



July 21, 2025

Ms. Corrie Bondar, PE
Town of Cary Utilities Department
Utilities Engineering Division
316 N. Academy St.
Cary, North Carolina 27513

Subject: Regional Wastewater Partnerships Evaluation (Project)

Dear Ms. Bondar,

The Town of Cary (Cary), Town of Apex, and Town of Holly Springs have been working collaboratively over the last several months to develop the initial strategy and concepts to achieve the objectives of enhanced regional utility collaboration to maximize available and planned wastewater treatment capacity at the Western Wake Regional Water Reclamation Facility (WWRWRF) and the South Cary WRF (SCWRF). Building on this collaboration, HDR Engineering, Inc. of the Carolinas (HDR, Professional) will continue to work with the three Towns to further define and evaluate the range of partnership models for shared wastewater treatment capacity, as well as identify and define the regulatory challenges associated with the potential partnerships and the required movement of wastewater across the respective service areas and river basin boundaries. The three general partnership models currently under consideration include:

- Partnership Buy-in Model: partner ownership with a buy-in to the existing facility capacity and a share in future expansion costs. The agreement would specify ownership responsibility, including ongoing costs for both capital projects and operations and maintenance.
- Customer Model: lease of facility capacity, not ownership of capacity. The lease rate would include a capital charge for capacity plus proportional operating costs allocated on a per-gallon basis. The agreement would specify flow and load surcharges above the agreed-upon capacity and per-gallon costs.
- Hybrid Model: a combination of the partnership buy-in and customer model, where a customer model can be used on an interim basis until a future capacity expansion is undertaken, and a partner can elect to buy-in for an ownership share of the expansion capacity.

Service for the Project will be completed under the Professional's On-call Engineering Services Master Agreement, executed on April 15, 2025. The Professional has identified the following tasks, in collaboration with Cary staff, to support achieving the project objectives.

Task 1 – Cary, Apex Baseline Partnership Model - WWRWRF

The Professional will evaluate an updated Partnership model for Cary and Apex's current Partnership in the WWRWRF. The evaluation will include an increase in the overall permitted capacity of WWRWRF from 18 MGD to 24 MGD. The Professional will develop a cost allocation model based on capital cost information provided by the Cary for the following facilities:

- WWRWRF (including treatment works, biosolids facilities, effluent pump station, and effluent pipeline)
- Beaver Creek Pump Station
- Beaver Creek Force Main
- West Reedy Branch Gravity Sewer

The cost model will adjust the original WWRWRF construction cost to current year dollars, accounting for inflation, interest costs, and depreciation, as well as integrate current expansion cost estimates. The cost model will be used to develop an analysis of the following two scenarios:

- Baseline Scenario 1
 - Cary - 50% of total WWRWRF 24 MGD Capacity (12 MGD)
 - Apex - 50% of total WWRWRF 24 MGD Capacity (12 MGD)
- Baseline Scenario 2
 - Cary - 54% of total WWRWRF 24 MGD Capacity (13 MGD)
 - Apex - 46% of total WWRWRF 24 MGD Capacity (11 MGD)

Task deliverables are outlined at the end of this scope of services, and will include for this task a cost allocation model, a section in the Regional Wastewater Partnership Evaluation TM, as well as meeting presentation materials related to the technical analysis.

Task 2 – Cary, Apex, Holly Springs Partnership Model - WWRWRF

The Professional will evaluate a Partnership model for Cary, Apex, and Holly Springs for capacity sharing in the WWRWRF. The evaluation will include an increase in the overall permitted capacity of WWRWRF from 18 MGD to 30 MGD. The Professional will develop a cost allocation model based on capital cost information provided by the Cary for the following facilities:

- WWRWRF (including treatment works, biosolids facilities, effluent pump station, and effluent pipeline)

The cost model will adjust the original construction cost to current year dollars, accounting for inflation, interest costs, and depreciation, as well as integrate current

expansion cost estimates. The cost model will be used to develop an analysis of the following three scenarios:

- Cary, Apex, Holly Spring Partnership Scenario 1
 - Cary - 50% of total WWRWRF 30 MGD Capacity (15 MGD)
 - Apex - 40% of total WWRWRF 30 MGD Capacity (12 MGD)
 - Holly Springs - 10% of total WWRWRF 30 MGD Capacity (3 MGD)
- Cary, Apex, Holly Spring Partnership Scenario 2
 - Cary - 47% of total WWRWRF 30 MGD Capacity (14 MGD)
 - Apex - 40% of total WWRWRF 30 MGD Capacity (12 MGD)
 - Holly Springs - 13% of total WWRWRF 30 MGD Capacity (4 MGD)
- Cary, Apex, Holly Spring Partnership Scenario 3
 - Cary - 43% of total WWRWRF 30 MGD Capacity (13 MGD)
 - Apex - 37% of total WWRWRF 30 MGD Capacity (11 MGD)
 - Holly Springs - 20% of total WWRWRF 30 MGD Capacity (6 MGD)

Task deliverables are outlined at the end of this scope of services, and will include for this task a cost allocation model, a section in the Regional Wastewater Partnership Evaluation TM, as well as meeting presentation materials related to the technical analysis.

Task 3 – Cary, Apex, Holly Springs Partnership Hybrid Model - WWRWRF

The Professional will evaluate the Partnership Models from Tasks 2 and 3, adopting a hybrid approach that allows for a short-term sharing of capacity at a set capital capacity charge prior to full partnership capacity buy-in for a WWRWRF capacity expansion. The objective of the hybrid model is to bridge the gap between current and projected wastewater treatment needs and the timing of actual facility expansion requirements.

Task deliverables are outlined at the end of this scope of services, and will include for this task a cost allocation model, a section in the Regional Wastewater Partnership Evaluation TM, and meeting presentation materials related to the technical analysis.

Task 4 – Cary, Holly Springs Customer Model - SCWRF

The Professional will evaluate a Cary and Holly Springs Customer Model, which involves sharing capacity at SCWRF, with no capacity ownership, and with a capacity capital charge. This model will be reviewed for up to three flow volume scenarios for flow routed from Holly Springs to the SCWRF.

Task deliverables are outlined at the end of this scope of services, and will include for this task a cost allocation model, a section in the Regional Wastewater Partnership Evaluation TM, as well as meeting presentation materials related to the technical analysis.

Task 5 – IBT Evaluation and Strategy

Existing and proposed IBT legislation may limit the development of regional solutions. The Towns Cary and Apex hold a joint IBT certificate to transfer water from the Haw River Basin into the Neuse and Cape Fear River basins. The conveyance of wastewater flow from Holly Springs to the SCWRF has the potential to create additional complexity with regard to the Town's current IBT certificate. The Professional will evaluate the IBT limitations and strategy to potentially send Holly Springs flows to the SCWRF and WWRWRF, including the following tasks:

- Summarize Holly Springs water demands and wastewater flows routed to the Neuse River basin under all scenarios for which wastewater is routed to SCWRF, to determine the associated IBT volumes.
- Determine the maximum allowable Holly Springs flow that can be directed to the SCWRF without triggering an IBT certificate.
- For Cary and Apex, determine the forecast for both IBT and required water return to the Cape Fear River basin, including redirecting future Veridea flow to the Cape Fear River basin. This effort will build on the forecasts developed as part of the Long-Range Water Resources Plans for each Town.
- Evaluate the feasibility of amending the existing Cary and Apex IBT certificate to include Holly Springs as a co-applicant.
- Prepare a Cary, Apex, Holly Springs partnership IBT presentation for review by the Environmental Management Commission (EMC).

Task deliverables are outlined at the end of this scope of services and will include, for this task, a summary of projected IBT for Holly Springs associated with all partnership scenarios, future IBT for Cary and Apex, a section in the Regional Wastewater Partnership Evaluation TM, as well as meeting presentation materials related to the technical analysis.

Task 6 – Scenario Consensus Workshop

The Professional will facilitate a Scenario Consensus Workshop to define the flow and loading scenarios for WWRWRF and SCWRF that the Towns want to evaluate. The outputs of this workshop can be informed by Tasks 1-5, and will be an input to the technical evaluations for the WRFs and collection system being completed by Jacobs. The Professional will provide a workshop summary to summarize the output from this workshop.

Task 7 – Update Operations, Ownership, and Management Agreement

The Professional will draft updated or new Operations, Ownership, and Management Agreement(s) for WWRWRF and SCWRF based on the final selected partnership models for capacity sharing for each facility and each Town. The Professional will develop a key terms sheet for each agreement to gain consensus on the central terms

of each agreement before drafting or updating the agreement language. The starting point for the agreement(s) will be the current Cary and Apex WWRWRF Agreement.

Task 8 - Project Management

Project Kick-off Workshop

The Professional will conduct a two-hour Project Kick-off Workshop with Cary, Apex, and Holly Springs staff. This workshop will be used to review the Project objectives and scope, identify critical success factors, expected outcomes, and define how each town will be engaged as part of the Project, defining key team members from each Town organization. The project scope of services, schedule, and milestones, as well as coordination items, will be reviewed. A workshop summary will be prepared to document workshop topics and discussion.

Data Acquisition and Review

The Professional will review data provided by all Towns for previous projects to identify new or additional data requirements to support the Project. After the review, the Professional will develop a data request to include, but not limited to, the following general items:

- NPDES Permits for the WWRWRF, SCWRF, Utle Creek WRF, and the Middle Creek WRF.
- Projected flows and loads provided on a year-by-year basis to extend from 2030 to 2050 for Cary, Apex, and Holly Springs.
- Provide actual year-by-year flows and loads from the startup of WWRWRF until the current, with projections for Cary/Apex up to 2030.
- WWRWRF Master Plan (when complete)
- Utle Creek WRF Master Plan
- Current Cary/Apex Partner Arrangement
- Current Chatham County Partner Agreement
- Previous Durham County Wastewater Agreement

Upon receipt, the Professional will review, catalog, and prepare data for Tasks 2 through 5. Questions regarding the data received will be directed to the appropriate Town.

Project Management

The Professional will perform project management functions associated with the Project as identified below:

- Project management and controls activities, including managing scope, task goals, budget, schedule, and coordination among the Professional's team members.
- Coordination of activities with Cary.
- Attendance and preparation for monthly progress meetings with Cary.
- Monthly invoicing and progress reports.
- Maintain quality control program and deliverable review.

Project Meetings/Workshops and Deliverables

WORKSHOPS/MEETINGS

- Project Kick-off Workshop
- Two (2) Meetings with NCDWR
- One (1) EMC Meeting
- One (1) Scenario Consensus Workshop
- Two (2) Combined Town Meetings
- Two (2) Individual Meetings with Cary staff
- Two (2) Individual Meetings with Apex staff
- Two (2) Individual Meetings with Holly Springs staff

DELIVERABLES

- Data request memorandum
- Project Kick-off Workshop summary
- Scenario Consensus Workshop summary
- Draft and Final Wastewater Regional Partnership Evaluation Technical Memorandum (TM)
- Draft WWRWRF Operations, Ownership, and Management Partnership Agreement
- Draft SCWRF Operations, Ownership, and Management Partnership Agreement

Project Assumptions

In addition to task-specific assumptions documented above within individual scope of services tasks, this scope and fee are based upon the following general assumptions:

- All Draft and Final TM's and Agreements will be electronically submitted.
- Review of Draft deliverables will occur over a two (2) week period.
- All workshops/meetings will be two (2) hours in length and held at Town (Cary, Apex, or Holly Springs) offices, a virtual meeting option will be included for the Professional's out of town team members.
- The current WWRWRF Agreement provides a starting point for terms and conditions for the development of the updated or new Agreement(s).
- The Towns will provide their own independent Legal review of the Agreement(s); the Agreement(s) will be considered Draft and only finalized after the Towns' Legal review. The Towns will be responsible for finalizing the Agreement(s), gaining Town Council approvals, and facilitating the execution of those agreements.
- No cost estimating will be required for this scope of services; Cary will provide input on current WWRWRF and SCWRF valuations and expansion costs.
- Operating expenses, operating (per 1,000 gallon) charges, and flow and load surcharges have already been defined by Cary's financial modeling efforts and will be provided as input to this scope of services.

Schedule

The term for this scope of services is approximately 8 months from notice to proceed.

Compensation

Compensation to the Professional shall be on a lump sum basis for a total contract not to exceed the value of \$200,000. A breakdown of fees by task is provided in Table 1. If additional services are required to support the scope of services, the Professional will use the rate table established by the Professional's On-call Engineering Services Master Agreement, executed on April 15, 2025.

TABLE 1
Project Compensation, by Task

Project Task	HDR Labor Hours	HDR Labor Costs	Expenses	Task Total
Task 1 – Cary, Apex Baseline Partnership Model - WWRWRF	88	\$25,200	\$100	\$25,300
Task 2 – Cary, Apex, Holly Springs Partnership Model - WWRWRF	90	\$25,800	\$100	\$25,900
Task 3 – Cary, Apex, Holly Springs Partnership Hybrid Model - WWRWRF	48	\$14,400		\$14,400
Task 4 – Cary, Holly Springs Customer Model - SCWRF	90	\$25,800	\$100	\$25,900
Task 5 – IBT Evaluation and Strategy	157	\$38,000	\$200	\$38,200
Task 6 – Scenario Consensus Workshop	30	\$7,100	\$100	\$7,200
Task 7 – Update Operations, Ownership, and Management Agreement	136	\$39,400		\$39,400
Task 8 – Project Management	98	\$23,500	\$200	\$23,700
Project Total	737	\$199,200	\$800	\$200,000

Thank you again for the opportunity to support Cary, Apex, and Holly Springs on this important project. Our team looks forward to getting started.

Sincerely,
HDR Engineering, Inc. of the Carolinas



Adam Sharpe
Project Manager



Jonathan Henderson, PE
Senior Vice President