October 1, 2020

Submitted via email to Stormwater2020@floridadep.gov

Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Re: Section 5 of Chapter 2020-150, L.O.F. Stormwater Rulemaking – Initial Comments in Response to Request for Public Input

Dear Sir/Madam:

On behalf of the undersigned organizations, we are submitting comments in response to the Department of Environmental Protection's (FDEP) request for public input ahead of the formal initiation of rulemaking to update Florida's stormwater design and operation regulations as directed by Section 5 of Chapter 2020-150, Laws of Florida. We offer the following from organizations concerned by the current state of our waters, representing Floridians statewide:

As Florida's population steadily increases, so does the total amount of land converted to impermeable surfaces. Stormwater pollution from urban, agricultural and industrial runoff is a major source of nonpoint water pollution affecting our lakes, rivers, estuaries, wetlands, springs and aquifer. The regulation of activities that create stormwater runoff is essential to the protection of Florida's waters and the stormwater regulatory system should ensure the design of Best Management Practices (BMPs), including Low Impact Development (LID) BMPs that achieve the highest possible reduction of pollutants entering our waters.

FDEP's 2010 draft Environmental Resource Permit (ERP) Stormwater Quality Applicant's Handbook would have been a first step for establishing stronger regulations but was ultimately not adopted. Ten years later, the 2010 draft rules can be built upon for stronger protective procedures in the 2021 rules that reflect the advances in our technological and scientific understanding of hydrologic and climate systems and improvements to BMP design.

Additionally, while Senate Bill 712 directs FDEP and the water management districts to update the stormwater design and operation regulations *including* updates to the ERP Applicant's Handbook, amendments must also be made to the rules that govern stormwater *beyond* the ERP Applicant's Handbook in order to address the issues with stormwater pollution and meet the underlying objectives of SB 712. We therefore urge FDEP to expand the scope of this rulemaking beyond the ERP Applicant's Handbook.

To achieve a truly protective and restorative stormwater rule, the following topics must be considered and addressed:

- **Primacy of more stringent local stormwater regulations**
- **"Pre-development conditions loading" definition**
- **"Net improvement" definition**

- **Post-construction monitoring components**
- **Sea level rise and climate change impacts on stormwater systems**
- **Redevelopments/retrofitting standards**
- **10/2 General Permits and self-certification**

Primacy of more stringent local stormwater regulations
The state must promulgate strong stormwater regulations that act as a regulatory floor, not a ceiling for local governments. Local governments must continue to have the ability to protect their water resource-based economies with measures that are more protective than the state's baseline standards. For example, Alachua, Pinellas and Sarasota county governments have voluntarily strengthened their stormwater codes to include regionally tailored regulatory elements for stormwater discharges; the freedom to do so must remain in any resulting rule. Local governments cannot be restrained from taking action to ensure achievement of the state's own water quality standards. Accordingly, any new regulations must not preempt local efforts that are more protective/restorative than the state minimums.

"Pre-development conditions loading" definition
The calculation of the pre-development conditions and pollutant loading rates is the foundation for designing a stormwater system that meets all applicable requirements and protects water quality. The correct baseline must be known before calculating the required reductions and designing a suite of stormwater BMPs that will meet the reduction goal.

Pre-development does not necessarily mean "existing conditions," but rather, pre-development is the natural, undisturbed land-use and vegetative characteristics of the site absent anthropogenic impacts. Simply using existing conditions would in certain cases result in locking in current, human-caused pollutant loading into the stormwater system design. Thus, how "pre-development" is defined will ultimately influence whether the updated stormwater regulations are effective at achieving the relevant performance standards.

The March 2010 Draft of the ERP Applicant's Handbook appropriately defined both "pre-development" and "natural vegetative community type," as follows (emphasis added)[1]:

> "Pre-development' means" the natural vegetative community type of the project area.
>
> "Natural vegetative community type" means the landscape that *currently exists* or is *likely to have existed prior to disturbance* based on the vegetation community associated with the natural soil type of the project area, using information such as soil surveys, aerial photographs, and the vegetation communities that can reasonably be expected to have existed on the site before disturbance."

"Net improvement" definition
Section 5 of Chapter 2020-150 directs FDEP to consider and address "…measures for consistent application of the net improvement performance standard to ensure significant reductions of any

[1] FDEP and Water Management Districts. March 2010 Draft Environmental Resource Permit Stormwater Applicant's Handbook. 2010.

pollutant loadings to a waterbody." "Net improvement" is typically defined as ensuring the stormwater pollutant loading from the developed site is less than the current loading from the site, and is required for any projects that discharge to waterbodies that do not meet applicable state water quality standards, i.e., the waterbody is impaired. However, not only is net improvement interpreted differently across the state's five Water Management Districts, the ERP rules lack specific quantifiable requirements to measure net improvement. The increasing number of waterbodies impaired for nitrogen and phosphorus throughout the state of Florida underlines the critical need to develop a protective and effective definition for net improvement, given the continued rapid rate of development and population growth. The undersigned recommend that the stormwater rulemaking address the net improvement definition through a two-step process:

First, for those waterbodies listed on the state's Verified List of Impaired Waters, net improvement should be defined as a specific percent *better than* pre-development/existing conditions, similar to Alachua County's stormwater manual that identifies at least 10%.[2] The rulemaking should consider whether a greater than 10% net improvement standard is necessary, given that the majority of adopted Total Maximum Daily Loads (TMDL) require more than a 10% pollutant loading reduction.

Secondly, once a TMDL is adopted with waterbody specific required load reductions, then net improvement requirements should equal the percent reduction identified in the applicable TMDL, in order to protect water resources.

Post-construction monitoring components

Stormwater design, operation, and management is a complex and evolving field. Despite best efforts, the current system fails to adequately protect our waterways from nutrient laden stormwater runoff. While numerous changes are needed to address this issue, the single most important change needed is to require ongoing monitoring and maintenance of stormwater systems in order to ensure that they are properly functioning and not contributing to the degradation of water quality. Without continuous data, there is no way of knowing if design standards are adequate, if stormwater systems are functioning properly, or if systems are in need of maintenance or updates. The presumption of compliance for stormwater systems has failed to protect our waterways, as evidenced by the rampant nutrient pollution across the state. Post-construction monitoring is absolutely critical to a successful stormwater program.

Sea level rise and climate change impacts on stormwater systems

Florida's stormwater regulations must require that updated sea level rise projections and increases of both surface water and groundwater be included in stormwater system designs in order to avoid retention pond failure and possible release of untreated stormwater. An April 2020 study[3] examined the reliability and performance of a retention pond in the Tampa Bay area under sea level rise conditions. The results showed that sea level rise could cause an increase of the seasonal high-water elevation of the pond, thereby lowering the system's reliability by about 45%. The amount of pollutants discharged by the system increased due to the pond's failure to recover within the required 72 hours. Additionally, the updated stormwater rule should address the

[2] Alachua County Stormwater Treatment Manual. Alachua County, Florida. October 2018.

[3] Rahman Davtalab et al., "Sea Level Rise Effect on Groundwater Rise and Stormwater Retention Pond Reliability," Water, 12 ,1129 (2020): doi: 10.3390/w12041129.

nonstationarity of rainfall frequency statistics used as the basis for runoff projections. The current curves are no longer valid reflections of current statistics and do not reflect the conditions likely to prevail in coming decades.

Redevelopment/retrofitting standards

Due to the projected increase in population within the state of Florida, retrofit and redevelopment projects will likely increase as well. However, with redevelopment come challenges associated with ensuring outdated stormwater management systems are updated to modern standards. FDEP can begin addressing these challenges by defining redevelopment within the ERP Applicant's Handbook and ensuring that the stormwater rule update appropriately incorporates protective redevelopment and retrofitting performance standards.

Additionally, updated stormwater regulations should consider incentives for redevelopment, while simultaneously requiring the same regulatory standards for redevelopment as new development. Recognizing that redevelopment projects are sometimes land-limited, we suggest that the same performance standard apply to these projects as new development, with the flexibility of using off-site mitigation/treatment within the same watershed as necessary to meet requirements. Adopting similarly stringent standards with off-site mitigation options would ensure stormwater improvements would be made on-site as the first preference, protect water quality, and provide flexibility based on site conditions.

10/2 General Permits and self-certification

Section 5 of Chapter 2020-15 also directs FDEP to review and evaluate permits issued pursuant to F.S. 403.814(12), commonly referred to as 10/2 General Permits or 10/2 Self Certification Permits. Projects with 10 acres or less of upland impacts and 2 acres or less of impervious surface are eligible to "self-certify" under 10/2 that a development meets the applicable requirements, including providing net improvement if located within an impaired watershed. 10/2 General Permits bypass the higher level of scrutiny and review required by the agencies for Individual Permits. An analysis by Eric Livingston in 2014 indicated that "less than one percent of the 10/2 Self Certifications for projects within impaired watersheds met the 'net improvement' standard of having the post-development pollutant load less than the pre-development pollutant load."[4]

Despite the size restrictions on these types of permits, the cumulative impact of hundreds of 10/2 permits being approved within impaired watersheds and failing to meet net improvement must be addressed in the rulemaking process. Moreover, due to the site-specific nature of net improvement, the undersigned recommend that the 10/2 provisions be revised to prohibit issuance when a proposed project is located within a watershed listed as impaired or has an adopted TMDL.

Conclusion

We look forward to participating in rule development workshops following the formal initiation of rulemaking and welcome FDEP staff to contact representatives of the undersigned organizations for additional information about our recommendation

[4] Summary of the Impacts of the "10/2 Self Certification" General Permit. Eric Livingston, Watershed Management Services, LLC, Crawfordville, FL. Updated November 2014.

Sincerely,

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