



Developing An Innovative Approach to Nutrient Management

The challenge: The [2011 Falls Lake Rules](#) require local governments to reduce nutrient loads from development in the watershed. Development includes houses, schools, roads, offices, etc.

The 2011 Rules have different requirements based on when development occurred. Areas developed after 2012 are regulated as “New Development.” This section of the Rules requires installation of engineered devices to limit nutrient loading from the site. Since 2012, each local government has required that developers meet these requirements.

The 2011 Rules also require that local governments reduce nutrient loading from sites developed before 2012. This older development is more difficult to treat. Roads, water lines, and buildings limit the use of new treatment devices. In the original 2011 Rules, only devices with NC-approved nutrient reduction values could be used. These nutrient reduction values are also called credits. Many beneficial actions improve water quality and reduce nutrients that do not have approved credits. In the past, these actions did not count toward compliance.

A new idea: In 2018, the UNRBA began exploring an alternative. This approach would address nutrient loading from older development. Environmental conservation groups first suggested the idea. They proposed that beneficial actions should “count” toward compliance even without NC-approved credits. Their idea shifted the focus from tracking nutrients to implementing beneficial projects.

The UNRBA members worked with many organizations to develop this new program. The North Carolina Division of Water Resources (DWR) was heavily involved. DWR and the UNRBA presented the concept to the NC Environmental Management Commission (EMC). After developing a detailed joint compliance [program](#), the EMC approved it in January 2021. Every local government that is a member of the UNRBA is participating in the IAIA.

This program is called the Interim Alternative Implementation Approach (IAIA):

- Uses financial investment to track compliance
 - Relies on projects and activities that benefit water quality
 - Expands the types of beneficial actions that count toward compliance
-

Types of allowable projects: The EMC-approved program identifies eligible projects and. Local governments have the flexibility to select those that best meet the needs of their community. This innovative approach benefits the entire watershed.

Preservation of natural areas like forests is extremely important to maintain water quality. This practice does not currently have a nutrient reduction credit. Under the IAIA, land conservation is an eligible activity.



The program document can easily be updated to add new activities once approved by DWR. The March 2022 IAIA Program Document includes the following eligible activities. This version was current when this document was drafted. Future updates to the IAIA Program Document will be posted to the [UNRBA Resource Library](#).

- All State-approved practices with established nutrient credits including stormwater control measures (SCMs)
- Green infrastructure and other best management practices (BMPs) that include water quality and quantity improvements
- Stream and riparian buffer restoration and enhancement
- Programmatic measures beyond levels in 2006 for years after the start of the IAIA program
 - Fertilizer application education of businesses and homeowners
 - Onsite wastewater treatment system inspection programs, maintenance tracking, repair, replacement, and pump-out programs, education of owners regarding proper maintenance, and training of professionals who inspect and repair onsite systems
 - Pet waste pickup education, waste management stations, and enforcement
- Infrastructure improvements including
 - Repair and replacement of leaky infrastructure
 - Reduction of sanitary sewer overflows
 - Extension of sewer lines to areas using onsite systems (targeting areas with known failure issues) or package plants
- Illicit discharge detection and elimination
- Land conservation in high priority areas (as determined through an appropriate evaluation resource, i.e., land conservation programs that identify water quality aspects of available preservation sites)
- Floodplain restoration and reconnection
- Greenways and parks with water quality and quantity benefits (water quality benefits would be identified as specific project components and documented within the adopted development plans)
- Projects and activities that focus on flooding that have an associated water quality benefit
- Operation and maintenance costs associated with preserving long-term functionality of practices implemented under the IAIA



Land conservation site; photo courtesy of Person County



- Hydrilla removal and control as approved by DWR in a memorandum from Rich Gannon to Wesley Poole (Orange County) dated February 10, 2022: “The Division approves the type of activity described in your request as eligible toward compliance under the IAIA program, provided it is conducted through participation in the Eno River Hydrilla Management Task Force or other similar state-sanctioned body, and in accordance with the protocols of the Division’s Aquatic Weed Control Program. Acceptable activities under this oversight can include periodic, contained stocking of sterile grass carp in contributing ponds in the watershed and annual herbicide treatment (fluridone) in flowing streams, followed by a tuber survey to determine effectiveness.”

Program Duration: The IAIA has an initial 5-year duration. The program serves as a demonstration to inform the Falls Lake Rules readoption process. The IAIA is interim because it only applies until the Falls Lake Rules are readopted (expected by 2027).

Successes: The UNRBA members established the required levels of investment for the IAIA. Each year, participants are required to commit a total of \$1.5 million. These investments must go toward eligible projects and activities. This funding is separate from the reexamination study or funding of the UNRBA.

The first two years of the IAIA were hugely successful. The [Year 1](#) and [Year 2](#) annual compliance reports show \$8.5 million has been committed already! In these first two years, the UNRBA members exceeded the required investments by \$5.5 million. Subsequent annual compliance reports will be posted to the [UNRBA Resource Library](#).

Application for Revised Falls Lake Rules:

The IAIA successes demonstrate the benefits of a collaborative approach. Watershed stakeholders would like to see the IAIA incorporated into revised Falls Lake Rules.

The UNRBA [recommendations](#) for a revised strategy expand on this approach:

- Partner with other regulated entities
- Foster greater cooperation
- Expand activities to address the entire system
- Track progress and changing conditions
- Adapt to new information

