the requirements of the General Statutes of North Carolina, a copy of which is hereto attached, is hereby granted authority to transact business in the State of North Carolina.



Scan to verify online.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 19th day of January, 2024.

Elaine F. Marshall

Secretary of State

Document Id: C202334101225

Verify this certificate online at <https://www.sosnc.gov/verification>

AGENDA ITEM

To: CHAIRMAN PHILLIPS AND BOARD MEMBERS

From: TIM H. HOLLOMAN, EXECUTIVE DIRECTOR

Date: July 13, 2026

Re: Executive Director's Report

EDR1 - Comments on Customers' Water Usage and Raw Water Revenue for
Fiscal Year to Date Ending June 30, 2026

EDR2 - Operating Budget Status, Ending May 31, 2026

EDR3 - Summary of Activities

Action Requested: For information purposes.

Executive Director Highlighted Activities:

- Regular Monthly meetings with the Design Build Team and the Owner's Advisor for the parallel line project.
- Routine meetings with HDR concerning projects
- Review OA submissions after re-advertisement for Board recommendation.
- Continuing last-minute work with the Legislative Delegation on the double project funding. Sending out correspondence regarding the Air Backwash and 4th pump project.
- Continued work on IBT Concern
- Certify BB Monthly Report
- Attended AWWA ACE in Washington.
- Reviewed Air Backwash and Walkway Design Meeting
- Reviewed State Budget with Lobbyist.
- Staff attended H2Go's 50th Anniversary Program
- ROW follow-up on the bottom 14 miles of Parallel Line.
- Met with HDR staff regarding current projects.
- Discussion with DEQ regarding Lower flow findings for Cape Fear River.
- Monthly meeting with McKim and Creed
- Computer Warriors Security presentation for Kings Bluff.
- Director Lunch
- NC Water Warn Monthly Meeting
- Algae response meeting with Partners.

LOWER CAPE FEAR WATER AND SEWER AUTHORITY
FISCAL YEAR 2025-2026 BUDGET

ACCOUNT NO.	REVENUES	FY 2025-2026 APPROVED BUDGET	FY 2025-2026 AMENDED BUDGET	July 1 - May 31, 2026 ACTUAL		FY 25-26 TOTAL COMBINED BUDGET	% of Amended Budget As of 05/31/2026
				KINGS BLUFF	BLADEN BLUFFS		
	OPERATING						
3001-01	Brunswick County	\$ 2,621,733	\$ 2,621,733	\$ 2,420,227	\$ -	\$ 2,420,227	92%
3002-01	Cape Fear Public Utility Authority	\$ 2,022,934	\$ 2,022,934	\$ 1,886,073	\$ -	\$ 1,886,073	93%
3003-03	Pender County	\$ 289,440	\$ 289,440	\$ 305,566	\$ -	\$ 305,566	106%
3004-01	Stepan/Invista	\$ 140,000	\$ 140,000	\$ 187,923	\$ -	\$ 187,923	134%
3005-01	Praxair, Inc	\$ 35,200	\$ 35,200	\$ 23,242	\$ -	\$ 23,242	66%
3006-01	Bladen Bluffs Reimbursement for Plant Operation Costs	\$ 5,670,086	\$ 5,670,086	\$ -	\$ 2,876,585	\$ 2,876,585	51%
3006-02	Bladen Bluffs Administrative Reimbursement	\$ 133,823	\$ 133,823	\$ -	\$ 177,457	\$ 177,457	133%
3007-01	Sales Tax Refund	\$ 159,988	\$ 159,988	\$ -	\$ 290,617	\$ 290,617	182%
	Subtotal	\$ 11,073,204	\$ 11,073,204	\$ 4,823,031	\$ 3,344,658	\$ 8,167,689	74%
	Non-Operating						
3105-01	Interest	\$ 200,000	\$ 200,000	\$ 222,059	\$ -	\$ 222,059	111%
3120-01	Other Revenue (Insurance Proceeds/Refunds/FEMA)	\$ -	\$ -	\$ -	\$ -	\$ -	0%
3125-01	Federal Tax Subsidy	\$ -	\$ -	\$ -	\$ -	\$ -	0%
3156-00	Rental House Income	\$ -	\$ -	\$ -	\$ -	\$ -	0%
3170-01	Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -	0%
3900-01	Renewal and Replacement Fund Appropriated	\$ -	\$ 750,000	\$ 750,000	\$ -	\$ 750,000	0%
3900-02	SRF/ARPA	\$ 37,762,800	\$ 37,762,800	\$ 31,795,441	\$ -	\$ 31,795,441	84%
2900-00	Fund Balance Appropriated	\$ -	\$ -	\$ -	\$ -	\$ -	0%
	Subtotal	\$ 37,962,800	\$ 38,712,800	\$ 32,767,499	\$ -	\$ 32,767,499	85%
	TOTAL REVENUES	\$ 49,036,004	\$ 49,786,004	\$ 37,590,531	\$ 3,344,658	\$ 40,935,189	82%

LOWER CAPE FEAR WATER AND SEWER AUTHORITY
FISCAL YEAR 2025-2026 BUDGET

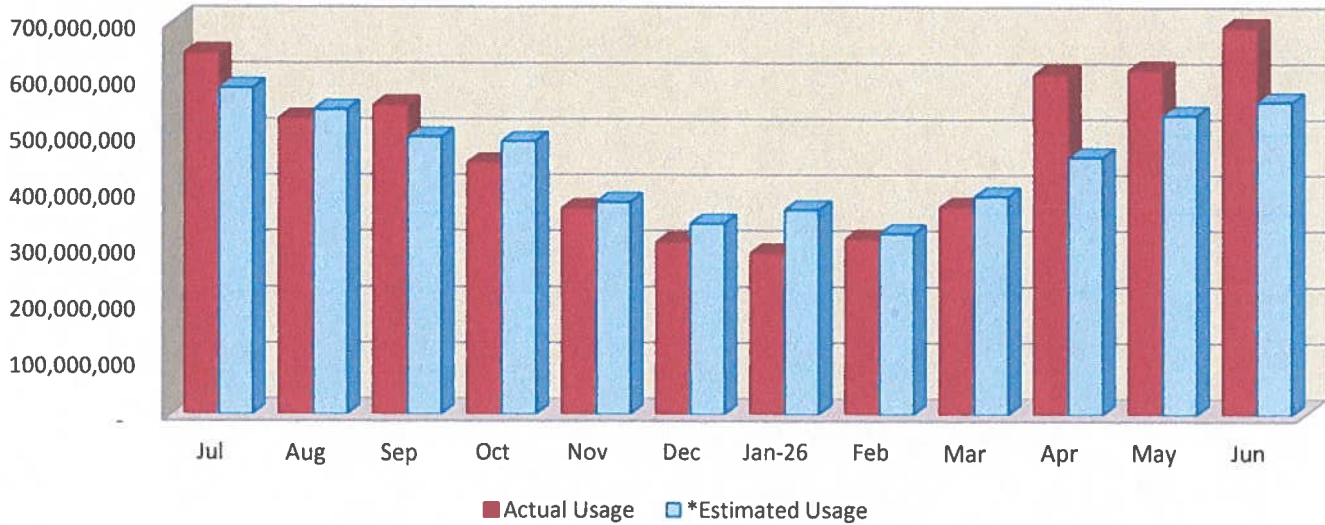
ACCOUNT NO.	EXPENDITURES	FY 2025-2026 APPROVED BUDGET	FY 2025-2026 AMENDED BUDGET	July 1 - May 31, 2026		FY 25-26 TOTAL COMBINED BUDGET	% of Amended Budget As of 05/31/2026
				KINGS BLUFF	BLADEN BLUFFS		
	Administration						
4001-01	Salaries	\$ 246,869	\$ 246,869	\$ 156,131	\$ 67,889	\$ 224,020	91%
4010-01	Per Diem and Mileage Board Members	\$ 64,791	\$ 64,791	\$ 34,176	\$ 17,818	\$ 51,994	80%
4012-01	Vehicle Allowance	\$ 5,200	\$ 5,200	\$ 3,370	\$ 1,430	\$ 4,800	92%
4019-01 & 4024-01	FICA Taxes	\$ 24,658	\$ 24,658	\$ 14,274	\$ 6,781	\$ 21,055	85%
4029-01	Retirement	\$ 36,660	\$ 36,660	\$ 21,287	\$ 10,082	\$ 31,369	86%
4035-01	401K Plan	\$ 13,912	\$ 13,912	\$ 7,734	\$ 3,826	\$ 11,560	83%
4036-01	Miscellaneous Payroll Processing Expenses	\$ 2,900	\$ 2,900	\$ 2,965	\$ -	\$ 2,965	102%
4038-01	Group Insurance	\$ 42,586	\$ 42,586	\$ 16,821	\$ 11,712	\$ 28,532	67%
4039-01	Property and Liability Insurance	\$ 173,160	\$ 173,160	\$ 92,881	\$ 47,619	\$ 140,500	81%
4046-00	Professional Services General	\$ 55,000	\$ 210,000	\$ 169,239	\$ -	\$ 169,239	81%
4046-01	Attorney	\$ 65,000	\$ 73,500	\$ 65,049	\$ -	\$ 65,049	89%
4047-01	Auditor	\$ 9,500	\$ 9,500	\$ 3,950	\$ 2,800	\$ 6,750	71%
4048-01	Engineer	\$ 150,000	\$ 57,500	\$ 52,092	\$ -	\$ 52,092	91%
4049-01	Information Technology	\$ 15,000	\$ 25,000	\$ 21,993	\$ -	\$ 21,993	88%
4050-01	Financial Advisor	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	0%
4055-01	Office Maintenance/Repair/Common Charge	\$ 45,000	\$ 35,000	\$ 24,521	\$ -	\$ 24,521	70%
4058-01	Office Utilities	\$ 4,000	\$ 4,000	\$ 3,101	\$ -	\$ 3,101	78%
4059-01	Office Expenses (telephone, Printing, Adv)	\$ 15,000	\$ 11,500	\$ 8,196	\$ -	\$ 8,196	71%
4062-01	Office Equipment	\$ 30,000	\$ 50,000	\$ 47,195	\$ -	\$ 47,195	94%
4064-01	Printing and Advertising	\$ 15,500	\$ 15,500	\$ 8,529	\$ -	\$ 8,529	55%
4065-01	Telephone and Internet	\$ 5,500	\$ 7,100	\$ 5,659	\$ -	\$ 5,659	80%
4070-01	Travel and Training	\$ 36,000	\$ 43,500	\$ 35,824	\$ -	\$ 35,824	82%
4070-20	Phone Allowance	\$ 520	\$ 520	\$ 337	\$ 143	\$ 480	92%
4075-01	Vehicle Expense	\$ -	\$ -	\$ -	\$ -	\$ -	0%
4080-01	Miscellaneous Expense	\$ 25,000	\$ 25,000	\$ 4,601	\$ -	\$ 4,601	18%
4081-01	Dues & Subscription	\$ 12,000	\$ 14,165	\$ 14,165	\$ -	\$ 14,165	100%
	Subtotal	\$ 1,103,756	\$ 1,202,521	\$ 814,090	\$ 170,099	\$ 984,189	82%

LOWER CAPE FEAR WATER AND SEWER AUTHORITY

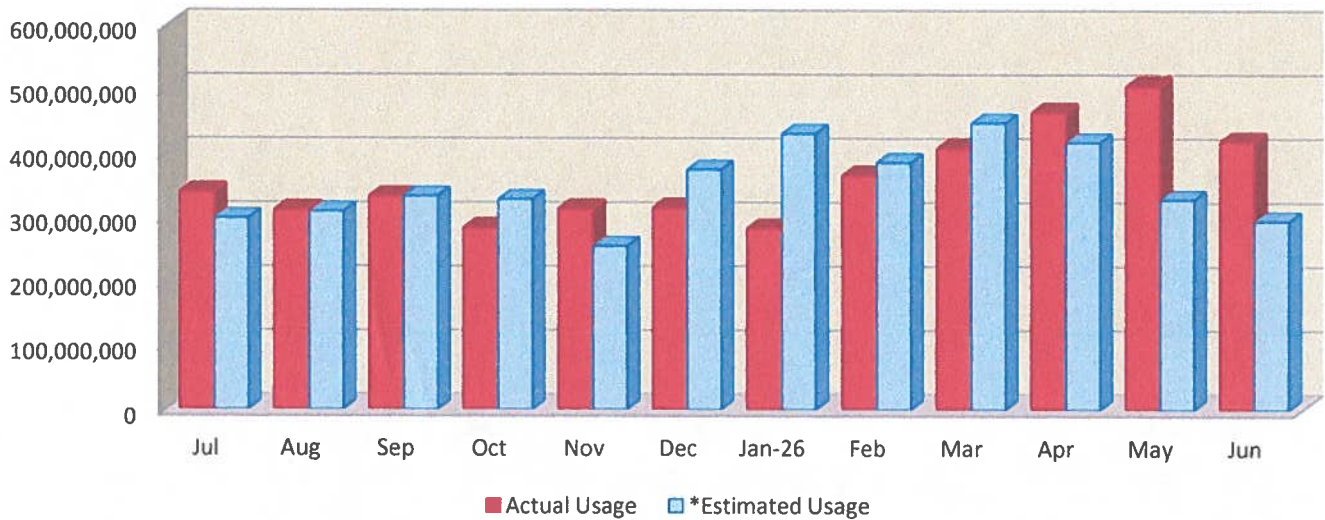
FISCAL YEAR 2025-2026 BUDGET

ACCOUNT NO.	EXPENDITURES	FY 2025-2026 APPROVED BUDGET	FY 2025-2026 AMENDED BUDGET	July 1 - May 31, 2026		FY 25-26 TOTAL COMBINED BUDGET	% of Amended Budget As of 05/31/2026
				KINGS BLUFF	BLADEN BLUFFS		
	Operating						
4501-01	Sales Tax Expense	\$ 150,000	\$ 550,000	\$ -	\$ 424,386	\$ 424,386	
4510-01	Bladen Bluffs O & M	\$ 3,821,385	\$ 3,408,385	\$ -	\$ 698,756	\$ 698,756	77%
4515-01	Bladen Bluffs Hurricane Florence	\$ -	\$ -	\$ -	\$ -	\$ -	21%
4520-01	Utilities/Energy Kings Bluff	\$ 778,052	\$ 662,287	\$ 589,320	\$ -	\$ 589,320	0%
4530-01	Contract O & M Kings Bluff	\$ 736,811	\$ 766,811	\$ 765,655	\$ -	\$ 765,655	89%
4537-01	O&M Kings Booster Pump Bluff Pump Station	\$ -	\$ -	\$ -	\$ -	\$ -	100%
4541-01	Combined Enterprise Funded Series 2010 Principal	\$ -	\$ -	\$ -	\$ -	\$ -	0%
4542-01	Combined Enterprise Funded Series 2010 Interest	\$ -	\$ -	\$ -	\$ -	\$ -	0%
4543-01	Combined Enterprise System Ref Series 2012 Principal	\$ -	\$ -	\$ -	\$ -	\$ -	0%
4544-01	Combined Enterprise System Ref Series 2012 Interest	\$ -	\$ -	\$ -	\$ -	\$ -	0%
4545-01	Bladen Bluffs Debt Service Principal	\$ 1,115,000	\$ 1,115,000	\$ -	\$ 1,115,000	\$ 1,115,000	100%
4546-01	Bladen Bluffs Debt Service Interest	\$ 480,000	\$ 480,000	\$ -	\$ 374,196	\$ 374,196	78%
	Operating Capital Expense	\$ 10,851,000	\$ 10,851,000	\$ 1,506,965	\$ -	\$ 1,506,965	14%
4998-05	Transfer to R&R - Kings Bluff R&R Expense	\$ -	\$ 750,000	\$ 750,000	\$ -	\$ 750,000	100%
	Transfer to R&R - Industrial	\$ -	\$ -	\$ -	\$ -	\$ -	0%
4998-06	Transfer to Enterprise Fund	\$ -	\$ -	\$ -	\$ -	\$ -	0%
2041-01	421 Relocation New Hanover County Loan Principal	\$ -	\$ -	\$ -	\$ -	\$ -	0%
5180-00	SRF/7 mile parallel line expenditures	\$ 30,000,000	\$ 30,000,000	\$ 28,730,645	\$ -	\$ 28,730,645	96%
	Subtotal	\$ 47,932,248	\$ 48,583,483	\$ 32,342,585	\$ 2,612,338	\$ 34,954,923	72%
	TOTAL EXPENDITURES	\$ 49,036,004	\$ 49,786,004	\$ 33,156,674	\$ 2,782,437	\$ 35,939,111	72%

Brunswick County Water Usage FY 25-26



CFPUA Water Usage FY 25-26



Pender County Water Usage FY 25-26

