

Stormwater Regulations Comparison

Volusia County Environment and Natural Resources Committee
February 5, 2024

- Criteria reviewed
 - ▣ Volume of Retention
 - ▣ Design Storm
 - ▣ Projected Rainfall
 - ▣ Pond Design
 - ▣ Maintenance

Volusia Municipalities (all)

- ▣ Daytona Beach
- ▣ Daytona Beach Shores
- ▣ DeBary
- ▣ DeLand
- ▣ Deltona
- ▣ Edgewater
- ▣ Holly Hill
- ▣ Lake Helen
- ▣ New Smyrna Beach
- ▣ New Smyrna Beach (Proposed)
- ▣ Oak Hill
- ▣ Orange City
- ▣ Ormond Beach
- ▣ Pierson
- ▣ Ponce Inlet
- ▣ Port Orange
- ▣ South Daytona

□ Select Counties

- Known to have more restrictive standards and/or immediately adjacent
 - Pinellas County
 - Sarasota County
 - Brevard County
 - Seminole County
 - Indian River County

Volusia County Requirements

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- 2 sets of standards within Code
 - Ch. 50 applies to all municipalities within Volusia
 - Marked with **green text**
 - Ch. 72 contains Volusia's additional minimum standards applicable only in the unincorporated areas

□ Volusia County

- 24-hour, 25-year frequency storm
- Ponds must recover within 72 hours
- Small sites must retain **½ inch of depth** over entire project area

□ Jurisdiction Comparison

- Debary, Sarasota County
 - 24-hour, **100-year** frequency storm
- DeLand, Edgewater, Deltona, Ormond Beach
 - Small sites must retain **1 inch** of depth over the entire project area
- New Smyrna Beach (existing)
 - No less than **1 and ½ inch**

□ Volusia County

- Closed basin hydrograph for a 24-hour, 100 year storm event

□ Jurisdiction Comparison

■ Debary

- Closed basin for **10.6 inches** (equivalent to 24 hour, 100 year)
- Closed basin retention volume should recover within **14 days** after event (same as SJRWMD)

- Volusia County
 - Defer to SJWMD

- Jurisdiction Comparison

- Pinellas County
 - Uses the FDOT Rainfall Intensity-Duration-Frequency (IDF) Curves
- New Smyrna Beach (Proposed), Brevard County
 - Specifies rainfall amounts within each category of storm.
 - e.g. 24-hour 25-year storm = 9.0" (BC) / 9.5" (NSB)

□ Volusia County

- Water table lowered no more than **15% of the site up to 5 feet** (uncommon)
- Slopes no steeper than 4:1 to a depth of 2 feet at seasonal low level pond elevation, at which point the side slope may be increased to 2:1

□ Jurisdiction Comparison

- Holly Hill
 - Requires a maintenance berm of 10 feet
- Ormond Beach
 - Pond bottom at least 1 foot above seasonal high-water table (SJRWMD)

□ Volusia County

- Water table lowered no more than **15% of the site up to 5 feet** (uncommon)
- Slopes no steeper than 4:1 to a depth of 2 feet at seasonal low level pond elevation, at which point the side slope may be increased to 2:1

□ Jurisdiction Comparison

- Ormond Beach, Debary, Orange City
 - Require minimum pond depth
- Pinellas County
 - Infiltration rate no greater than $\frac{3}{4}$ of lowest infiltration rate (dry ponds)
- Sarasota County
 - Dry retention ponds with filter systems over 150 feet shall have a concrete low flow v-channel
- Debary
 - Side slopes shall have max depth of 4 feet from surrounding average grade

□ Volusia County

- Shall be maintained by owner with easements for County maintenance access if needed

□ More restrictive municipalities

■ Daytona Beach

- Required easement of 15 feet for dry ponds, 10 feet for wet ponds

■ Port Orange

- Require maintenance easement of 20 feet centered over pipe/structure

Discussion