



## **FDEP Statewide Water Quality Rule - Bullet Points**

**Moderator: Steven J. Stuebs, P.E. (AVID Group)**

- **WHY IS FDEP CREATING A STATEWIDE WATER QUALITY RULE NOW?**

- FDEP is trying to address the growing problem of nutrient enrichment of Florida's surface and ground waters.
- The state's previous water quality criteria addressed capturing total suspended solids, and did not directly address increased loads of dissolved nutrients such as nitrogen & phosphorus.
- FDEP has been monitoring the quality of over 6,000 water bodies throughout the state.
- Surface waters that do not meet water quality standards, as set forth in the 1999 Florida Watershed Restoration Act, are deemed "impaired".
- FDEP issued a list of impaired water bodies in 1998, and has been continuously updating it since then.
- The current rule development is based on a study completed by Harvey Harper, Ph.D., P.E. for FDEP (*Evaluation of Current Stormwater Design Criteria within the State of Florida*, June 2007). Dr. Harper is a former faculty member at UCF.

- **WHAT DEVELOPMENTS WILL THE NEW RULES AFFECT?**

- Any development that is not previously permitted and constructed including redevelopment projects.
- Exemptions for development / redevelopment involving more than 0.2 ac of impervious construction are no longer granted by SWFWMD, even if the existing site is completely paved.
- Obtaining an environmental resource permit will delay the effect of the new rules until the permit expires or is modified.
- Obtaining a permit and constructing the permitted stormwater infrastructure will permanently avoid the new rules, unless the permitted improvements are later modified.
- A modification to an approved permit after the new rules are in effect may allow the agency to require a retrofit of the system to address the new rule.

- **HOW DOES THE NEW RULE AFFECT PROJECTS?**

- The required water quality treatment storage will increase.
- The required fill will increase for projects using dry pre-treatment
- More area must be set aside for stormwater ponds, or funds must be allocated to provide underground stormwater storage.
- Rate control / flood control is not directly affected by the new rule.

- **HOW WILL TREATMENT SYSTEMS BE DIFFERENT UNDER THE NEW RULE?**

- Standalone wet ponds have historically been adequate to address water quality criteria. Under the new rule, cascading systems containing upstream dry storage and downstream wet storage will be common.
- Additional treatment methods that are either not approved, or in common usage, will begin to become more prevalent (stormwater reuse, floating vegetated mats, pervious pavement, green roofs, chemical treatment, etc.)

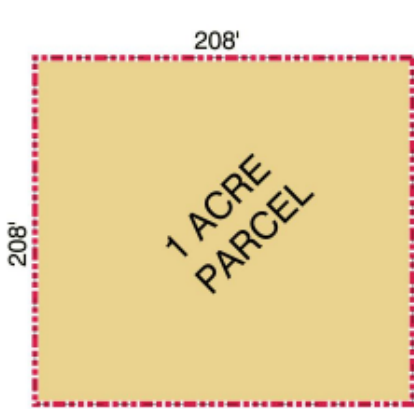
- **EFFECT OF THE NEW RULE ON A 1 ACRE URBAN INFILL REDEVELOPMENT**

- Existing site is 100% impervious.
- Proposed redevelopment is for a use similar to the historic use in terms of size and intensity.
- Entire site will be demolished and rebuilt.
- Assume good underlying soil conditions (deep water table, high permeability)
- Historically, this kind of redevelopment would have been exempt from stormwater treatment and attenuation criteria in SWFWMD.
- Under SWFWMD's current interpretation of the new rule,
  - Water quality treatment must be provided for any constructed impervious cover, even if it replaces existing impervious cover.
  - Impervious cover that remains undisturbed or is resurfaced / restriped is not subject to the water quality retrofit.
  - If the parcel lies in a basin impaired by high nutrient concentrations, the volume needed for the greater of the "presumptive" or the "net improvement of nutrient" treatment must be provided. For a highly impervious existing condition, the increase in nutrient load will not be significant and the presumptive treatment volume will control.
  - "Net improvement" is the reduction of pollutant discharge from a parcel as a result of the parcel's development or redevelopment. SWFWMD does not want a project to match its existing nutrient discharge rates when it redevelops. They want the rates to be reduced, which they have termed "net improvement".
  - The presumptive water quality volume is the volume that was required by SWFWMD from 1984 – 2008 (typically trapping ½" runoff in a dry pond or 1" runoff in a wet pond).
- Under the coming FDEP rules, the existing condition of the land is considered to be what it would have been if it was "undisturbed" (i.e., forest). Credits for existing nutrient loads based on existing development will be eliminated.

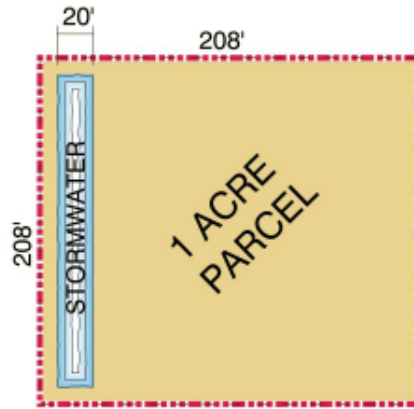
- **SUMMARY**

- Developers need to be more open minded to new stormwater treatment systems (the old ways do not work any more)
- The cost of stormwater systems will increase (all the new stuff costs more money)
- The timeframe to obtain a permit will be longer until the new rules are fully understood
- Maintenance cost for the new stormwater systems will increase

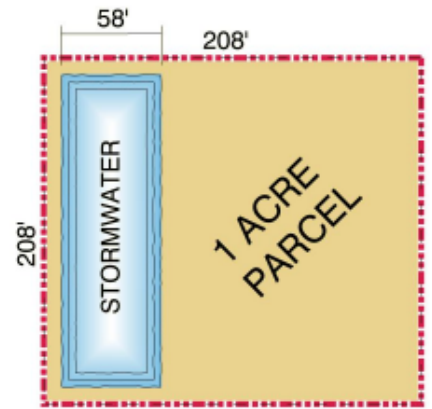
## EFFECT OF NEW RULES



POND SIZE UNDER THE OLD RULES  
(0 %)



POND SIZE UNDER CURRENT RULES  
(9.5 %)



POND SIZE UNDER FUTURE RULES  
(27.7 %)

NOTE: REPRESENTATIVE SITE IS 1 ACRE, TOTALLY IMPERVIOUS IN PRE-DEVELOPMENT/EXISTING CONDITION. ASSUME POND TREATMENT DEPTH IS 0.5' AND WATER PERCOLATES IN VERTICAL WALL POND.