

ACHIEVING FLORIDA NUTRIENT REMOVAL REQUIREMENTS

Florida’s Statewide Stormwater Ratification Bill (SB 7040) was signed into law June 28, 2024, with nutrient removal performance standards taking effect December 28, 2025. These codified nutrient removal requirements mean that traditional stormwater systems in many cases will no longer solely be able to meet the nutrient requirements for Total Nitrogen (TN) and Total Phosphorus (TP).

REVISED NUTRIENT REMOVAL STANDARDS

The new stormwater rule establishes statewide standards for minimum Total Nitrogen (TN) and Total Phosphorus (TP) removal based on watershed characteristics.

The new mandate will increase stormwater treatment requirements for most projects, whether they are new development or redevelopment. With these new standards will come new challenges to achieving regulatory compliance. Ultimately, the historic design methods, including wet ponds, will need to be supplemented by new and innovative treatment solutions.

Project Type	Reduction Percentage	
	TP	TN
All Sites	80%	55%
Outstanding Florida Waters (OFW)	90%	80%
Impaired Water	80%	80%
Impaired Water + OFW	95%	95%

A TREATMENT TRAIN APPROACH

Combining traditional practices, such as wet ponds, with manufactured treatment devices, media, permeable surface and stormwater harvesting allows sites to come into compliance with the new regulations.

To achieve this, Ferguson is proud to expand our product portfolio with the addition of Greyter Water Systems. Through this partnership, Ferguson now adds stormwater harvesting solutions to our portfolio of treatment devices focused on achieving stormwater compliance.



**Permeable
Surfaces**



**Floating
Wetlands**



**Inlet
Treatment**



**Filtration
Media**



**Treatment
System**



**Indoor
Reuse**



**Outdoor
Reuse**

UTILIZING STORMWATER HARVESTING

For sites with the most stringent nutrient removal requirements or for sites with development limitations, it is often difficult to achieve nutrient compliance. From limited space for ponds, to grading limitations compared to seasonable high-water table, often designers face a limitation that prohibits their ability to deploy certain technologies.

In these cases, designers must look to new ways to reduce off-site discharges of nitrogen and phosphorus. One way to accomplish this is through retaining the water on-site for utilization in irrigation and other non-potable applications like toilet flushing and cooling towers. Please turn to the back side of this document for an introductory understanding on how to model a Stormwater Harvesting system in BMPTrains, to achieve nutrient removal compliance in Florida.

BMPTRAINS MODELING OF A STORMWATER HARVESTING SYSTEM

Navigating a path to compliance starts with stormwater Best Management Practices (BMP's). Let the Team from Ferguson Waterworks show you how to get there utilizing the BMPTrains software platform to model a Stormwater Harvesting system.

BMPTRAINS AND THE MODELING PROCESS

Achieving nutrient removal compliance in the state of Florida begins with determining the nutrient removal goal(s) and establishing a nutrient loading model.

The nutrient loading model, developed in BMPTrains, utilized Florida specific data in a peer-reviewed platform. Once entering the software, users will input pre- and post- development catchment conditions to establish a nutrient loading differential between existing conditions and the proposed development. From there, user will develop treatment trains to achieve the desired nutrient removal solution.

Once a successful model has been developed, designers can partner with manufacturers to develop specifications for the construction and operation of the proposed practices.

Steps to Modelling

1. Specify nutrient removal goal
 - Net Improvement, 10% Pre, or Specified Removal
2. Enter catchment details
 - Calculates TN & TP needed for removal
3. Enter treatment train devices (BMP's)
 - Numerous treatment practices available
 - User Defined allows the input of Manufactured Treatment Devices (MTDs)
4. Configure catchments to connect treatment devices with catchments.
5. Review the summary to determine if treatment goals have been met.

INPUTTING STORMWATER HARVESTING

To properly input a stormwater harvesting system, designers must prepare a treatment train utilizing multiple practices withing the Treatment form of BMPTrains. This ensures proper nutrient removal efficiencies are deployed based on the site-specific configuration.

To accomplish this, Ferguson Waterworks recommends all systems start with a pre-treatment manufactured treatment device. Using the User Defined form, designers will enter the devices brand name and the nutrient removal efficiencies per manufacturer testing data or Appendix O. These devices remove trash, debris, and sediment from the stormwater system, reducing nutrient loads and long-term maintenance costs.

Next, like with traditional nutrient models, the designer will input their wet pond configuration. This begins with the permanent pool that provides nutrient credits. From there, additional credits can be added for littoral zones and floating wetlands.

Finally, the user will establish their Stormwater Harvesting criteria. This includes the area for irrigation, the harvesting volume, and the harvesting rate. It is important to note that the model provides credit based on the volume of runoff retained within the harvesting process.

Pre-treatment
Wet Pond
Stormwater Harvesting

Navigating the software and developing the right strategy may be challenging. At Ferguson Waterworks, we specialize in helping customers attain their goals for water quality and rehabilitation of their downstream resources, while meeting regulatory requirements.

Proudly serving the State of Florida with Sustainable Stormwater Solutions.

Visit fergusongss.com for more product details or contact a Geo & Stormwater Specialist at infogeo@ferguson.com.