

**ST. JOHNS RIVER WATER MANAGEMENT DISTRICT**

**CHAPTER 40C-42, F.A.C.**

**ENVIRONMENTAL RESOURCE PERMITS:  
REGULATION OF STORMWATER  
MANAGEMENT SYSTEMS**

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CALIFORNIA REGIONAL WATER  
QUALITY CONTROL BOARD  
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## CHAPTER 40C-42

### ENVIRONMENTAL RESOURCE PERMITS: REGULATION OF STORMWATER MANAGEMENT SYSTEMS

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#### 40C-42.011 Scope.

(1) This chapter governs stormwater management systems which are designed and constructed or implemented to control discharges necessitated by rainfall events. These systems may incorporate methods to collect, convey, store, absorb, inhibit, treat, use or reuse water to prevent or reduce flooding, overdrainage, environmental degradation and pollution, or otherwise affect the quality and quantity of discharges. Standard general and individual environmental resource stormwater permits are required under this chapter for construction, operation, maintenance, alteration, removal, or abandonment of systems that are not permitted under provisions of chapters 40C-4, 40C-40, or 40C-400, F.A.C. Permits issued under this chapter must be consistent with the objectives of the District and not cause harm to the water resource.

(2) A permit under this chapter will be required only for certain stormwater management systems as defined herein. This provision shall not affect the District's authority to require appropriate corrective action whenever any system causes or contributes to violations of state water quality standards.

(3) Stormwater discharges to groundwaters shall be regulated under the provisions of section 62-28.700, F.A.C., and other applicable rules of the Department of Environmental Protection.

*Specific Authority 373.044, 373.113, 373.171, 373.418 FS. Law Implemented 373.416, 403.812, 403.814 FS. History--New 4-1-86. Amended 9-25-91, 10-3-95.*

#### **40C-42.021 Definitions.**

(1) "Appropriate Registered Professional" or "Registered Professional" means, for purposes of this rule, a professional registered in Florida with the necessary expertise in the fields of hydrology, drainage, flood control, erosion and sediment control, and stormwater pollution control to design and certify stormwater management systems. Examples of registered professionals may include professional engineers licensed under chapter 471, F.S., professional landscape architects licensed under chapter 481, F.S., and professional geologists licensed under chapter 492, F.S., who have the referenced skills.

(2) "As-Built Drawings" means plans certified by an appropriate registered professional or registered surveyor which accurately represents the constructed condition of a system.

(3) "Completion of Construction" means the time at which the stormwater management system is first placed into operation, when the project passes final building inspection or when the project receives a certificate of occupancy, whichever occurs first.

(4) "Construction" means any activity including land clearing, earth moving, or the erection of structures which will result in the creation of a stormwater management system.

(5) "Control Device" or "Bleed-down Device" means that element of a discharge structure which allows the gradual release of water under controlled conditions.

(6) "Control Elevation" means the lowest elevation at which water can be released through the control device.

(7) "Detention with Filtration" or "Filtration" means the selective removal of pollutants from stormwater by the collection and temporary storage of stormwater and the subsequent gradual release of the stormwater into surface waters in the state through at least 2 feet of suitable fine textured granular media such as porous soil, uniformly graded sand, or other natural or artificial fine aggregate, which may be used in conjunction with filter fabric and/or perforated pipe.

(8) "Detention" or "To Detain" means the collection and temporary storage of stormwater with subsequent gradual release of the stormwater.

(9) "Direct Discharge" means, for purposes of this chapter, a point or nonpoint discharge which enters Class I, Class II, or Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting without an adequate opportunity for mixing and dilution to prevent significant degradation. Examples of direct discharge include the following:

(a) discharge without entering any other water body or conveyance prior to release to the Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting;

(b) discharge into an intermittent watercourse which is a tributary of a Class I, Class II, Outstanding Florida Water, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting; and

(c) discharge into a perennial watercourse which is a tributary of a Class I, Class II, Outstanding Florida Water, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting when there is not an adequate opportunity for mixing and dilution to prevent significant degradation.

(10) "Dry detention" means a system designed to collect and temporarily store stormwater in a normally dry basin with subsequent gradual release of the stormwater.

(11) "Effective Grain Size" means the diameter of filter sand or other aggregate that corresponds to the 10 percentile finer by dry weight on the grain size distribution curve.

(12) "Intermittent Watercourse" means a stream or waterway that flows only at certain times of the year, flows in direct response to rainfall, and is normally an influent stream except when the ground water table rises above the normal wet season level.

(13) "Littoral zone" means, in reference to stormwater management systems, that portion of a wet detention pond which is designed to contain rooted aquatic plants.

(14) "Off-line" means the storage of a specified portion of the stormwater in such a manner so that subsequent runoff in excess of the specified volume of stormwater does not flow into the area storing the initial stormwater.

(15) "Operational Maintenance" means any activity or repair required to keep a stormwater management system functioning as permitted and designed.

(16) "Operate" or "Operation" means to cause or to allow a stormwater management system to function.

(17) "Perennial Watercourse" means a stream or waterway which is not an intermittent watercourse.

(18) "Permanent Pool" means that portion of a wet detention pond, which normally holds water (e.g., between the normal water level and the pond bottom) excluding any water volume claimed as wet detention treatment volume pursuant to paragraph 40C-42.026(4)(a), F.A.C.

(19) "Pollution" means the presence in waters of the state of any substances, contaminants, or manmade or man-induced impairment of waters or alteration of the chemical, physical, biological, or radiological integrity of water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation unless authorized by applicable law.

(20) "Registered Surveyor" means a registered professional land surveyor licensed in the state of Florida under chapter 472, F.S.

(21) "Reconstruction" means rebuilding or construction in an area upon which construction has previously occurred.

(22) "Retention" means a system designed to prevent the discharge of a given volume of stormwater runoff into surface waters in the state by complete on-site storage. Examples may



include excavated or natural depression storage areas, pervious pavement with subgrade, or above ground storage areas.

(23) "Seasonal high ground water table elevation" means the highest level of the saturated zone in the soil in a year with normal rainfall.

(24) "Semi-impervious" means land surfaces which partially restrict the penetration of water; included as examples are porous concrete and asphalt pavements, limerock, and certain compacted soils.

(25) "Sensitive Karst Areas" means those areas of the District delineated in chapters 40C-4 and 40C-41, F.A.C., in which the Floridan aquifer is near the land surface.

(26) "Stormwater" means the flow of water which results from, and which occurs immediately following, a rainfall event.

(27) "Stormwater Discharge Facility" means a stormwater management system which discharges stormwater into surface waters of the State.

(28) "Stormwater Management System" means a system which is designed and constructed or implemented to control discharges which are necessitated by rainfall events, incorporating methods to collect, convey, store, absorb, inhibit, treat, use or reuse water to prevent or reduce flooding, overdrainage, environmental degradation, and water pollution or otherwise affect the quality and quantity of the discharges.

(29) "Swale" means a manmade trench which:

(a) Has a top width to depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical; and,

(b) Contains contiguous areas of standing or flowing water only following a rainfall event; and,

(c) Is planted with or has stabilized vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; and,

(d) Is designed to take into account the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge.

(30) "Underdrain" means a drainage system installed beneath a stormwater holding area to improve the infiltration and percolation characteristics of the natural soil when permeability is restricted due to periodic high water table conditions or the presence of layers of fine textured soil below the bottom of the holding area. These systems usually consist of a system of interconnected below-ground conduits such as perforated pipe, which simultaneously limit the water table elevation and intercept, collect, and convey stormwater which has percolated through the soil.

(31) "Underground Exfiltration Trench" or "Exfiltration Trench" means a below-ground system consisting of a conduit such as perforated pipe surrounded by natural or artificial aggregate which is utilized to percolate stormwater into the ground.

(32) "Uniformity Coefficient" means the number representing the degree of homogeneity in the distribution of particle sizes of filter sand or other granular material. The coefficient is calculated by determining the  $D^{60}/D^{10}$  ratio where  $D^{10}$  and  $D^{60}$  refer to the particle diameter corresponding to the 10 and 60 percentile of the material which is finer by dry weight.

(33) "Waters" are as defined in subsection 373.019(8), F.S.

(34) "Wet Detention" means the collection and temporary storage of stormwater in a permanently wet impoundment in such a manner as to provide for treatment through physical, chemical, and biological processes with subsequent gradual release of the stormwater.

(35) "Wetlands Stormwater Management System" means a stormwater management system which incorporates those wetland described in subsection 40C-42.0265(2), F.A.C., into the stormwater management system to provide stormwater treatment.

*Specific Authority 373.044, 373.113, 373.171, 373.418 FS. Law Implemented 373.413, 373.416 FS. History--New 4-1-86. Amended 9-25-91, 3-21-93, 4-11-94, 10-3-95*

#### **40C-42.022 Permits Required.**

(1) A permit is required under this chapter for construction (including operation and maintenance) of a stormwater management system which serves a project that exceeds any of the following thresholds:

(a) Construction of 4,000 square feet or more of impervious or semi-impervious surface area subject to vehicular traffic. This area includes roads, parking lots, driveways, and loading zones;

(b) Construction of 5000 square feet or more of building area or other impervious area not subject to vehicular traffic; or

(c) Construction of 5 acres or more of recreational area. Recreation areas include but are not limited to golf courses, tennis courts, putting greens, driving ranges, or ball fields.

(2) A permit is required under this chapter for alteration, removal, reconstruction, or abandonment of existing stormwater management systems which serve a project which may be expected to result in any of the following:

(a) Increase pollutant loadings (including sediment) in stormwater runoff from the project,

(b) Increase in peak discharge rate,

(c) Decrease in onsite or instream detention storage,

(d) Replacement of roadside swales with curb and gutter,

(e) Construction of 4,000 square feet or more of impervious or semi-impervious surface area subject to vehicular traffic. This area includes roads, parking lots, driveways, and loading zones;

(f) Construction of 5,000 square feet or more of building area or other impervious area not subject to vehicular traffic; or

(g) Construction of 5 acres or more of recreational area. Recreation areas include but not limited to golf courses, tennis courts, putting greens, driving ranges, or ball fields.

(3) These thresholds include all cumulative activity which occurs on or after September 25, 1991.

(4) For purposes of this section, the calculation of the amount of impervious surface shall not include water bodies.

(5) Applications received by the District for which a permit has not been issued prior to the rule revisions effective April 11, 1994, and which do not require a permit pursuant to sections (1) or (2), above, may be withdrawn by the applicant.

(6) Permits issued by the District for systems which no longer require a permit pursuant to sections (1) or (2), above, may either be abandoned or relinquished by the permittee subject to the following:

(a) Local governments may have concurrent jurisdiction with the District over a stormwater system. The permittee is not relieved by this rule of the responsibility to comply with any other applicable rules or ordinances which may govern such system.

(b) The permittee provides reasonable assurance that there will not be a violation of state water quality standards as set forth in chapter 62-302 and 62-550, F.A.C.;

(c) The permittee provides reasonable assurance that adjacent or nearby properties not owned or controlled by the applicant will not be adversely affected by drainage or flooding; and

(d) The permittee must apply to the District for and receive written authorization from the District prior to abandonment of the system.

*Specific Authority 373.044, 373.113, 373.171, FS. Law Implemented 373.413, 373.416 FS. History--New 9-15-91. Amended 4-11-94, 11-22-94.*

**40C-42.0225 Exemptions From Permitting for Stormwater Management Systems.** The following types of stormwater management systems are exempt from the notice and permit requirements of this chapter:

(1) Systems designed to accommodate only one single family dwelling unit, duplex, triplex, or quadruplex, provided the single unit, duplex, triplex or quadruplex is not part of a larger common plan of development or sale.

(2) Systems which are designed to serve single family residential projects, including duplexes, triplexes and quadruplexes, of less than 10 acres total land area and which have less than 2 acres impervious surface and if the systems:

(a) Comply with all regulations or ordinances applicable to stormwater management adopted by a city or county;

(b) Are not part of a larger common plan of development or sale; and

(c) Discharge into a stormwater management system exempted or permitted by the District under this chapter which has sufficient capacity and treatment capability as specified in this chapter and is owned, maintained, or operated by a city, county, special district with drainage responsibility, or water management district; however, this exemption does not authorize discharge to a system without the system owner's prior written consent.

(3) Systems that qualify for a noticed general permit pursuant to chapter 40C-400, F.A.C. and which comply with the requirements of such noticed general permit.

*Specific Authority 373.044, 373.113, 373.171, 373.413 FS. Law Implemented 373.413, 373.416, 403.812 FS. History--New 9-25-91. Amended 3-21-93, 10-3-95.*

**40C-42.023 Requirements for Issuance.**

(1) To receive a general or individual permit under this chapter the applicant must provide reasonable assurance based on plans, test results and other information, that the stormwater management system:

(a) will not result in discharges from the system to surface and ground water of the state that cause or contribute to violations of state water quality standards as set forth in chapters 62-3,

62-4, 62-302 and 62-550, F.A.C., including any antidegradation provisions of sections 62-4.242(1)(a) and (b), 62-4.242(2) and (3), and 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in sections 62-4.242(2) and (3), F.A.C.;

(b) will not adversely affect drainage and flood protection on adjacent or nearby properties not owned or controlled by the applicant;

(c) will be capable of being effectively operated and maintained pursuant to the requirements of this chapter; and

(d) meets any applicable basin criteria contained in chapter 40C-41, F.A.C.

(2)(a) A showing by the applicant that the stormwater management system complies with the applicable criteria in sections 40C-42.024, 40C-42.025, 40C-42.026, and 40C-42.0265, F.A.C., shall create a presumption that the applicant has provided reasonable assurance that the proposed activity meets the requirements in paragraphs (a), above.

(b) A showing by the applicant that the stormwater management system complies with the criteria of subsections 40C-42.025(8) and (9), F.A.C., shall create a presumption that the applicant has provided reasonable assurance that the proposed activity meets the requirements in paragraph (b), above.

(c) A showing by the applicant that the stormwater management system complies with the applicable criteria of sections 40C-42.027, 40C-42.028, and 40C-42.029, F.A.C., shall create a presumption that the applicant has provided reasonable assurance that the proposed activity meets the requirements in paragraph (c), above.

*Specific Authority 373.044, 373.113, 373.171, 373.418 FS. Law Implemented 373.413, 373.416 FS. History--New 9-25-91. Amended 3-21-93, 10-3-95.*

#### **40C-42.024 Standard General and Individual Permits.**

(1) Any person proposing to construct, alter, operate, maintain, remove, or abandon a stormwater management system, which requires a permit pursuant to sections 40C-42.022, F.A.C., except those exempted pursuant to section 40C-42.0225, F.A.C., or noted in section 40C-42.061, F.A.C., shall apply to the District for a standard general or individual environmental resource stormwater permit, prior to the commencement of construction, alteration, removal, operation, maintenance, or abandonment of the stormwater management system. No construction, alteration, removal, operation, maintenance, or abandonment of a stormwater management system shall be undertaken without a valid standard general or individual environmental resource stormwater permit as required pursuant to this section.

(2) The following types of stormwater management systems qualify for a standard general environmental resource stormwater permit and shall be processed according to the administrative procedures set forth in chapter 40C-40, F.A.C.:

(a) Systems which discharge into a stormwater management system which is permitted pursuant to paragraph 40C-42.024(2)(b), (c), or (d), F.A.C., or subsection 40C-42.024(3), F.A.C., or which was previously approved pursuant to a noticed exemption under section 17-25.030 where the appropriate treatment criteria specified in this chapter and applied to the permitted or exempt system are not exceeded by the discharge; however, this does not authorize discharge to the permitted or exempt system without the system owner's prior written consent.

(b) Systems which meet the applicable design and performance standards of section 40C-42.025, F.A.C., and which comply with any one or more of the following:

1. Retention systems which meet the criteria of subsection 40C-42.026(1), F.A.C.;
2. Underdrain systems which meet the criteria of subsection 40C-42.026(2), F.A.C.;
3. Underground exfiltration trench systems which meet the criteria of subsection 40C-42.026(3), F.A.C.;
4. Wet detention systems which meet the criteria of subsection 40C-42.026(4), F.A.C.;

or

5. Swale systems which meet the criteria in subsections 40C-42.021(30) and 40C-42.026(5), F.A.C.

6. Dry detention systems within project areas less than 5 acres in size, and which serve drainage area less than 5 acres in size, and which meet the criteria of subsection 40C-42.026(6), F.A.C.

(c) Modification or reconstruction by a city, county, state agency, federal agency, or special district with drainage responsibility, of an existing stormwater management system which is not intended to increase the original design capacity, and which will not increase pollution loading, or change points of discharge in a manner that would adversely affect the designated uses of waters in the state.

(d) Paving of existing public dirt roads by a public entity if all of the following conditions are met:

1. The road will not serve new development.
2. Additional traffic lanes are not added to the road;
3. The traffic load is not expected to significantly increase;
4. The drainage system serving the road is not significantly altered;
5. Erosion and sediment controls are utilized to prevent turbidity during construction;
6. The project does not involve dredging or filling in wetlands or other surface waters, other than in ditches that were excavated through uplands;
7. Permanent vegetative cover is established on both sides of the pavement within the road right of way; and

8. Swale blocks, or other means, are utilized to retain runoff and promote infiltration in areas with soil having good infiltration (i.e., SCS hydrologic soil groups "A" and "B").

(3) The following types of stormwater management systems will be processed as an individual permit according to the administrative procedures set forth in chapter 40C-4, F.A.C.:

(a) Wetlands stormwater management systems which are designed pursuant to the criteria in sections 40C-42.025 and 40C-42.0265, F.A.C.;

(b) Systems which propose to satisfy the standards of subsection 40C-42.023(1), F.A.C., by employing an alternative treatment methodology or device other than those described in subsection (2) or paragraph (3)(a), above. An affirmative showing by the applicant that the system design will provide treatment equivalent to retention systems described in paragraph (2)(b)1., above, will create a presumption in favor of satisfying the standards in paragraphs 40C-42.023(1)(a), F.A.C. In addition, systems which have a direct discharge to Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting shall provide an additional level of



treatment (i.e., additional treatment volume and off-line treatment) pursuant to section 40C-42.026, F.A.C., or an alternative demonstrated by the applicant to be equivalent.

(c) Systems which do not meet the applicable criteria of sections 40C-42.025, 40C-42.026, or 40C-42.0265, F.A.C. An affirmative showing by the applicant based on plans, test results, calculations, or other information that an alternative design is appropriate for the specific site conditions will create a presumption in favor of satisfying the applicable standards in subsection 40C-42.023(1), F.A.C.

(4) In otherwise determining whether reasonable assurance has been provided for paragraphs (3)(b) and (c), above, the District shall, where appropriate, consider:

(a) Whether best management practices are proposed, such as those described in "Stormwater Management Manual (October, 1981)," "The Florida Development Manual: A Guide to Sound Land and Water Management (June, 1988)," or best management practices described in manuals adopted by the Environmental Regulation Commission pursuant to section 62-25.050, F.A.C., or other appropriate best management practices (the manuals listed above by name are adopted and made a part of this rule by reference. Copies of these documents may be inspected at all District offices);

(b) The public interest served by the system;

(c) The probable efficacy and costs of alternative controls; and

(d) Whether reasonable provisions have been made for the operation and maintenance of the proposed system.

(5) The standard general or individual environmental resource stormwater permit which is granted will include a specified period for which the permit will be valid. Such period, unless the permit is modified or revoked, is generally:

(a) five years for permits to construct, alter, or remove a system; and

(b) permanent for permits to operate, maintain, or abandon a system.

(6) Procedures governing transfers, permit revocation, permit modifications, and extensions are found in chapters 40C-1 and 40C-4, F.A.C., and apply to permits obtained pursuant to this chapter. Procedures governing converting construction to operation permits and transferring the system to the operation and maintenance entity are found in section 40C-42.027, F.A.C., below. *Specific Authority 373.044, 373.113, 373.118, 373.171, 373.418 FS. Law Implemented 373.413, 373.416, 403.813 FS. History--New 9-25-91. Amended 3-21-93, 4-11-94, 10-3-95.*

**40C-42.025 Design and Performance Criteria for Stormwater Management Systems.** The following criteria shall apply to stormwater management systems unless otherwise noted:

(1) Erosion and sediment control best management practices shall be used as necessary during construction to retain sediment on-site. These management practices shall be designed and certified by an appropriate registered professional experienced in the fields of soil conservation or sediment control according to specific site conditions and shall be shown or noted on the plans of the stormwater management system. The registered professional shall furnish the contractor with information pertaining to the construction, operation and maintenance of the erosion and sediment control practice. Sediment accumulations in the system from construction activities shall be removed to prevent loss of storage volume.



(2) Stormwater management systems which either receive stormwater from areas with greater than 50 percent impervious surface or are a potential source of oil and grease contamination in concentrations that exceed applicable water quality standards shall include a baffle, skimmer, grease trap or other mechanism suitable for preventing oil and grease from leaving the stormwater management system in concentrations that would cause or contribute to violations of applicable water quality standards in the receiving waters. For purposes of this subsection, the calculation of the amount of impervious surface shall not include water bodies.

(3) Unless applicable local regulations are more restrictive, for purposes of public safety the following requirements apply:

(a) Normally dry basins designed to impound more than two feet of water or permanently wet basins shall be fenced or otherwise restricted from public access, or shall contain side slopes that are no steeper than 4:1 (horizontal:vertical) out to depth of two feet below the control elevation; and,

(b) Control devices that are designed to contain more than a two foot depth of water within the structure under the design storm and have openings greater than one foot minimum dimension shall be restricted from public access.

(4) All stormwater basin side slopes shall be stabilized by either vegetation or other materials to minimize erosion and sedimentation of the basins.

(5) Stormwater management systems must be designed to accommodate maintenance equipment access and to facilitate regular operational maintenance (such as underdrain replacement, unclogging filters, sediment removal, mowing and vegetation control). Operational maintenance and operation easements shall be provided when necessary to facilitate equipment access.

(6) The applicant must obtain sufficient legal authorization as appropriate prior to permit issuance for stormwater management systems which propose to utilize offsite areas to satisfy the requirements in subsection 40C-42.023(1), F.A.C.

(7) Stormwater management systems (except retention and exfiltration trench systems) shall provide gravity or pumped discharge that effectively operates under one of the following tailwater conditions:

(a) Maximum stage in the receiving water resulting from the mean annual 24-hour storm. This storm depth is described in "Rainfall Analysis for Northeast Florida;" St. Johns River Water Management District Technical Publication No. SJ 88-3 (May, 1988). Lower stages may be utilized if the applicant demonstrates that flow from the project will reach the receiving water prior to the time of maximum stage in the receiving water;

(b) Mean annual high tide for tidal areas;

(c) Mean annual seasonal high water elevation. This elevation may be determined by water lines on vegetation or structures, historical data, adventitious roots or other hydrological or biological indicators, design of man-made systems, or estimated by a registered professional using standard hydrological methods based on the site and receiving water characteristics; or

(d) As an alternative, the applicant may propose any applicable criterion established by a local government, state agency, or stormwater utility with jurisdiction over the project.

(8) Stormwater management systems which require a permit pursuant to subsection 40C-42.022(1), F.A.C., and which serve new construction area with greater than 50 percent

impervious surface (excluding water bodies) must demonstrate that the post-development peak rate of discharge does not exceed the pre-development peak rate of discharge for one of the following:

(a) The mean annual 24-hour storm event. This storm depth is described in "Rainfall Analysis for Northeast Florida;" St. Johns River Water Management District Technical Publication No. SJ 88-3 (May, 1988). The criteria contained in sections 10.3.5 - 10.3.8 of the Management and Storage of Surface Waters Applicant's Handbook, (A.H.), are herein incorporated by reference;

(b) The mean annual 24-hour storm event utilizing the modified rational hydrograph method. This storm depth is described in the publication referenced in paragraph (a), above. This methodology should only be used for systems meeting the following criteria:

1. The drainage area is less than 40 acres;
2. The pre-development time of concentration for the system is less than 60 minutes;
- and,
3. The post-development time of concentration for the system is less than 30 minutes;

or

(c) As an alternative to paragraphs (a) or (b), above, the applicant may propose a storm event, duration, and criteria specified by a local government, state agency, or stormwater utility with jurisdiction over the project.

(9) Stormwater management systems which alter existing conveyance systems must not adversely affect existing surface water conveyance capabilities. It is presumed that a system meets this criteria if one of the following are met:

(a) The existing hydraulic conveyance is maintained;

(b) The applicant demonstrates that changes in flood elevations or velocities will not adversely impact upstream or downstream off-site property;

(c) The applicant demonstrates that the criteria in 10.5.2(b), Applicant's Handbook, are met; or

(d) As an alternative, the applicant may propose to comply with applicable criteria established by a local government, state agency, or stormwater utility with jurisdiction over the project.

(10) The construction plans and supporting calculations must be signed, sealed, and dated by an appropriate registered professional as required by the relevant statutory provisions when the design of the stormwater management system requires the services of an appropriate registered professional.

(11) Stormwater management systems located within Sensitive Karst Areas must meet the requirements of subsection 40C-41.063(6), F.A.C.

*Specific Authority 373.044, 373.113, 373.171, 373.418 FS. Law Implemented 373.117, 373.413, 373.416, 403.0877 FS. History--New 4-1-86. Amended 9-25-91, 3-21-93.*

#### **40C-42.026 Specific Design and Performance Criteria.**

(1) Retention systems shall:

(a) Provide for one of the following:

1. Off-line retention of the first one half inch of runoff or 1.25 inches of runoff from the impervious area, whichever is greater;

2. On-line retention of an additional one half inch of runoff from the drainage area over that volume specified in subparagraph 1., above;
  3. On-line retention that provides for percolation of the runoff from the three year, one-hour storm; or
  4. On-line retention of the runoff from one inch of rainfall or 1.25 inches of runoff from the impervious area, whichever is greater, for systems which serve an area with less than 40 percent impervious surface and that contain only U.S. Department of Agriculture Soil Conservation Service (SCS) hydrologic group "A" soils.
- (b) Provide retention in accordance with one of the following for those systems which have direct discharge to Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting:
1. At least an additional fifty percent of the applicable treatment volume specified in subparagraph 1., above. Off-line retention must be provided for at least the first one half inch of runoff or 1.25 inches of runoff from the impervious area, whichever is greater, of the total amount of runoff required to be treated;
  2. On-line retention of an additional fifty percent of the treatment volume specified in subparagraph 2., above;
  3. On-line retention that provides percolation of the runoff from the three-year, one-hour storm; or
  4. On-line retention that provides at least an additional 50 percent of the runoff volume specified in subparagraph 40C-42.026(1)(a)4., above, for systems which serve an area with less than 40 percent impervious surface and that contain only U.S. Department of Agriculture Soil Conservation Service (SCS) hydrologic group "A" soils.
- (c) Provide the capacity for the appropriate treatment volume of stormwater specified in paragraphs (a) or (b) above, within 72 hours following the storm event assuming average antecedent moisture conditions. The storage volume must be provided by a decrease of stored water caused only by percolation through soil, evaporation or evapotranspiration.
- (d) Be stabilized with pervious material or permanent vegetative cover. Permanent vegetative cover must be utilized, except for pervious pavement systems, when U.S. Department of Agriculture Soil Conservation Service (SCS) hydrologic group "A" soils underlie the retention basin.
- (2) Underdrain stormwater management systems shall:
    - (a) Provide for either of the following:
      1. Off-line storage of the first one half inch of runoff or 1.25 inches of runoff from the impervious area, whichever is greater; or
      2. On-line storage of an additional one half inch of runoff from the drainage area over that volume specified in subparagraph 1., above.
    - (b) Provide either of the following for those underdrain systems which have direct discharge to Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, restricted, or conditionally restricted for shellfish harvesting:
      1. At least an additional fifty percent of the applicable treatment volume specified in subparagraph 1., above. Off-line storage must be provided for at least the first one half inch of

runoff or 1.25 inches of runoff from the impervious area, whichever is greater, of the total amount of runoff required to be treated; or

2. On-line storage of the runoff from a three-year, one-hour storm or an additional fifty percent of the treatment volume specified in subparagraph 2., above, whichever is greater.

(c) Provide the capacity for the appropriate treatment volume of stormwater specified in paragraphs (a) or (b), above, within 72 hours following a storm event. The storage volume must be provided by a decrease of stored water caused only by percolation through soil with subsequent transport through the underdrain pipes, evaporation or evapotranspiration.

(d) Provide at least two feet of indigenous soil between the bottom of the stormwater holding area and the underdrain pipe(s).

(e) Be designed with a safety factor of at least two unless the applicant affirmatively demonstrates based on plans, test results, calculations or other information that a lower safety factor is appropriate for the specific site conditions. Examples of how to apply this factor include but are not limited to reducing the design percolation rate by half or designing for the required drawdown within 36 hours instead of 72 hours.

(f) Contain areas of standing water only following a rainfall event.

(g) Be stabilized with permanent vegetative cover.

(h) Include, at a minimum, a capped and sealed inspection and cleanout ports which extend to the surface of the ground at the following locations of each drainage pipe:

1. The terminus; and

2. Every 400 feet or every bend of 45 or more degrees, whichever is less.

(i) Utilize filter fabric or other means used to prevent the soil from moving and being washed out through the underdrain pipe.

(3) Underground exfiltration trench systems shall:

(a) Provide for either of the following:

1. Off-line storage of the first one half inch of runoff or 1.25 inches of runoff from the impervious area, whichever is greater; or

2. On-line storage of an additional one half inch of runoff from the drainage area over that volume specified in subparagraph 1., above.

(b) Provide either of the following for those exfiltration trench systems which have direct discharge to Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, conditionally restricted for shellfish harvesting:

1. At least an additional fifty percent of the applicable treatment volume specified in subparagraph 1., above. Off-line storage must be provided for at least the first one half inch of runoff or 1.25 inches of runoff from the impervious area, whichever is greater, of the total amount of runoff required to be treated; or

2. On-line storage of the runoff from the three-year, one-hour storm or an additional fifty percent of the treatment volume specified in subparagraph 2., above, whichever is greater.

(c) Provide the capacity for the appropriate treatment volume of stormwater specified in paragraphs (a) or (b), above, within 72 hours following a storm event assuming average antecedent moisture conditions. The storage volume must be provided by a decrease of stored water caused only by percolation into the soil.

- (d) Be designed with a safety factor of at least two unless the applicant affirmatively demonstrates based on plans, test results, calculations or other information that a lower safety factor is appropriate for the specific site conditions. Examples of how to apply this factor include but are not limited to reducing the design percolation rate by half or designing for the required drawdown within 36 hours instead of 72 hours.
- (e) Be designed with a twelve (12) inch minimum pipe diameter.
- (f) Be designed with a three (3) foot minimum trench width.
- (g) Be designed so that aggregate in the trench is enclosed in filter fabric.
- (h) Provide cleanout and inspection structures which extend to the surface of the ground at the inlet and terminus of each pipe. Inlet structures should include sediment sumps.
- (i) Be designed so that the invert elevation of the trench must be at least two feet above the seasonal high ground water table elevation unless the applicant demonstrates based on plans, test results, calculations or other information that a alternative design is appropriate for the specific site conditions.
- (j) Be designed so that the system must have the capacity to retain the required treatment volume without considering discharges to ground or surface waters.
- (4) Wet detention stormwater management systems shall:
  - (a) Provide a treatment volume of the greater of the following:
    - 1. First one inch of runoff; or
    - 2. 2.5 inches of runoff from the impervious area.
  - (b) Be designed so that the outfall structures shall bleed down one-half the volume of stormwater specified in paragraph (a), above, within 48 to 60 hours following a storm event, but no more than one-half of this volume will be discharged within the first 48 hours.
  - (c) Contain a permanent pool of water sized to provide an average residence time of at least 14 days during the wet season (June - October).
  - (d)1. Provide a littoral zone to be designed as follows:
    - a. The littoral zone shall be gently sloped (6:1 or flatter). At least 30 percent of the wet detention system surface area shall consist of a littoral zone. The percentage of littoral zone is based on the ratio of vegetated littoral zone to surface area of the pond at the control elevation.
    - b. The treatment volume should not cause the pond level to rise more than 18 inches above the control elevation unless the applicant affirmatively demonstrates that the littoral zone vegetation can survive at greater depths.
    - c. Eighty percent coverage of the littoral zone by suitable aquatic plants is required within the first twenty-four months of completion of the system or as specified by permit conditions.
    - d. To meet the 80% coverage requirement, planting of the littoral zone is recommended. As an alternative, portions of the littoral zone may be established by placement of wetland top soils (at least a four inch depth) containing a seed source of desirable native plants. When utilizing this alternative, the littoral zone must be stabilized by mulching or other means and at least the portion of the littoral zone within 25 feet of the inlet and outlet structures must be planted.
- 2. In lieu of the requirements of subparagraph 1., above, the applicant may provide either of the following:



a. At least fifty percent additional permanent pool volume over that specified in paragraph (c), above; or

b. Treatment of the stormwater pursuant to subparagraphs 40C- 42.024(2)(b)2., 3., 4., or 6., F.A.C., prior to the stormwater entering the wet detention pond.

(e) Be designed so that the mean depth of the permanent pool is between 2 and 8 feet and the maximum depth does not exceed 12 feet below the invert of the bleed down device, unless the applicant affirmatively demonstrates that alternative depths will not inhibit the physical, chemical, and biological treatment processes or cause the resuspension of pollutants into the water column due to anaerobic conditions in the water column.

(f) Be designed so the flow path through the pond has an average length to width ratio of at least 2:1. The alignment and location of inlets and outlets should be designed to maximize flow paths in the pond. If short flow paths are unavoidable, the effective flow path should be increased by adding diversion barriers such as islands, peninsulas, or baffles to the pond. Inlet structures shall be designed to dissipate the energy of water entering the pond.

(g) Be designed so that bleed down devices incorporating dimensions smaller than three inches minimum width or less than 20 degrees for "v" notches shall include a device to eliminate clogging. Examples include baffles, grates, and pipe elbows.

(h) Be designed so that bleed down structure invert elevations are at or above the estimated post-development normal ground water table elevation. If the structure is proposed to be set below this elevation, ground water inflow must be considered in the drawdown calculations, calculation of average residence time, estimated normal water level in the pond, and pollution removal efficiency of the system.

(i) Provide for permanent maintenance easements or other acceptable legal instruments to allow for access to and maintenance of the system, including the pond, littoral zone, inlets, and outlets. The easement or other acceptable instrument must cover the entire littoral zone.

(j) Be designed so that the average pond side slope measured between the control elevation and two feet below the control elevation is no steeper than 3:1 (horizontal:vertical).

(k) Wet detention systems which have direct discharge to Class I, Class II Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting shall provide either of the following in addition to the requirements in paragraphs (b), (d), and (e) - (j), above:

1. An additional fifty percent of the applicable treatment volume specified in paragraph (a), above, and an additional fifty percent of the applicable permanent pool volumes specified in paragraphs (c) or subparagraph (d)2., above; or

2. Treatment pursuant to subsections (1), (2), (3) above, or (5) below, prior to discharging into a wet detention pond designed pursuant to paragraphs (a) - (j), above.

(5) Swale systems shall:

(a) Percolate 80% of the runoff from the three year, one-hour storm.

(b) Percolate the runoff from the three-year, one-hour storm for those swale systems which have direct discharge to Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting.



(c) -- Provide the capacity for the given volume of stormwater pursuant to paragraphs (a) or (b), above, and contain no contiguous areas of standing or flowing water within 72 hours following the storm event referenced in paragraphs (a) and (b), above, assuming average antecedent moisture conditions. The storage volume must be provided by a decrease of stored water caused only by percolation through soil, evaporation or evapotranspiration.

(d) Meet the criteria in subsection 40C-42.021(29), F.A.C.

(6) Dry detention systems shall:

(a) Provide off-line detention of the first one inch of runoff or 2.5 inches of runoff from the impervious area, whichever is greater.

(b) Provide at least an additional fifty percent of the applicable treatment volume specified in subparagraph 1., above, for those systems which have direct discharge to Class I, Class II, Outstanding Florida Waters, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting.

(c) Be designed so that the outfall structures shall discharge one-half the appropriate treatment volume of stormwater specified in paragraphs (a) or (b), above, between 24 to 30 hours following a storm event.

(d) Be designed so that discharge structures shall include a device to prevent the discharge of accumulated sediment, minimize exit velocities, and prevent clogging. Examples include perforated riser enclosed in a gravel jacket and perforated pipes enclosed in sand or gravel.

(e) Contain areas of standing water for no longer than 3 days following a rainfall event.

(f) Be stabilized with permanent vegetative cover.

(g) Be designed so the average flow path through the basin has a length to width ratio of at least 2:1. The alignment and location of inlets and outlets should be designed to maximize flow paths in the basin. If short flow paths are unavoidable, the effective flow path should be increased by adding diversion barriers such as baffles to the basin.

(h) Be designed so inlet structures dissipate the energy of water entering the basin.

(i) Be designed to include a maintenance schedule for removal of sediment and debris on at least a bi-monthly basis from the basin and mowing and removal of grass clippings.

(j) Be designed so the basin floor is level or uniformly sloped toward the outfall structure.

(k) Be designed so that the basin floor and control elevation is at least one foot above the seasonal high ground water table elevation. Sumps may be placed up to one foot below the control elevation.

*Specific Authority 373.044, 373.113, 373.118, 373.177, 373.418 FS. Law Implemented 373.413, 373.416, 403.813 FS. History--New 9-25-91. Amended 3-21-93, 6-15-93, 4-11-94, 7-20-95.*

#### **40C-42.0265 Design and Performance Criteria for Wetlands Stormwater Management Systems.**

(1) The wetlands stormwater management system design and performance criteria and other provisions relating to such systems are an initial but necessary step by the District in a field in which there exists limited knowledge. In an effort to further refine the District's wetlands stormwater management system policies, monitoring data and other pertinent information relating to the performance criteria will be collected and analyzed and periodic reports of the results of this

monitoring shall be made available to the public. The District must attempt to ensure that the wetlands stormwater management system is compatible with the ecological characteristics of the wetlands utilized for stormwater treatment and to ensure that water quality standards will not be violated by discharges from wetlands stormwater management system. To achieve these goals, specific performance criteria are set forth in this section for systems which incorporate wetlands for stormwater treatment.

(2) The only wetlands to be used for stormwater treatment are those:

(a) Which are isolated wetlands; and

(b) Which would be isolated wetlands, but for a hydrologic connection to other wetlands or surface waters via another watercourse that was excavated through uplands.

(3) Applications for wetland stormwater management systems shall be processed by the District as an individual permit application according to the administrative procedures set forth in chapter 40C-4, F.A.C.

(4) In the review of wetlands stormwater management system permit applications, the District shall consider the following:

(a) Compliance of the wetlands stormwater management system permit with the performance criteria specified in subsection 40C-42.0265(5).

(b) If the applicant is unable to show compliance with the performance criteria in subsection 40C-42.0265(5), the applicant shall qualify for a wetlands stormwater management system permit using alternative design and performance criteria if the applicant affirmatively demonstrates that the use of the wetlands is compatible with the ecological characteristics of the wetland and the applicant complies with the standards in section 40C-42.023, F.A.C.

(c) If the applicant proposes to dredge or fill in the wetlands used for stormwater treatment, the District in its review of the permit application shall evaluate the adverse effects of the dredging or filling on the treatment capability of the wetland.

(5) A showing by the applicant that the wetlands stormwater management system design complies with the performance criteria listed below shall create a presumption in favor of the issuance of the permit:

(a) The system complies with the requirements of section 40C-42.025 and subsection 40C-42.0265(2), F.A.C.

(b) The system is part of a comprehensive stormwater management system that utilizes wetlands in combination with other best management practices to provide treatment of the runoff from the greater of the following:

1. First one inch of runoff; or

2. 2.5 inches times the impervious area.

(c) Those systems which direct discharge to Class I, Class II, or Outstanding Florida Waters shall provide an additional fifty percent of the applicable treatment volume specified in paragraph (b), above.

(d) The wetlands stormwater management system must provide treatment for the runoff as specified in paragraph 40C-42.0265(5)(b) or (c), F.A.C., within the wetlands. The design features of the system shall maximize residence time of the stormwater within the wetland. The outfall structure shall be designed to bleed down one-half the volume specified in paragraph 40C-42.0265(5)(b) or (c) within the first 60 to 72 hours.

(e) Stormwater shall be discharged into the wetlands utilized so as to minimize the channelized flow of stormwater by employing methods including, but not limited to, sprinklers, overland flow or spreader swales.

(f) The use of wetlands for stormwater must meet the criteria in section 12.0, Environmental Considerations, of the Applicant's Handbook: Management and Storage of Surface Waters, adopted by reference in section 40C-4.091, F.A.C.

(6) In order to establish a reliable, scientifically valid data base upon which to evaluate the performance criteria and the performance of the wetlands stormwater management system, a monitoring program may be required. Monitoring programs shall provide the District with comparable data for different types of wetlands and drainage designs. Data to be collected shall include (unless irrelevant to the permitted system): sedimentation rate, sediment trace metal concentrations, sediment nitrogen and phosphorus concentrations, changes in the frequency, abundance and distribution of vegetation, and inflow and outflow water quality for nutrients, metals, turbidity, oils and greases, bacteria and other parameters related to the specific site conditions. Inflow and outflow water quality parameters will be monitored on such storm event occurrences as established by the District based on a site specific basis. The District shall eliminate the requirement to continue the monitoring program upon its determination that no further data is necessary to evaluate the performance criteria or ensure compliance with the performance criteria and applicable water quality standards.

*Specific Authority 373.044, 373.113, 373.177, 373.418 FS. Law Implemented 373.413, 373.416 FS. History--New 9-25-91, 3-21-93, 10-3-95.*

#### **40C-42.027 Legal Operation and Maintenance Entity Requirements.**

(1) The District considers the following entities to be acceptable for meeting the requirements necessary to ensure that a stormwater management system will be operated and maintained in compliance with the requirements of this Chapter and other District regulations in chapters 40C-4 or 40C-40, F.A.C.:

(a) Local governmental units including counties or municipalities, or Municipal Service Taxing Units established pursuant to section 125.01, F.S.;

(b) Active water control districts created pursuant to chapter 298, F.S., or drainage districts created by special act, or Community Development Districts created pursuant to chapter 190, F.S., or Special Assessment Districts created pursuant to chapter 170, F.S.;

(c) State or federal agencies; or

(d) Duly constituted stormwater, communication, water, sewer, electrical or other public utilities.

(2) The property owner or developer is normally not acceptable as a responsible entity when the property is intended to be subdivided. The property owner or developer shall be acceptable in any of the following circumstances:

(a) Written proof is furnished either by letter or resolution, that a governmental entity or such other acceptable entity as set forth in paragraphs (a)-(d) above, will accept the operation and maintenance of the stormwater management system at a time certain in the future;

(b) Proof of bonding or assurance of a similar nature is furnished in an amount sufficient to cover the cost of the operation and maintenance of the stormwater management system;

(c) The property is wholly owned by the permittee and ownership is intended to be retained. This would apply to a farm, corporate office or single industrial facility, for example; or

(d) The ownership of the property is retained by the permittee and is either leased or rented to third parties such as in shopping centers or mobile home parks.

(3) Profit or non-profit corporations including homeowners associations, property owners associations, condominium owners associations or master associations shall be acceptable only under certain conditions that ensure that the corporation has the financial, legal and administrative capability to provide for the long term operation and maintenance of the stormwater management system.

(4) Entity Requirements.

(a) If a multimember association such as a Homeowner, Property Owner, Condominium or Master Association is proposed, the owner or developer must submit Articles of Incorporation for the Association, and Declaration of Covenants and Restrictions, or such other organizational and operational documents which affirmatively assign authority and responsibility for the operation or maintenance of the stormwater management system.

(b) The Association shall have sufficient powers reflected in its organizational or operational documents to:

1. Operate and maintain the stormwater management system as permitted or exempted by the District;
2. Establish rules and regulations;
3. Assess members a fee for the cost of operation and maintenance of the system, and enforce collection of such assessments;
4. Contract for services (if the Association contemplates employing a maintenance company) to provide the services for operation and maintenance;
5. Exist in perpetuity. The Articles of Incorporation must provide that if the association is dissolved the stormwater management system shall be transferred to and maintained by an entity acceptable to the District as defined in this section. Transfer of maintenance responsibility shall be effectuated prior to dissolution of the association;
6. Enforce the restrictions relating to the operation and maintenance of the stormwater management system;
7. Provide that the portions of the Declarations which relate to the operation and maintenance may be enforced by the District in a proceeding at law or in equity; and
8. Require that amendments to the documents which alter the stormwater management system beyond maintenance in its original condition must receive District approval prior to taking effect.

(5) Phased Projects.

(a) If an Operation and Maintenance entity is proposed for a project which will be constructed in phases, and subsequent phases will utilize the same stormwater management systems as the initial phase or phases, the entity shall have the ability to accept responsibility for the operation and maintenance of stormwater management system for future phases of the project.

(b) If the development scheme contemplates independent operation and maintenance entities for different phases, and the stormwater management system is integrated throughout the project, the entities either separately or collectively shall have the authority and responsibility to operate and maintain the stormwater management system for the entire project. That authority shall include cross easements for stormwater management and the ability to enter and maintain the various systems, should any sub-entity fail to maintain a portion of the stormwater management system within the project.

(6) The applicant shall be an acceptable entity from the time construction begins until the stormwater management system is dedicated to and accepted by a legal entity established pursuant to this section. The applicant shall provide proof of the existence of an entity pursuant to this section or of the future acceptance of the system by an entity described in this section prior to initiating construction.

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 403.812, 403.814 FS. History-- New 4-1-86. Amended 9-25-91, 3-21-93.*

#### **40C-42.028 Operation Phase Permits.**

(1) The operation phase of a stormwater management system permit which was designed by an appropriate registered professional does not become effective until all of the following criteria in this subsection and subsection (3) have occurred:

(a) Within 30 days after completion of construction of the stormwater management system, permittee shall submit a signed and sealed certification by an appropriate registered professional indicating that the system has been constructed and that the system is ready for inspection by the District.

(b) The certification prepared by a registered professional (not necessarily the project design registered professional but one who has been retained by the permittee to provide professional services during the construction phase of project completion) shall be made on form number 40C-1.181(13), As Built Certification by a Registered Professional.

(c) The registered professional shall certify that:

1. The system has been constructed substantially in accordance with approved plans and specifications, or;

2. Any deviations from the approved plans and specifications will not prevent the system from functioning in compliance with the requirements of this chapter. The registered professional shall note and explain substantial deviations from the approved plans and specifications and provide two copies of as-built drawings to the District.

(d) The certification shall be based upon on-site observation of construction (scheduled and conducted by the professional or by a project representative under his or her direct supervision) or review of as-built drawings for the purpose of determining if the work was completed in compliance with approved plans and specifications.

(e) As-built drawings shall be the permitted drawings revised to reflect any changes made during construction. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations required shall be certified by a registered surveyor. The following information, at a minimum, shall be verified on the as-built drawings:



1. Dimensions and elevations of all discharge structures including all weirs, slots, gates pumps, pipes, and oil and grease skimmers;
2. Locations, dimensions, and elevations of all filter, exfiltration, or underdrain systems including cleanouts, pipes, connections to control structures, and points of discharge to the receiving waters;
3. Dimensions, elevations, contours, or cross-sections of all treatment storage areas sufficient to determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems, when appropriate;
4. Dimensions, elevations, contours, final grades, or cross-sections of the system to determine flow directions and conveyance of runoff to the treatment system;
5. Dimensions, elevations, contours, final grades, or cross-sections of all conveyance systems utilized to convey off-site runoff around the system;
6. Existing water elevation(s) and the date determined; and
7. Elevation and location of benchmark(s) for the survey.

(2) The operation phase of a stormwater management system permit which was not designed by an appropriate registered professional does not become effective until all of the criteria in this subsection, and subsection (3) below, have occurred. Within 30 days after completion of construction of the stormwater management system, permittee shall submit a certification, on form number 40C-1.181(14), As Built Certification, that the system has been constructed in accordance with the design approved by the District and shall notify the District that the system is ready for inspection.

(3) The permittee shall submit documentation to the District showing that adequate provisions have been made for the operation and maintenance of the system and for meeting any special permit conditions. Entities which qualify to operate and maintain systems for purposes of this rule are listed at section 40C-42.027, *supra*. Documentation must include an affirmative indication that the entity intends to or agrees to take over maintenance responsibility for the system, unless the transfer is associated with the conversion of the construction permit to its operation phase and the maintenance entity exists as approved under the permit.

(4) The permit will be converted from a construction permit to an operation permit once the project is determined to be in compliance with the permitted plans and an appropriate entity exists for maintenance of the system. The District will transfer the permit to the maintenance entity upon request, pursuant to section 40C-4.351, F.A.C., once all conditions for converting the construction permit to an operation permit have been met.

*Specific Authority 373.044, 373.113, 373.171, 373.418 FS. Law Implemented 373.413, 373.416 FS. History--New 9-25-91, 3-21-93. Amended 7-20-95.*

#### **40C-42.029 Monitoring and Operational Maintenance Requirements.**

(1) The operation and maintenance entity is required to provide for periodic inspections of the stormwater management system to insure that the system is functioning as designed and permitted. The entity shall submit inspection reports to the District, certifying that the stormwater management system is operating as designed. In addition, the entity will state in the report what operational maintenance has been performed on the system. The reports shall only be required for those systems which are subject to operation phase permits pursuant to subsection 40C-42.028(1),



F.A.C., after the effective date of this rule adoption, unless indicated otherwise in a permit. The reports shall be submitted to the District as follows unless otherwise required by a permit condition:

(a) Inspection reports for retention, underdrain, wet detention, swales, and wetland stormwater management systems shall be submitted two years after the completion of construction and every two years thereafter on form number 40C-1.181(15), Registered Professional's Inspection Report, for systems designed by a registered professional. For systems not designed by a registered professional, the inspection reports shall be submitted on form number 40C-1.181(16), Statement of Inspection Report. However, reports for those systems in sensitive karst areas must be submitted pursuant to paragraph (c) below.

(b) Inspection reports for dry detention, exfiltration, and pumped systems shall be submitted one year after the completion of construction and every two years thereafter on form number 40C-1.181(15), Registered Professional's Inspection Report. A registered professional must sign and seal the report certifying the dry detention, filtration, exfiltration, or pumped system is operating as designed. However, reports for those systems in sensitive karst areas must be submitted pursuant to paragraph (c) below.

(c) Systems in sensitive karst areas must be inspected monthly for the occurrence of sinkholes and solution pipes. The inspection reports for these systems must be submitted to the District annually on form number 40C-1.181(15), Registered Professional's Inspection Report, for systems designed by a registered professional. For systems not designed by a registered professional, the inspection reports shall be submitted on form number 40C-1.181(16), Statement of Inspection Report.

(2) Permittees which operate stormwater management systems that are designed and constructed to accept stormwater from multiple parcels within the drainage area served by the system shall notify the District annually of the stormwater discharge volumes of all new parcels which have been allowed to discharge into the system in the previous year and shall certify that the maximum allowable treatment volume of stormwater has not been exceeded.

(3) The following operational maintenance activities shall be performed on all permitted systems on a regular basis or as needed:

(a) Removal of trash and debris,

(b) Inspection of inlets and outlets,

(c) Removal of sediments when the storage volume or conveyance capacity of the stormwater management system is below design levels, and

(d) Stabilization and restoration of eroded areas.

(4) Specific operational maintenance activities are required, depending on the type of permitted system, in addition to the practices listed in subsection (3), above.

(a) Retention, swale and underdrain systems shall include provisions for:

1. Mowing and removal of grass clippings, and

2. Aeration, tilling, or replacement of topsoil as needed to restore the percolation capability of the system. If tilling or replacement of the topsoil is utilized, vegetation must be established on the disturbed surfaces.

(b) Exfiltration systems shall include provisions for removal of sediment and debris from sediment sumps.

(c) Wet detention systems shall include provisions for operational maintenance of the littoral zone. Replanting shall be required if the percentage of vegetative cover falls below the permitted level. It is recommended that native vegetation be maintained in the littoral zone as part of the system's operation and maintenance plan. Undesirable species such as cattail and exotic plants should be controlled if they become a nuisance.

(d) Dry detention systems shall include provisions for mowing and removal of grass clippings

(e) Systems in sensitive karst areas shall include provisions for the repair of any sinkhole or solution pipe that develops in the system.

(5) If the system is not functioning as designed and permitted, operational maintenance must be performed immediately to restore the system. If operational maintenance measures are insufficient to enable the system to meet the design and performance standards of this chapter, the permittee must either replace the system or construct an alternative design. A permit modification must be obtained from the District prior to constructing such alternative design pursuant to section 40C-4.331, F.A.C.

*Specific Authority 373.044, 373.113, 373.171, 373.418 FS. Law Implemented 373.413, 373.416 FS. History--New 9-25-91. Amended 3-21-93, 4-11-94.*

#### **40C-42.031 Exemptions for Stormwater Management Systems.**

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 403.812, 403.814 FS. History--New 4-1-86. Amended 8-11-91. Repealed 9-25-91.*

#### **40C-42.032 Limiting Conditions.**

(1) The Governing Board shall impose upon any permit granted pursuant to this Chapter such reasonable conditions as are necessary to assure that construction and operation of the permitted system will not be inconsistent with the District's permitting standards set forth in section 40C-42.023, F.A.C., and will not be harmful to the water resources of the District.

(2)(a) In addition to project-specific special conditions, the following standard limiting conditions shall be attached to all permits issued pursuant to this Chapter unless waived by the Board upon a determination that the conditions are inapplicable for the work authorized by a given permit:

1. This permit for construction will expire five years from the date of issuance unless otherwise specified by a special condition of the permit.

2. Permittee must obtain a permit from the District prior to beginning construction of subsequent phases or any other work associated with this project not specifically authorized by this permit.

3. Before any offsite discharge from the stormwater management system occurs, the retention and detention storage must be excavated to rough grade prior to building construction or placement of impervious surface within the area served by those systems. Adequate measures must be taken to prevent siltation of these treatment systems and control structures during construction or siltation must be removed prior to final grading and stabilization.

4. The permittee must maintain a copy of this permit complete with all conditions, attachments, exhibits, and permit modifications, in good condition at the construction site. The

complete permit must be available for review upon request by District representatives. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

5. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall be considered a violation of this permit.

6. District authorized staff, upon proper identification, must be granted permission to enter, inspect and observe the system to insure conformity with the plans and specifications approved by the permit.

7. Prior to and during construction, the permittee shall implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment on-site and to prevent violations of state water quality standards. All practices must be in accordance with the guidelines and specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988), which are hereby incorporated by reference, unless a project specific erosion and sediment control plan is approved as part of the permit, in which case the practices must be in accordance with the plan. If site specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the permittee shall implement additional best management practices as necessary, in accordance with the specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988). The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

8. If the permitted system was designed by a registered professional, within 30 days after completion of the stormwater system, the permittee must submit to the District the following: District Form No. 40C-1.181(13) (As Built Certification By a Registered Professional), signed and sealed by an appropriate professional registered in the State of Florida, and two (2) sets of "As Built" drawings when a) required by a special condition of this permit, b) the professional uses "As Built" drawings to support the As Built Certification, or c) when the completed system substantially differs from permitted plans. This submittal will serve to notify the District staff that the system is ready for inspection and approval.

9. If the permitted system was not designed by a registered professional, within 30 days after completion of the stormwater system, the permittee must submit to the District the following: District Form No. 40C-1.181(14) (As Built Certification), signed by the permittee and two (2) sets of "As Built" drawings when required by a special condition of this permit, or when the completed system substantially differs from permitted plans. This submittal will serve to notify the District staff that the system is ready for inspection and approval.

10. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.

11. Should any other regulatory agency require changes to the permitted system, the permittee shall provide written notification to the District of the changes prior to implementation so that a determination can be made whether a permit modification is required.

12. Within thirty (30) days after sale or conveyance of the permitted stormwater management system or the real property on which the system is located, the owner in whose name the permit was granted shall notify the District of such change of ownership. Transfer of this permit shall be in accordance with the provisions of section 40C-1.612, Florida Administrative Code. All terms and conditions of this permit shall be binding upon the transferee. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.

13. The stormwater management system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure. The system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the stormwater management system to a local government or other responsible entity.

14. The operation phase of the permit shall not become effective until the requirements of condition No. 8 or 9 have been met, the District determines that the system complies with the permitted plans, and the entity approved by the District in accordance with section 40C-42.027, F.A.C., accepts responsibility for operation and maintenance of the system. The permit cannot be transferred to such an approved responsible operation and maintenance entity until the requirements of section 40C-42.028, F.A.C., are met, and the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District in accordance with section 40C-42.028, F.A.C., the permittee shall request transfer of the permit to the responsible approved operation and maintenance entity, if different from the permittee. Until the permit is transferred pursuant to subsection 40C-42.028(4), F.A.C., the permittee shall be liable for compliance with the terms of the permit.

15. Prior to lot or unit sales, or upon completion of construction of the system, whichever occurs first, the District must receive the final operation and maintenance document(s) approved by the District and recorded, if the latter is appropriate. For those systems which are proposed to be maintained by county or municipal entities, final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final document will result in the permittee remaining personally liable for carrying out maintenance and operation of the permitted system.

16. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40C-42, F.A.C.



17. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.

18. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

19. Activities approved by this permit shall be conducted in a manner which do not cause violations of state water quality standards.

(b) This section shall not be construed as a limitation on the authority of the Board to impose such other limiting conditions as may be necessary in order to assure that the permitted system is consistent with the requirements for issuance listed in section 40C-42.023, F.A.C.

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.409, 373.413, 373.416, 373.419, 373.423, 373.426 FS. History--New 3-21-93, 10-3-95.*

#### **40C-42.033 Implementation.**

(1) This chapter shall become effective on September 25, 1991.

(2)(a) Each construction permit issued under chapter 40C-42, F.A.C., prior to the effective date of this rule shall remain valid according to its terms.

(b) Each construction permit application which is filed with the District prior to the effective date of this rule will be processed and evaluated under the rules implemented on April 1, 1986.

(c) Each construction permit application which is not filed with the District prior to September 25, 1991, will be processed and evaluated according to the rule provisions implemented on September 25, 1991.

(3) If the validity of any provisions of chapter 40C-42, F.A.C., or the application thereof to any person or circumstance is challenged pursuant to Chapter 120 or 373, F.S., or pursuant to any other basis in law, it is the intent of the Governing Board of the St. Johns River Water Management District that neither a challenge to the validity of a provision or application thereof nor the invalidation of a provision or application thereof shall affect the validity or application of other provisions of the rule which can be given effect without the challenged or invalidated provision or application and to this end the provisions of chapter 40C-42, F.A.C., are declared severable.  
*Specific Authority 373.044, 373.113, 373.171, 373.429 FS. Law Implemented 373.416 FS. History--New 9-25-91.*

#### **40C-42.035 Stormwater General Permits.**

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 403.812, 403.814 FS. History--New 4-1-86. Repealed 9-25-91.*

#### **40C-42.041 Individual Permit Requirements for New Stormwater Discharge Facilities.**

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 403.812, 403.814 FS. History--New 4-1-86. Repealed 9-25-91.*

#### 40C-42.061 Relationship to Other Permitting Requirements.

(1) Whenever the construction, alteration, removal, operation, maintenance, or abandonment of a stormwater management system requires that an environmental resource permit be secured pursuant to Chapters 40C-4 or 40C-40, F.A.C., the requirements in this chapter shall be reviewed as part of those permit applications. A separate permit application under this chapter shall not be required. However, the applicant must provide the required technical information as part of those applications to demonstrate compliance with this chapter. If the applicant requests a separate environmental resource stormwater permit, the applicant must notify the District of any other District permits, exemptions, or certifications which have or will be requested for the project.

(2) When a permit is required pursuant to this chapter and an individual environmental resource permit is required pursuant to chapter 40C-4 for the same system, the time frames of chapter 40C-4 shall apply to issuance of a permit under section 40C-42.024(2), F.A.C.

(3) This rule does not apply to any stormwater discharge facility listed in (a) and (b) below, unless such facility is modified pursuant to section 40C-42.024, F.A.C.:

(a) Which was in existence on February 1, 1982; or

(b) Which was permitted, modified, or found to be exempt, under Chapter 62-25, F.A.C., by the Department of Environmental Regulation (DER) after February 1, 1982, but prior to April 1, 1986, provided the facility was constructed in accordance with the DER permit or exemption, and is functioning in accordance with the requirements of chapter 62-25, F.A.C.

(4) The operation phase permit requirements set forth in subsection 40C-42.028(1), F.A.C., shall not apply to systems permitted and found to be in compliance with all rule requirements prior to the effective date of this rule.

(5) Applications for conceptual agency review of stormwater management systems, as required by section 380.06, F.S., will be reviewed in accordance with the procedure used by the District to review conceptual approval permit applications pursuant to subsection 40C-4.041(2), F.A.C.

(6) Systems for agricultural lands will be regulated under chapter 40C-44, F.A.C.

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.413, 373.416, 380.06(9) FS. History--New 4-1-86. Amended 9-25-91, 3-21-93, 4-11-94, 7-20-95, 8-3-95.*

**40C-42.071 Permit Processing Fee.** There shall be a non-refundable permit processing fee as specified by section 40C-1.603, F.A.C., payable to the District at the time that an application for a permit is submitted.

*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.109, 373.113 FS. History--New 4-1-86. Amended 9-25-91.*

**40C-42.081 General Provisions.** Nothing under this chapter shall preclude:

(1) Stormwater effects from being considered in the evaluation of other types of permits where such consideration is relevant to a determination of compliance with applicable District requirements.



(2) The legal joinder in a permitting proceeding under this chapter of any person who owns or controls an unpermitted stormwater management system or systems which comprise a significant portion of the stormwater management system.

(3) The District from taking appropriate legal action including but not limited to the requiring of a permit to prevent the impairment of a use for which a water of the state has been designated under chapter 62-3, F.A.C.

(4) The District from entering interagency or interlocal agreements to accomplish the provisions of this chapter.  
*Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 403.812, 403.814 FS. History-- New 4-1-86. Amended 9-25-91.*

#### **40C-42.091 Publications Incorporated by Reference.**

(1) The Governing Board adopts by reference Part I "Policy and Procedures", Part II, "Criteria for Evaluation", and Part III "Operation and Maintenance", of the document entitled "Applicant's Handbook: Regulation of Stormwater Management Systems, Chapter 40C-42, F.A.C.", effective 10-3-95.

(2) This document provides information regarding the stormwater management system permitting program

(3) A copy of this document may be obtained by contacting:  
Director, Division of Permitting Data Services,  
St. Johns River Water Management District,  
P.O. Box 1429,  
Palatka, Florida 32178-1429

St. Johns River Water Management District,  
7775 Baymeadows Way, Suite 102  
Jacksonville, Florida 32256

St. Johns River Water Management District,  
618 East South Street, Suite 200,  
Orlando, Florida 32801

St. Johns River Water Management District,  
305 East Drive,  
Melbourne, Florida 32904

*Specific Authority 120.54(8), 373.044, 373.113, 373.171, 373.418 F.S. Law Implemented 373.413, 373.416, 373.426. History--New 4-11-94. Amended 7-20-95, 10-3-95.*

**40C-42.900 Forms and Instructions.** The following forms and instructions incorporated by reference have been approved the Governing Board and are available upon request from:

Department of Resource Management  
St. Johns River Water Management District  
P.O.Box 1429  
Palatka, Florida 32178-1429.

- (1) Joint Application For Environmental Resource Permit/Authorization to Use State Lands/Federal Dredge and Fill Permit , form number 40C-4.900(1) adopted 10-3-95 .
  - (2) As Built Certification by a Registered Professional, form number 40C-1.181(13), adopted March 21, 1993.
  - (3) As Built Certification, form number 40C-1.181(14), adopted 3-21-93.
  - (4) Registered Professional's Inspection Report, form number 40C-1.181(15), adopted 3-21-93.
  - (5) Statement of Inspection Report, form number 40C-1.181(16), adopted 3-21-93.
- Specific Authority 120.53(1), 373.044, 373.113, 373.118 FS. Law Implemented 120.52(16), 120.53(1), 373.085, 373.116, 373.118, 373.103, 373.106, 373.229, 373.413 FS. History--New 5-30-90. Amended 9-25-91, 3-21-93, 2-27-94, 10-3-95.*