

Exhibit C

Division 9 of Article 4 in the Land Development Regulations is amended as followed:

(All other sections not set forth below will remain unchanged)

Division 9. Stormwater Management

Sec. 4.385. Standards for review.

4.385.F. *Water quality criteria.*

1. Surface water discharges from a project after development shall have approximately the same quality as runoff that would have occurred following the same rainfall under predevelopment conditions.
2. Reserved.
3. Compliance with this section 4.385.F shall be demonstrated by compliance with the following water quality treatments. Alternatives to these water quality treatments may be allowed if the applicant demonstrates, to the satisfaction of Martin County, that the annual mass pollutant load reductions provided by the alternate is equal to or greater than the annual mass pollutant load reductions provided by the following water quality treatments. The burden of proof for efficiency of requested alternative must be supported by independent analysis and verified by field testing.
4. New projects. Treatment volumes and methodologies for all development shall be calculated using the following: The required treatment volume is three inches except for agricultural projects where the required treatment volume is the runoff from three inches of rainfall. The treatment type is weighted in accordance with its efficiency; therefore the total treatment volume may be greater than the required treatment volume. The following represents the treatment type and its efficiency:
 - a. *Dry retention, reuse, source reduction, exfiltration trench, swales, etc.*
 - (1) Pond bottom minimum one foot above seasonal high groundwater table.
 - (2) Recovery of half of the treatment volume between 24 hours and five days.
 - (3) Recovery 90 percent of the 25-year three-day runoff volume in 12 days from cessation of the storm event.
 - (4) One acre-foot of dry retention volume is equivalent to one acre-foot of the required treatment volume.
 - b. *Off-line retention:*
 - (1) Recovery of half of the treatment volume between 24 hours and five days.
 - (2) Pond bottom minimum three feet above seasonal high groundwater table or a minimum of 18 inches above the seasonal high groundwater table with mounding calculations to support lower elevation.
 - (3) One acre-foot of off-line retention volume is equivalent to one acre-foot of the required treatment volume.
 - c. *Dry detention:*
 - (1) Pond bottom minimum one foot above seasonal high groundwater table elevation, mounding calculations required when proposed in soils with low hydraulic conductivity.
 - (2) Orifice or V-notch weir one inch above pond bottom.
 - (3) Recovery of half of the treatment volume between 24 hours and five days.
 - (4) Recovery 90 percent of the 25-year three-day runoff volume in 12 days from cessation of the storm event.
 - (5) One and one-quarter acre-foot of dry detention volume is equivalent to one acre-foot of the required treatment volume.

- d. *Wet detention:*
- (1) Minimum 14-day wet season residence time.
 - (2) Orifice elevation minimum is the seasonal high groundwater table elevation.
 - (3) Recovery of half of the treatment volume between 24 hours and five days.
 - (4) Recovery 90 percent of the 25-year three-day runoff volume in 12 days from cessation of the storm event.
 - (5) One and one half acre-foot of wet detention volume is equivalent to one acre-foot of the required treatment volume.
5. Littoral and upland transition zones. Permanent plantings consisting of native vegetation shall be established and maintained as part of the surface water management system. All required lake planting and lake area management plans shall be approved by the Growth Management Director. Excavated lakes or ponds shall be planted with required littoral and upland vegetation prior to the issuance of the first certificate of occupancy for any lot in the development or the associated development phase and no later than the final certification, or prior the County Engineer's acceptance of completion. Such plans shall comply with the following requirements:
- a. General plan requirement. Provide areal and cross-sectional planting plans for the establishment of required lake littoral and upland transition zones, including a lake management plan prepared by a qualified environmental professional. The lake littoral and upland transition zones shall be identified and quantified on a final site plan for proposed development. The planting plans shall be provided on a landscape plan or PAMP as part of a proposed development.
 - b. General planting requirement. Identify the species, size and number of native plants to be used; the location and dimensions of the littoral and upland transition zones; the total linear footage of the proposed lake; typical cross section of planted littoral, upland transition areas; and the methods for planting and ensuring survival of the plants.
 - c. Lake littoral zone planting area requirement. The littoral zone shall include a total area of at least ten square feet per linear foot of lake perimeter. The lake perimeter shall be measured at the control elevation of the lake. The littoral zone planting area consists of that area between one foot above control water elevation to four feet below control water elevation. With some exceptions predicated on species and exposure, extended littoral zone shelves should be located in pocketed areas of the lake and/or in areas of the lake which receive direct drainage outfall from adjacent development.
 - (1) Slopes for planted littoral zones shall be no steeper than ten feet horizontal to one foot vertical to a distance of five feet waterward of the designated planted littoral zone area. Shallower slopes are encouraged to promote greater success of the littoral zone plantings.
 - (2) The littoral zone shall be provided with a minimum of six inches of an organic topsoil mix to promote vegetative growth for those areas that do not have adequate soil conditions to ensure plant survivorship. The littoral zone shall be planted with at least five species of appropriate native wetland vegetation with an average spacing of two feet on center. Submergent aquatic vegetation, as well as emergent vegetation shall be used to satisfy the littoral planting requirement. The design of these species used shall have an anticipated minimal 80 percent coverage
 - (3) In addition to the littoral zone criteria required above, a minimum of one tree for every 500 square feet of littoral zone area is required. The trees must be a minimum of eight feet in height and consist of native freshwater wetland and transitional varieties.
 - d. Lake upland transition zone planting area requirement. The upland transition zone shall also include a total area of at least ten square feet per linear foot of lake perimeter. The upland transition zone planting area consists of that area immediately beyond the landward extent of the littoral zone planting area. The upland transition zone may consist of preserved or planted vegetation but shall include trees, understory and ground cover of native species only. The upland transition zone and the adjacent littoral zone shall be designed and maintained to provide a continuous compatible habitat area.
 - (1) The upland transition zone shall be planted with at least five native plant species which shall include trees with a minimum height of eight feet and understory seedlings with a minimum height of 18 inches. Existing native vegetation in the upland transitional zone shall qualify to help fulfill this

requirement. Plants are required to be installed in accordance with the applicable standards provided in Division 1 of this Article to establish native groundcover and understory species. The design of these species used shall have an anticipated minimum 80 percent coverage.

- (2) A minimum of one tree shall be planted for every 500 square feet of upland and transitional zone area. The trees must be a minimum of eight feet in height and native upland and transitional varieties.
- e. Adjacent lake habitat and islands. The required area of littoral zones and upland buffer zones may be created by utilizing contiguous native habitat adjacent to the lake or by creating "habitat islands" within the water body to the extent that no less than 25 percent of the lake shoreline is provided with littoral zones and adjacent upland transition zones a minimum of ten feet wide. Utilization of islands with native littoral zone and upland vegetation are encouraged to meet this requirement. Where habitat islands are not included in the construction of the lake, a minimum of 50 percent of the lake perimeter will be provided with a vegetated extended littoral zone shelf and upland and transitional zone.
- f. Lake area management plan requirement. A lake area management plan (LAMP) shall be prepared by a qualified environmental professional for the successful establishment and long-term maintenance of lake littoral and upland transitional zone areas. The lake area management plan may be included with a PAMP for projects that have protected upland or wetland habitats or with the landscape plan for projects that do not require a PAMP and shall include the following:
 - (1) Description of how vegetation is to be established including the extent, method, type, and timing of any planting provided. Contingencies for reestablishing lake littoral or upland transition zone plantings where required coverage is not established.
 - (2) Description of the water management procedures to be followed to assure the continued viability and health of the plantings.
 - (3) A written strategy that identifies who shall be responsible for regular monitoring and removal of noxious, pest plant, and exotic species in order to assure a continued healthy diversity in littoral zone vegetation. This shall include management guidance for future homeowner's associations or responsible entities to address common maintenance issues and remedies to implement.