

VIII. STORMWATER MANAGEMENT PLANS

A. Applicability

1. Except as exempted in Section 17-25.03 F.A.C., a storm water discharge facilities permit from the Department of Environmental Regulation (DER) in accordance with Chapter 17-25, F.A.C., "Regulation of Storm water Discharge," shall be required for all new development prior to the issuance of a building permit.
2. For those developments using the swale exemption pursuant to Section 17-25.03 (1) ©, F.A.C., the applicant shall provide calculations and other supporting documentation as part of site plan review demonstrating that the treatment required by Chapter 17-25, F.A.C is obtained.
3. Development located in the Special Waterfront District and exempt from DER permitting pursuant to Section 17-25.03, F.A.C., shall include a storm water management system as part of site plan review which assures that the post-development peak discharge rate, volume, and pollution load of storm water is no greater than that which existed before development. The storm water management system shall be designed in accordance with the following standards:
 - a. Prior to and during land clearing and construction, a sediment control barrier shall be installed between the area to be cleared and wetlands or waters. In addition, flow paths of storm water from surrounding lands shall be determined; if storm water flow is toward areas to be cleared, measures shall be taken to redirect the storm water toward vegetated land.
 - b. Only those areas necessary for construction activities should be cleared. During construction, storm water barriers shall be inspected and maintained, and building debris shall be removed from the storm water flow path and deposited into trash receptacles.
 - c. Storm water impacts shall be minimized by using site suitable best management practices which maximize infiltration of storm water and minimize offset discharge. Storm water flow paths for property as it is planned to be developed shall be determined and berms, shallow depressions, swales, landscaping and other storm water management practices shall be included in the plan to intercept, infiltrate and treat storm water before it reaches wetlands or waters.

B. General Design Requirements

1. A storm water management system shall be provided to assure that the storm water peak discharge rate; volume and pollutant load is no greater after development than before development.
2. The storm water system shall be designed in accordance with Chapter 17-25 F.A.C., except that detention with filtration systems shall not be allowed and that off-line retention systems shall be used whenever the soil

conditions will allow percolation of the treatment volume within 72 hours. When soil conditions will not allow infiltration practices to be used, the storm water system shall consist of a wet detention system with a vegetated littoral zone. To enhance the effectiveness of the wet detention system, landscape retention pretreatment practices such as the placement of storm sewer inlets in grassed areas shall be employed in combination with the detention system.

3. To provide flood protection, the additional volume generated by the development from a 25 year frequency 24 hour duration storm event shall be controlled by a detention facility and released at a rate of discharge not to exceed the peak discharge rate from the site in its undeveloped condition. Special engineering features all be incorporated in minimize the transport of pollutants remaining in the detention facility.
4. No direct connection between retention and detention facilities shall be allowed. Flow from the retention facility shall be filtered naturally by percolation through the soil.
5. All detention facilities shall discharge design flow through structural discharge facilities. When direct discharge will degrade waters of natural streams, marshes, environmentally sensitive areas shellfish classification waters, or lands naturally receiving sheet flow, the discharge structure shall direct the flow to an intermediate spreader swale system.
6. All discharge structures shall be designed to trap floating debris and pollutants on site.
7. A 220-foot wide maintenance beam will be required around wet detention facilities and those dry facilities with slopes steeper than 4:1.
8. Storm water management systems shall be designed for ease of maintenance and operation and low maintenance costs. It is suggested that the required storm water system be integrated into a site's open areas and landscaping and that they be used as recreational or park areas. The system should be constructed in such a manner (i.e. gentle slopes, grassed, plantings, etc.) that it will be an amenity to the development.
9. Projects that are to be developed in phases will normally require the submission of a master plan of the applicant's contiguous land holdings. Applications for individual project phases may be considered only when the phases and the storm water systems are totally independent of adjacent lands.
10. No new untreated point sources of discharge will be permitted. Specific Authority 380.055 (10), F.S. Law implemented 380.0555 (10), F.S.
History – New

C. Storm water Management Plan Requirements

1. Whenever possible, the information to be submitted by the applicant may be combined with information required for site plan review and with information required by the Department of Environmental Regulation for a storm water permit pursuant to Chapter 17-25, F.A.C.
2. It is the responsibility of the applicant to include in the Storm water Management Plan sufficient information for the City to evaluate the

environmental characteristics of the affected areas, the potential and predicted impacts of the proposed activity on community waters, and the effectiveness and acceptability of those measures proposed by the applicant for reducing adverse impacts. The Storm water Management Plan shall contain maps, charts, graphs, tables, photographs, narrative descriptions, calculations and explanations and citations to supporting references, as appropriate to communicate the information required by this section. At a minimum, the Storm water Management Plan shall contain the information listed below.

3. General Information
 - a. The applicant's name, address and telephone number.
 - b. The owner's name, address and telephone number if different than the applicant.
 - c. The project name.
 - d. The project area in acres, the dimensions of the site, and the total land area owned or controlled by the applicant or owner which is contiguous with the project area.
 - e. A description of the scope of the proposed project including the land uses to be served.

4. Site Information Specific to the Project Area.
 - a. A detailed location sketch showing the parcel, major adjacent roads, water bodies, wetlands, etc., at an appropriate scale.
 - b. A recent aerial photograph of the project area and the surrounding areas at a scale no smaller than one inch equals 800 feet with the project area and the total land area identified.
 - c. A detailed overall area map showing drainage basin boundaries; existing hydrograph and runoff patterns; the location and description of all watercourses, water bodies, flood plains and wetlands or adjacent to the site; the location of areas on the site where storm water collects or percolates into the ground; and the size, location and land use of any off site areas which drain onto, through or from the project area.
 - d. A map showing topography at a minimum contour interval of one foot, vegetative cover, soils and seasonally high water table elevations. Also show the location of any soils boring or percolation tests.

5. Master Development Information
 - a. Paving, grading, landscaping and construction plans showing the location, dimensions, specifications and proposed elevations of all roads and buildings.
 - b. Storm water management plan showing all components of the storm water system including drainage basin boundaries showing the direction and rate of flow of storm water; details of hydrograph, side slopes, depths, elevations of all system

components including wetlands, a topographical map with a minimum contour interval of one foot.

- c. Construction plans and specifications for all components of the storm water management system.
- d. An erosion and sediment control plan to retain sediment on-site. The plan shall describe, in detail, the type and location of control measures the stage of development at which they will be put into place and provisions for maintenance.
- e. A description of scheduled maintenance needs of the storm water system.
- f. Right-of-way and easement locations for the storm water system shall be shown on the storm water plan.
- g. Identification and description of any additional best management practices to be used I the project.

6. Calculations to be Submitted

- a. All runoff calculations used in the design of the storm water system including a description o the methodology, assumptions and parameters. Include calculations showing discharges, elevations and volumes retained or detained and the volume of storm water treated for applicable design storm events. If a computer program is used for analysis, a copy of the printout shall be submitted.
- b. Computations of state-storage and stage-discharge for all structures.
- c. Computation of off-site inflows.
- d. Actual acreages and percentage of the project area for impervious surfaces, natural water bodies and wetlands, artificial lakes, retention or detention area, swales, pervious surfaces and total project area.
- e. Computation of pre-development and post-development runoff and storage.

7. Legal and Institutional Information

- a. A copy of a boundary survey and evidence of ownership or control.
- b. Identification of the entity responsible for the perpetual care, operation, maintenance, and associated liabilities of the system. If the entity is to be a public body such as a county, municipality, or special district, a letter or other evidence of acceptance must be included. If the entity is a non-public body such as a homeowner's association or private corporation or person, documentation of its existence, fiscal and legal ability, and willingness to accept the responsibility must be included.
- c. The storm water management plan shall be prepared and sealed by a professional engineer registered into eh State of Florida.

- d. For projects subject to storm water permitting by the Department of Environmental Regulation pursuant to Chapter 17-25, F.A.C., applicants shall apply for and receive a DER storm water permit demonstrating treatment of the first inch of runoff (first 1.5” of runoff for direct discharges to outstanding Florida Waters) in an off-line system. Projects which are exempt from permitting under Chapter 17-25 shall submit the storm water management plan to the County. (An interagency agreement between the City of Apalachicola and the Department of Environmental Regulation for plan review, permitting, inspection, enforcement will need to be developed.)