# Upper Neuse River Basin Association (UNRBA) Stage I Existing Development Interim Alternative Implementation Approach (IAIA)

## Fiscal Year 2024-2025 Summary Report

Beginning in 2018, the UNRBA began exploring an alternative option for achieving compliance with Stage I existing development nutrient load reductions under the Falls Lake Rules. To overcome some of the obstacles present in the current Rules, the UNRBA and its stakeholders developed the Stage I Existing Development Interim Alternative Implementation Approach (IAIA) with the goal of protecting and improving water quality in the watershed and lake. The concept was originally suggested by environmental advocacy groups active in the watershed and engaged with the UNRBA and its efforts. The UNRBA worked with its members, representatives from environmental groups, conservation organizations, staff at DWR, other interest groups, and regulated entities to develop an alternative approach for meeting the Stage I Existing Development Rule. This compliance framework uses financial investment in eligible projects and activities that benefit water quality and quantity both for the lake and the watershed. This approach recognizes long-term benefits and emphasizes protecting lake uses and improving water quality in the watershed and lake. The engagement of local governments that represent both lake users and those areas that drain to the lake provides a critical link between upstream actions and downstream benefits. The IAIA Program Document (approved by the EMC in January 2021) and other materials are available here.

Implementation of the IAIA's first year of effort began July 1, 2021, and ended June 30, 2022 (Fiscal Year (FY) 2021-2022). The second year of the program ended June 30, 2023 (FY 2022-2023), the third year ended June 30, 2024 (FY 2023-2024), and the fourth year ended June 30, 2025 (FY 2024-2025). Participants submit annual reports to DWR following each fiscal year to assess individual compliance. Copies are provided to the UNRBA for summary reporting.

This report summarizes the minimum annual requirements for each participant and the funds allocated in the IAIA Program for FY2024-2025 (Table 1). Funds allocated during previous years are also provided for tracking purposes. Each individual participant met or exceeded its minimum requirement over the combined four-year period. Over the first four years of implementation, the participants were required to cumulatively invest approximately $6.0 million. Total investments have exceeded $16 million over this period, more than 2.6 times the required amount.

Table 2 shows the fund allocations by type and number of projects for FY2024-2025, and Table 3 lists the project descriptions and investments allocated for each individual project implemented during this period.

**Table 1. Annual Funding Commitments and Annual Investments for the First Four Years by IAIA Participant (Listed Alphabetically)**

| Participant | Annual Funding Commitment | FY2021-2022 Funds Allocated | FY2022-2023 Funds Allocated | FY2023-2024 Funds Allocated | FY2024-2025 Funds Allocated | Cumulative Rollover the FY2025-2026 |
|---|---|---|---|---|---|---|
| City of Creedmoor | $16,926 | $16,926 | $16,926 | $16,926 | $16,926 | $- |
| City of Durham | $337,587 | $960,268 | $1,750,824 | $1,371,018 | $913,833 | $3,645,595 |
| City of Raleigh | $466,081 | $1,745,485 | $740,000 | $1,199,400 | $506,000 | $2,326,561 |
| Durham County | $133,300 | $148,394 | $46,069 | $828,327 | $310,896 | $800,485 |
| Franklin County | $19,058 | $19,058 | $19,058 | $19,058 | $19,058 | $- |
| Granville County | $100,453 | $100,453 | $100,453 | $100,453 | $100,453 | $- |
| Orange County | $161,943 | $342,878 | $9,538 | $307,488 | $9,993 | $22,124 |
| Person County | $114,394 | $114,394 | $114,394 | $150,733 | $318,231 | $240,176 |
| Town of Butner | $23,393 | $23,393 | $23,393 | $23,393 | $23,393 | $- |
| Town of Hillsborough | $34,221 | $41,871 | $58,730 | $35,864 | $47,053 | $46,634 |
| Town of Stem | $11,605 | $11,605 | $11,605 | $11,605 | $11,605 | $- |
| Town of Wake Forest | $13,692 | $13,692 | $13,692 | $13,692 | $58,924 | $45,232 |
| Wake County | $88,968 | $1,973,493 | $135,810 | $608,450 | $642,726 | $3,004,607 |
| **Grand Total** | **$1,521,621** | **$5,511,909** | **$3,040,491** | **$4,686,407** | **$2,979,092** | **$10,131,415** |

**Table 2. Investment Allocations by Project Type for FY2024-2025**

| Project Type | Funds Allocated | Number of Projects |
|---|---|---|
| Watershed Improvement Plans and Programmatic Measures | $757,122 | 5 |
| Stream and riparian buffer restoration and enhancement | $588,901 | 4 |
| Stormwater control measures (State-approved SCMs) | $541,250 | 5 |
| Land conservation | $428,000 | 2 |
| Green infrastructure and other best management practices (BMPs) | $423,704 | 6 |
| Infrastructure Improvements | $152,377 | 4 |
| Illicit discharge detection and elimination | $66,281 | 1 |
| Hydrilla removal and control | $21,456 | 3 |
| **Grand Total** | **$2,979,092** | **30** |

**Table 3. Project Descriptions and Funds Allocated for FY2024-2025**

| IAIA Member | Project Descriptions | Funds Allocated |
|---|---|---|
| City of Durham | South Ellerbe Stormwater Restoration Professional Services. This project will create a combination of restored streams and a wetland that will provide a natural system for reducing and removing pollutants from an urban watershed, most of which was developed prior to the adoption of stormwater regulations. Nutrient reductions will be indicated in phase 3B construction. Additional ecosystem service benefits will include flood reduction, native plantings, increased wildlife habitat, expanded green space, and educational opportunities. | $288,182.58 |
| City of Durham | City Department of Water Management funding of hydrilla monitoring and eradication to improve water quality in the Eno River, multiple locations. Benefits include improvements to aquatic life and reduction of invasive aquatic plant | $5,881.52 |
| City of Durham | Invasive vegetation management within the Falls Lake watershed to preserve riparian buffer function, multiple locations with conservation easements. This is an ongoing project. Benefits include improvements to buffer vegetation and reduction of invasive vegetation | $16,532.00 |
| City of Durham | The Southeast Durham Watershed Improvement Plan is a multifaceted effort combining field assessments, planning, and project implementation to address water quality concerns with a joint contract with the City and County. The study limits fall across the Falls, Jordan, and Lower Neuse watersheds. Cost information provided reflects expenses for tasks limited to the Falls Lake watershed. | $254,856.07 |
| City of Durham | Partnership between Durham, Raleigh, and Person County to give funds to Tar River Land Conservancy to purchase 85 acres of land to protect Rocky Fork Branch, which flows into deep creek. This will prevent rural neighborhood development and protect riparian buffers. | $158,000.00 |
| City of Durham | The City of Durham has identified the construction of an algal floway as a cost-effective approach to address the Falls Lake Rules. This contract is to identify a suitable site in the portion of the Falls Lake watershed located within Durham County. The identification of a suitable site is required to proceed with the future design and construction of a permanent algal floway system. Nutrient reductions will depend on the size/capacity of the constructed floway. | $84,290.00 |
| City of Durham | Calculations based on Memorandum: Approval of Remedying Illicit Discharges Nutrient Reduction Practice, Zimmerman, NC DEQ DWR, 2017. Source specific eliminated load method for dry weather sanitary sewer overflows (SSOs). Ongoing response program implemented by Water Management and Environmental and Street Services to identify, contain, and properly dispose of SSO discharges. | $66,281.25 |
| City of Durham | This project identified and evaluated potential green stormwater control measure (SCM) locations within 600 feet of the Rail Trail Corridor. Three identified locations received preliminary designs. One location will receive 100% designs. The proposed green SCMs selected for design provide additional nutrient removal beyond what is required for the development of the Rail Trail. | $39,810.00 |
| Town of Butner | Repair and replacement of surcharging pump stations, sewer pipes, and appurtenances currently leaking sewage, which lead to illicit discharges. More information is available on the Project Site: https://www.sgwasa.org/i85-ssi | $23,393.00 |
| City of Creedmoor | Repair and replacement of surcharging pump stations, sewer pipes, and appurtenances currently leaking sewage, which lead to illicit discharges. More information is available on the Project Site: https://www.sgwasa.org/i85-ssi | $16,926.00 |

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| Durham County | The goal of this project is to prepare a Watershed Improvement Plan for the Lick Creek, Stirrup Iron Creek, and Brier Creek watersheds. The project aims to develop an implementation plan for restoring watershed function to the watersheds. Work will include planning, conduction public meetings, assessment of current watershed conditions, formulation of watershed restoration goals, development of watershed restoration recommendations, identification of stormwater retrofit/restoration opportunities, water quality modeling, watershed modeling, hydraulic/hydrologic modeling, engineering, design, analysis, cost estimates, surveying, data collection, and preliminary plans and construction plans for stormwater projects. | $310,895.51 |
| Granville County | Repair and replacement of surcharging pump stations, sewer pipes, and appurtenances currently leaking sewage, which lead to illicit discharges. More information is available on the Project Site: https://www.sgwasa.org/i85-ssi | $100,453.00 |
| Orange County | Orange County Hydrilla Removal: Hydrilla removal was recently added to the list of eligible activities that would count towards jurisdictional investment in the IAIA. N & P reductions have yet to be assigned for hydrilla removal, so values are TBD. These efforts will be conducted throughout the Falls Lake watershed within Orange County so specific Lat/Long is not provided. Per Memorandum from DWR on 2/10/2022, hydrilla can lead to loss of recreational use of waters and increased flood duration and intensity from obstruction of waterways. It can also negatively impact water quality and harm aquatic life by depleting oxygen levels and can increase nutrients released from sediment. For those reasons, hydrilla containment and removal has been considered as likely benefitting water quality and quantity. | $9,992.94 |
| Person County | Construction phase at County Farm site with project schedule towards constructing a passive recreational park with stormwater controls for IAIA compliance; Special Use Permit approved to convert the site into a park. Anticipated to be completed in FY26. | $318,231.00 |
| Town of Stem | Repair and replacement of surcharging pump stations, sewer pipes, and appurtenances currently leaking sewage, which lead to illicit discharges. More information is available on the Project Site: https://www.sgwasa.org/i85-ssi | $11,605.00 |
| Town of Hillsborough | Eno River Hydrilla Management Project - Cost share for treating invasive hydrilla plant by the Eno River Hydrilla Management Task Force. Provides multiple benefits including nutrient reductions and aquatic habitat improvement. | $5,581.52 |
| Town of Hillsborough | Odie St GI Project - Design and construct stormwater green infrastructure treating impervious surface within the Odie Street Habitat for Humanity Neighborhood. Provides multiple benefits including nutrient reduction, peak flow attenuation, ecosystem benefits and includes an educational component to a historically underserved community. | $8,950.85 |
| Town of Hillsborough | Odie St Stabilization Project - Stabilize existing ephemeral/intermittent stream channel and plant riparian vegetation; while this is a separate project, it is part of the overall Odie Street/Habitat for Humanity project. Stabilizing the stream will reduce sediment and erosion, while stabilizing the roadbed along the channel. | $29,765.33 |
| Town of Hillsborough | DNJ Cistern Project - Install an above ground cistern and associated appurtenances at the town's Dorothy N. Johnson Community Center; water to be used for irrigation of plants and gardens within the DNJ center. | $284.89 |
| Town of Hillsborough | DNJ Rain Garden Project - Install a rain garden to treat runoff from the parking lot at the Dorothy N. Johnson Community Center; included an educational and outreach component as it was planted by volunteers. | $1,251.27 |
| Town of Hillsborough | Riverwalk Bioswale - convert an existing riprap lined drainage ditch along the town's Riverwalk greenway into a bioswale. Project also included an educational/public involvement component utilizing volunteers to plant as part of a sanctioned Creek Week event. | $1,219.48 |

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| Wake County | Protection of 18.15 ac in the critical water supply area of Falls Lake Watershed will protect water quality for future generations. The natural forested area will help recharge groundwater, slow runoff and filter pollutants. | $270,000.00 |
| Wake County | Reporting represents water-related education and outreach activities conducted by BJCP staff for FY25. In-kind funds represent average hourly rate for BJCP staff multiplied by the total number of program hours. Education and outreach increase awareness of water resources and the importance of protecting water quality. | $1,970.78 |
| Wake County | Wake County Wastewater Management staff respond to complaints and requests for investigation of malfunctioning septic systems. Complaint response is a top priority for WWM as malfunctioning septic systems present potential threats to both public health and water quality. In-kind funds are based upon the hourly rate for staff performing 1) septic complaint investigation/code case violations, 2) septic repairs (Construction Authorization and Operation Permit, Inspections), and 3) Operation and Maintenance Inspections within the Falls Lake Watershed. Watershed investment reflects hours above and beyond 2006 hours. | $176,445.38 |
| Wake County | WCES Watershed Management staff performed 34 inspections on projects permitted prior to July 1, 2012, in Falls Lake Watershed to ensure SCMs are functioning properly. Properly functioning SCMs are critical to maintaining water quality in Falls Lake. SCMs provide nutrient reduction and peak flow attenuation. In-kind funds are based upon the hourly rate for staff performing SCM inspections within the Falls Lake Watershed. Watershed investment reflects hours above and beyond 2006 hours. | $12,954.33 |
| Wake County | The project repaired 150 linear feet of an unnamed tributary (UT) with eroding stream banks on a single-family home site. The project stabilized the banks and installed matting and native vegetation to establish a riparian buffer. By reducing sediment and filtering nutrients from runoff, this project helps to improve water quality in the Falls Lake Watershed. | $36,604.00 |
| Wake County | Wake County completed the design and construction for retrofit of an existing dry detention to a bioretention and installation of a new linear bioretention at Northern Wake Fire Station #2. The 8.5 ac is located on a UT to Falls Lake. The project is located in the Protected Area of Falls Lake and ~0.5mi outside of the Critical Area. Initial project construction pre-dated Falls Lake Rules. The SNAP tool estimates an 85% reduction of nitrogen and 87% reduction of phosphorous with installation of the two bioretention projects. Wake County SWCD contributed $50,000 in CCAP funds to assist with construction costs. Project installation is complete. Project installed with sod groundcover. Additional planting is anticipated in Fall 2025 to enhance aesthetic and habitat benefits. | $144,752.00 |
| City of Raleigh | The project is located at 1317 Thompson Road in eastern Durham County, and the conservation easement consists of 13 acres adjacent to both sides of the tributary. The project will repair and reconstruct 4,400 linear feet of the stream bank to significantly reduce erosion and improve water quality. Once completed, the project would be permanently protected and prevent an estimated 985 pounds of nitrogen and 63 pounds of phosphorous per year from entering Falls Lake. The other funding partners include the landowner (donation of $66,074), North Carolina Land and Water Fund ($400,000), and North Carolina Division of Water Resources ($200,000) for a total project cost of $1,172,074. The DCSWD will be responsible for monitoring and maintenance requirements. | $506,000.00 |
| Franklin County | Project type is listed as Stormwater control measures (State-approved SCMs); no additional description provided. | $19,058 |
| Town of Wake Forest | The Town is looking to retrofit an existing dry detention basin to provide both water quality treatment and peak flow attenuation. KCI Associates is helping the Town explore the most effective SCM type to be installed such as a bioretention cell, stormwater wetland, or a submerged gravel wetland. | $58,924 |