

STATE OF RHODE ISLAND
COASTAL RESOURCES MANAGEMENT COUNCIL
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In accordance with and pursuant to the provisions of the "Administrative Procedures Act" (Section 42-35-3 of the General Laws of Rhode Island) and the Rule and Regulations of the Coastal Resources Management Council, notice is hereby given of the intention of the Coastal Resources Management Council to change the management plans, policies, procedures and regulations of the agency regarding planning and management of the coastal resources of the State relative to Chapter 46-23 of the State of Rhode Island.

The following changes are proposed:

RI Coastal Resources Management Program - Redbook

Revise Section 210.3.C.4 Coastal Wetlands as follows:

4. Alterations to salt marshes and contiguous freshwater or brackish wetlands abutting Type 2 waters are prohibited except for minor disturbances associated with (a) residential docks and walkways approved pursuant to the standards set forth in Section 300.3, and, (b) approved ~~construction or~~ repair of structural shoreline protection facilities; or, (c) Council-approved restoration activities.

Purpose is to clarify the prohibition policy on alterations to salt marshes and contiguous freshwater wetlands abutting Type 2 waters such that the construction of new structural shoreline protection facilities is not permitted.

Revise Section 335.C.2 Protection and Enhancement of Public Access to the Shore as follows:

2. It is the Council's policy to require applicants to provide, where appropriate, on-site access of a similar type and level to that which is being impacted as the result of a proposed activity or development project.

Purpose is to clarify existing policy to require applicants to provide on-site access of a similar type and level to that which is being impacted as the result of a proposed activity or development project.

Revise Section 300.14 Maintenance of Structures/Table 4a. Dwelling Rebuilds and Additions for Maintenance Activities under Section 300.14 in its entirety as follows:

Table 4a. Dwelling Rebuilds and Additions for Maintenance Activities under Section 300.14

Section 210.7 (Dunes): Within the 50 Foot Dune Setback Zone			
DEVELOPED BARRIERS			MODERATELY DEVELOPED AND UNDEVELOPED BARRIERS*
All Structural Alterations other than Maintenance will be Required to: Move Beyond the 50-foot Setback Area and Meet Flood Plain Elevation Requirements			
Additions (On Ground)	Prohibited		
	Allowed: 25 sq.ft. Cantilever Decks at a minimum of 8 feet above grade (in 50 foot setback area only)		
If Foundation is NOT FEMA Compliant and:		Note: Before any work can be done, structure's foundation must be made FEMA compliant (i.e.: move up) and meet Section 140 (move back) & other applicable RICRMP sections.	
— 1. Rebuild In kind	Not Allowed		Not Allowed*
— 2. Anything Else	Not Allowed		Not Allowed
If Foundation IS FEMA Compliant and:			
— 1. Rebuild In kind	Allowed (as Maintenance)	Note: If structure is within the 50 foot setback area, and cannot re-locate beyond 50 foot setback area, application will be determined to be a Maintenance activity and the structure will be allowed to be rebuilt in-kind.	Allowed*
— 2. Anything Else	Not Allowed		Not Allowed
— (Add 2 nd Floor	Allowed only if Activity is built beyond 50 foot Setback and meets Flood Plain Elevation)		Not Allowed
— (Demolition/ — Add 2 nd Floor	Allowed only if Activity is built beyond 50 foot Setback and meets Flood Plain Elevation)		Not Allowed

These are for typical maintenance activity reviews. In unusual circumstances, the Executive Director may invoke the maintenance provision allowances of Section 300.14. This table is for residential structures which are intact and functional at the time of application. It shall not be applicable for structures which have been destroyed 50% or greater by coastal storms. Structures which have been destroyed 50% or more by coastal storms will be processed as new applications under the appropriate sections of the RICRMP and applicable SAMPs. Relief from this table requires a Special Exception.

*On Moderately Developed and Undeveloped Barriers, only in-kind maintenance is allowed. If a lot can support it, the structure may be

moved back and up (FEMA-compliant). However, in-kind rebuild is still only allowance.

Table 4a. Dwelling Rebuilds and Additions for Maintenance Activities under Section 300.14

Section 210.7 (Dunes): Existing Structures			
<u>DEVELOPED BARRIERS</u>			<u>MODERATELY DEVELOPED AND UNDEVELOPED BARRIERS*</u>
<u>All Structural Alterations other than Maintenance will be Required to:</u>			
<u>Move Beyond the 50 foot Setback Area and Meet RI State Building Code Requirements</u>			
<u>Structural Alteration</u>	<u>Within 50 foot setback</u>	<u>Landward of 50 foot setback</u>	
<u>Cantilever Decks</u>	<u>Allowed: Maximum 25 sq.ft. at a minimum of 8 feet above grade (in 50 foot setback area only)</u>	<u>Allowed</u>	<u>Prohibited*</u>
<u>If Foundation is NOT FEMA Compliant and:</u>			
<u>1. Rebuild In-kind</u>	<u>Prohibited</u>	<u>Allowed provided RI State Building Code and all other RICRMP requirements are met</u>	<u>Prohibited*</u>
<u>2. Other</u>	<u>Prohibited</u>		<u>Prohibited</u>
<u>If Foundation IS FEMA Compliant and:</u>			
<u>1. Rebuild In-kind</u>	<u>Allowed (as Maintenance¹)</u>	<u>Allowed provided RI State Building Code and all other RICRMP requirements are met.</u>	<u>Allowed*</u>
<u>2. Add 2nd Floor</u>	<u>Prohibited</u>		<u>Prohibited</u>
<u>3. Demolition and Add 2nd Floor</u>	<u>Prohibited</u>		<u>Prohibited</u>
<u>4. Other</u>	<u>Prohibited</u>		<u>Prohibited</u>

These are for typical maintenance activity reviews, however, a variance may be required if erosion setbacks are farther landward than the 50-foot dune setback. In unusual circumstances, the Executive Director may invoke the maintenance provision allowances of Section 300.14. This table is for residential structures which are intact and functional at the time of application. It shall not be applicable for structures which have been destroyed 50% or more by coastal storms. Structures which have been destroyed 50% or more by coastal storms will be processed as new applications under the appropriate sections of the RICRMP and applicable SAMPs. Relief from this table requires a Special Exception. Where an activity is indicated as “allowed” it must also meet all other applicable RICRMP requirements.

¹ If structure is within the 50 foot setback area, and cannot relocate beyond 50 foot setback area, application will be determined to be a Maintenance activity and the structure will be allowed to be rebuilt in-kind provided it meets current RI State Building Code and all other applicable RICRMP requirements.

*On Moderately Developed and Undeveloped Barriers, only in-kind maintenance is allowed. If a lot can support it, the structure may be moved back and elevated in accordance with RI State Building Code requirements. However, in-kind rebuild is still only allowance.

Purpose is to revise Table 4a such that it clarifies how maintenance activities that are located on barriers and within the 50-foot dune setback zone are to be reviewed, as well as reformatting the table for better readability.

Revise Section 210.2.D Barrier Islands and Spits as follows:

9. This prohibition does not apply to infrastructure which is intended to service the needs of the state such as transportation related projects, or transmission corridors or other infrastructure intended to meet a demonstrated state need that provides public benefit.

The purpose of the proposed change is to recognize the management of state infrastructure projects on barrier systems.

Revise Section 130 Special Exceptions as follows:

A. Special exceptions may be granted to prohibited activities to permit alterations and activities that do not conform with a Council goal for the areas affected or which would otherwise be prohibited by the requirements of this document only if and when the applicant has demonstrated that:

1) The proposed activity serves a compelling public purpose which provides benefits to the public as a whole as opposed to individual or private interests. The activity must be one or more of the following:

- (a) an activity associated with public infrastructure such as utility, energy, communications, transportation facilities, however, this exception shall not apply to activities proposed on all classes of barriers, barrier islands or spits except as provided in 210.2.D.9;
- (b) a water-dependent activity that generates substantial economic gain to the state; and/or
- (c) an activity that provides access to the shore for broad segments of the public.

The purpose of the proposed change is to reference revisions found in section 210.2.D

Revise Section 300.6 Treatment of Sewage and Stormwater in its entirety as follows:

A. Definitions

1. **Sewage:** ~~The Council has adopted the definition of sewage set forth under R.I.G.L. § 46-12-1, to wit: "... any human or animal excremental liquid or substance, any decomposed animal or vegetable matter, garbage, offal, filth, waste, chemicals, acid, dyestuff, starch, coloring matter, oil and tar, radioactive substances and any compound solution, mixture or product thereof, and every substance which may be injurious to public health or comfort, or which would injuriously affect the natural and healthy propagation, growth or development of any fish or shellfish in the waters of this state, or of the nourishment of the same, or which would injuriously affect the flavor, taste, or value of food of any such fish or shellfish or which would defile said waters or injure or defile any vessel, boat, wharf, pier, or any public or private property upon, in or under said waters or any shore thereof."~~

For purposes of the Coastal Resources Management Program, "sewage" is further defined to include freshwater discharges including runoff that may significantly alter the salinity of tidal waters or salt ponds. The term "sewage" also includes discharges of heated waters. pursuant to R.I.G.L. § 46-12-1, sewage means "fecal material and human waste, or wastes from toilets and other receptacles intended to receive or retain body waste, and any wastes, including wastes from human households, commercial establishments, and industries, and

industries, and storm water runoff...” For purposes of the Coastal Resources Management Program, “sewage” is further defined to include freshwater discharges, including stormwater runoff that may significantly alter the salinity of tidal waters or salt ponds; the terms “wastewater” and “sewage”, as defined by the DEM OWTS Rules; and discharges of heated waters to tidal waters of the state.

2. Individual sewage disposal system (ISDS): any arrangement for sanitary sewage disposal by means other than discharge into a public sewer system. **Onsite wastewater treatment systems (OWTS): means any system of piping, tanks, dispersal areas, alternative toilets or other facilities designed to function as a unit to convey, store, treat or disperse wastewater by means other than discharge into a public sewer system.**

3. **Point source discharges:** any conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, container, transport vehicle or vessel from which sewage is or may be discharged. **means any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which sewage is or may be discharged.**

4. **Sewage treatment plants:** sewage collection and treatment facilities, including state, municipal, or privately owned and operated collection, pumping, treating, disposal or dispersion facilities designed for the treatment of sewage from residences, commercial buildings, industrial plants and institutions, together with any groundwater, surface water, or surface runoff that may be present in the waste stream.

5. **Stormwater runoff:** that portion of precipitation that does not naturally infiltrate into the landscape (e.g., without human influence) but rather travels overland as surface flow. It is also commonly referred to as "stormwater". Stormwater runoff ~~can be~~ is a significant contributor of pollutants ~~including such as~~ sediments, bacteria, nutrients (e.g., nitrogen and phosphorus), hydrocarbons (e.g., oil and grease), metals, and other substances ~~which can~~ that adversely affect water quality and the coastal environment. In addition, significant discharges of stormwater may alter salinity and thereby, adversely impact the coastal environment, especially in poorly flushed estuaries and embayments.

6. **Stormwater management plan:** A stormwater management plan is a description of the proposed best management practices, detailed site plans, and written narrative that, ~~A plan describing the proposed methods and measures to prevent or minimize stormwater runoff (water quality and quantity) impacts associated with a development project both during and after construction. It identifies selected low impact development (LID) source controls and treatment practices to address those potential impacts, the engineering design of the treatment practices, and maintenance requirements for proper performance of the selected practices. The stormwater management plan details how a project complies with the eleven (11) minimum stormwater management standards and performance criteria detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*.~~ ~~when~~ When such a plan is implemented, it provides protection and restoration of receiving waters by reducing pollutant loadings and other negative impacts associated with changes in land use (i.e., urbanization).

7. **Large Projects:** For the purposes of the stormwater management requirements contained in this section, large projects are defined as any one of the following: subdivisions of six (6) units or more; any structure serviced by an on-site sewage disposal system serving 2000 gallons or more per day; any activity which results in the creation of one (1) acre or more of parking facilities, roadways, or impervious surfaces; all new roads, highways, and bridges; all improvement projects to roads, highways, and bridges (excluded from these requirements are projects consisting only of pavement resurfacing, minor roadway repairs, or emergency roadway and drainage repairs); any activity which is subject to the RIPDES general permit requirements for construction activities or industrial activities; any activity subject to Section 300.8; any activity subject to Section 300.13; and any activity subject to Section 320. **Redevelopment:** for purposes of the CRMC is defined as any construction, alteration, or improvement that disturbs existing impervious area, regardless of the total area disturbed, where the existing land use is commercial, industrial, institutional, governmental, recreational, or multi-family residential.

8. **Small Projects:** For the purposes of the stormwater management requirements contained in this section, small projects are defined as all new development and redevelopment or modification of existing commercial and industrial structures, or residential subdivisions of 5 units or less. In addition, activities which are classified as maintenance, and projects which receive a finding of no significant impact (FONSI) are excluded from these requirements. **Low Impact Development (LID):** is a site planning and design strategy aimed at maintaining or replicating the predevelopment hydrology through the use of site planning, source control, and small-scale practices integrated throughout a site to prevent, infiltrate, and manage stormwater runoff as close to its source

to its source as possible. LID achieves natural resource protection by replenishing groundwater supplies, minimizing the stormwater runoff volume discharged to surface waters, and improving water quality. Examples of LID practices include bioretention, vegetated swales, stormwater planters, porous pavement or concrete, greenroofs, rainwater collection systems for water reuse, and other similar methods.

9. Water quality volume: the storage needed to capture and treat 90% of the average annual stormwater runoff volume, and in Rhode Island this equates to one (1)-inch of runoff from impervious surfaces.

10. Maximum extent practicable: means the applicant has made all reasonable efforts to meet the standard, including the evaluation of alternative methods to achieve the same level of treatment. To show that a proposed development has met a standard to the maximum extent practicable, the applicant must demonstrate the following: (1) all reasonable efforts have been made to meet the standard in accordance with current local, state, and federal regulations; (2) a complete evaluation of all possible management measures has been performed; and (3) if full compliance cannot be achieved, the highest practicable level of management is being implemented.

B. Policies

1. It is the Council's policy to maintain and, where possible, improve the quality of coastal wetlands, contiguous freshwater wetlands, freshwater wetlands in the vicinity of the coast, groundwater resources and tidal and salt pond surface waters. In so doing, the Council requires the use of low impact development (LID) strategies as the primary method of stormwater management to reduce the volume of stormwater runoff to surface waters, recharge groundwater supplies, and improve overall water quality.
2. It is the Council's policy to minimize the amount of ISDS onsite wastewater treatment system (OWTS)-derived nitrates and other potential contaminants which may leach into salt ponds and all other Type 1, 2, and 3 waters.
3. ~~Applicants for Assents for ISDS are encouraged~~ The Council encourages applicants for a CRMC Assent to install, alter or repair an OWTS to meet on site with CRMC staff prior to undertaking of ISDS-OWTS groundwater and soil tests to discuss the location of the system and buffer zones, where applicable.
4. It is the Council's policy to require the proper management and treatment of stormwater through the preparation and implementation of a stormwater management plan ~~which satisfies the requirements of the RICRMP. All activities which meet the definition of a large project must prepare and implement a stormwater management plan which satisfies the requirements of Section 300.6.E.2. All activities which meet the definition of small project must satisfy the stormwater management standards contained in Section 300.6.E.3. in accordance with the most recent version of the Rhode Island Stormwater Design and Installation Standards Manual, and which satisfies the requirements of the RICRMP and any applicable Special Area Management Plan.~~
5. The most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual* provides the appropriate methods for the preparation of stormwater management plans and the treatment of stormwater ~~with "Best Management Practices" (BMP) using LID practices and methods within the CRMC's jurisdiction. However, applicants are encouraged to consult other appropriate guidance and technical stormwater design manuals such as Schueler (1987) and Schueler (1992).~~ The Council also recognizes that the most recent version of the *Rhode Island Soil and Erosion and Sediment Control Handbook*, and its amendments, published jointly by the Rhode Island Department of Environmental Management and the United States Department of Agriculture (USDA), ~~Soil Conservation Service (SCS) Natural Resources Conservation Service (NRCS)~~ provides additional guidance and supplemental information with respect to the management and treatment of stormwater.
6. ~~After construction has been completed and the site has been permanently stabilized, the average annual total suspended solid loadings (TSS) shall be reduced by 80 percent. In addition, to the maximum extent practicable, the post-development peak runoff rate and the average volume from 2 year, 25 year, and 100 year storm events shall be maintained at pre-development levels unless: i) the applicant has obtained local or state approval which certifies that the existing storm drain system has the capacity to accommodate the additional stormwater runoff; or ii) the stormwater runoff is conveyed, preferably without hardened channels, non-erosive to tidal waters. It is the Council's policy that all stormwater management plans shall take into consideration all potential impacts associated with the discharge of stormwater runoff into the coastal environment. Potential~~

environment. Potential impacts include, but are not limited to, the following: (i) impacts to salt marshes such as changes in species composition due to the introduction of freshwater to high marsh areas; (ii) changes in the salinity of receiving waters; (iii) thermal impacts to receiving waters; (iv) the effects of introducing stormwater runoff to receiving waters with low dissolved oxygen concentrations; and (v) other potential water quality impacts.

~~7. All stormwater management plans required by the Council should clearly describe the Best Management Practices (BMP) as found in Rhode Island's Stormwater Design and Installation Standards Manual that will be used to treat and mitigate adverse environmental impacts associated with stormwater runoff. In addition, all stormwater management plans shall take into consideration all potential impacts associated with the discharge of stormwater runoff into the coastal environment. Potential impacts include, but are not limited to, the following: (i) impacts to coastal wetlands such as changes in species composition due to the introduction of freshwater to high marsh areas; (ii) changes in the salinity of receiving waters; (iii) thermal impacts to receiving waters; (iv) effects of introducing stormwater runoff to receiving waters that has low dissolved oxygen concentrations; and (v) other potential water quality impacts. The Council's policy is to ensure that all projects are planned, designed, and developed in order to: (1) protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; (2) limit increases of impervious surface areas, except where absolutely necessary; (3) limit land disturbance activities such as clearing and grading and cut and fill to reduce erosion and sediment loss; and (4) limit disturbance of natural drainage features and vegetation. Additionally, stormwater management practices should be designed as landscape amenities to include native plant species on project sites. The Council recommends applicants to use the "Rhode Island Coastal Plant Guide," an interactive, web-based plant list prepared by the URI Cooperative Extension Education Center in consultation with the CRMC and available online at: <http://www.crmc.ri.gov/coastallandscapes.html>.~~

~~8. All sites should be planned, designed, and developed in order to: (1) Protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; (2) limit increases of impervious surface areas, except where necessary; (3) limit land disturbance activities such as clearing and grading and cut and fill to reduce erosion and sediment loss; and (4) limit disturbance of natural drainage features and vegetation.~~

C. Prerequisites

~~1. Applicants for seeking a Council Assents to construct, alter, or extend repair individual sewage disposal onsite wastewater treatment systems or point source discharges shall first obtain a the requisite permit(s) from the Department of Environmental Management.~~

~~2. All federal water pollution control requirements established by the Federal Water Pollution Control Act (Clean Water Act), as amended, or established by the federal government or by any state or local government pursuant to such act, are the water pollution control requirements of the Rhode Island Coastal Resources Management Program. Accordingly, all discharge standards, effluent limitations and/or pretreatment standards established pursuant to the Clean Water Act for discharges of pollutants to the waters of Rhode Island under the Rhode Island Pollutant Discharge Elimination System (RIPDES) shall be met (Rhode Island is an EPA delegated state with respect to the NPDES program). In addition, applicants shall obtain an Underground Injection Control (UIC) permit from the Rhode Island Department of Environmental Management when applicable. Applicants subject to RIPDES general permit requirements for construction activities and industrial activities shall apply to the Council prior to submitting an application to the RIDEM.~~

~~3. The Council shall formally review proposed actions only after all other applicable state/local requirements have or will be met. However, the Council, however, will comment on preliminary plans for major facilities to assist in the planning process.~~

~~4. The Executive Director or the Council may require that an applicant obtain a DEM System Suitability Determination, as provided in the DEM OWTS Rules, from RIDEM be obtained for septic onsite wastewater treatment systems that pre-date 1968.~~

D. Prohibitions

1. Point source discharges of sewage and/or stormwater runoff are prohibited on unconsolidated coastal banks and bluffs.

2. New and enlarged stormwater discharges to the high salt marsh environment bordering Type 1 and Type 2 waters and within salt marshes designated for preservation which border Type 3, 4, 5, and 6 waters are prohibited. Stormwater discharges to existing well flushed tidal channels within high marshes shall not be subject to this prohibition. ~~However, all~~ All such discharges, however, shall meet the applicable standards contained in Section 300.6.E.2 herein.

3. Point source discharges of sewage are prohibited in Type 1 waters.

E. Standards

1. ~~For individual sewage disposal systems (ISDS) onsite wastewater treatment systems (OWTS):~~

~~(a) See standards given in "Filling, Removing, or Grading" (Section 300.2).~~

~~(b) Grading around the ISDS shall direct the flow of surface runoff water away from the ISDS.~~

~~(c) Subdrains constructed to lower groundwater levels in an area where an ISDS shall be built shall: (1) have a minimum pipe diameter of 6 inches; (2) have no piping located between the anticipated ISDS and the shore; (3) be constructed so as to prevent clogging by soil fines; and (4) have outfalls suitably protected against shoreline erosion and scour.~~

~~(d) When existing buildings are changed from seasonal to year round use or expanded by adding one or more rooms, certification shall be obtained from the Department of Environmental Management's ISDS Office that the existing ISDS is capable of treating sewage effluent adequately.~~

~~(e) Connections to ISDS and cesspools that are abandoned shall be removed, blocked, or otherwise disconnected, and abandoned cesspools and septic tanks shall be pumped dry and filled with clean fill.~~

~~(f) Where necessary, barriers shall be constructed to prevent vehicles from passing over septic systems.~~

(b) The construction, repair or alteration of all OWTS and components shall conform to the standards set forth in the most recent *Rules Establishing Minimum Standards relating to Location, Design, Construction and Maintenance of Onsite Wastewater Treatment Systems* promulgated by the Department of Environmental Management (referred to herein as DEM OWTS Rules).

(c) Site grading around the OWTS shall direct the flow of surface runoff water away from the OWTS and meet all applicable requirements of the DEM OWTS Rules.

(d) Subdrains constructed to lower groundwater levels in an area where an OWTS will be located shall: (1) conform to all applicable DEM rules; (2) have no piping located between the anticipated OWTS and the shoreline; and (3) have exposed outfalls suitably protected against shoreline erosion and scour.

(e) When existing buildings are changed from seasonal to year-round use, renovated or expanded by adding one or more rooms, an OWTS Suitability Determination shall be obtained by the applicant from the Department of Environmental Management to indicate that the existing OWTS meets all applicable DEM OWTS Rules.

(f) Connections to OWTS and cesspools that are abandoned shall be removed, blocked, or otherwise disconnected, and abandoned cesspools and septic tanks shall be pumped dry and filled with clean fill in accordance with all applicable DEM OWTS Rules.

(g) Where necessary, barriers shall be constructed to prevent vehicles from passing or parking over septic systems, unless permissible in accordance with DEM OWTS Rules.

2. ~~Stormwater Management for Large Projects~~

~~(a) All stormwater management plans shall be consistent with the Best Management Practices (BMP) and the stormwater design and performance standards found in the *Rhode Island Stormwater Design and*~~

Installation Standards Manual. In addition, all stormwater management plans shall take into consideration all potential impacts associated with the discharge of stormwater runoff into the coastal environment. Potential impacts include, but are not limited to, the following: (i) impacts to coastal wetlands such as changes in species composition due to the introduction of freshwater to high marsh areas; (ii) changes in the salinity of receiving waters; (iii) thermal impacts to receiving waters; (iv) effects of introducing stormwater runoff to receiving waters that has low dissolved oxygen concentrations; and (v) other potential water quality impacts.

(b) After construction has been completed and the site is permanently stabilized, the average annual total suspended solid loadings (TSS) shall be reduced by 80 percent. In addition, to the maximum extent practicable, the post development peak runoff rate and the average volume from 2 year, 25 year, and 100-year storm events shall be maintained at pre-development levels unless: i) the applicant has obtained local or state approval which certifies that the existing storm drain system has the capacity to accommodate the additional discharge of stormwater runoff; or ii) the stormwater runoff is conveyed, preferably without using hardened channels, non-erosive to tidal waters.

(c) The discharge from any stormwater facility must be conveyed through properly constructed watercourses to provide for non-erosive flows during all storm events. The proposed stormwater conveyance system consisting of open channels, pipes, etc. shall, at a minimum, accommodate the runoff associated with a 10-year storm event or greater if required by other local, state, or federal regulations. These stormwater conveyance systems shall provide for non-erosive flows to receiving waters.

(d) All stormwater detention basins shall be constructed to safely withstand or pass through the discharge from the 100-year runoff flows from the contributing drainage area. Specifically, detention basins shall be constructed to "withstand" the 100-year runoff flows and shall be capable of controlling these flows without failure or damage to the basin and/or detaining berms. Certification by the design engineer as to meeting this requirement shall be provided on the design plans for the proposal.

(e) New or enlarged stormwater discharges to salt marshes and well flushed tidal channels within high marshes shall only be permitted when the applicant can clearly demonstrate that no reasonable alternatives exist (e.g., no other discharge locations having a gravity flow outlet are available and impervious surfaces have been kept to an absolute minimum) and when no adverse impacts to the salt marsh environment will result. In these instances, the applicant shall, at a minimum, meet all applicable standards contained in the *Rhode Island Stormwater Design and Installation Standards Manual*. This standard does not apply to low salt marsh environments with an average width along the property of less than 35 feet.

(f) If the Council determines that any proposed stormwater discharge will result in an unacceptable discharge of pollutants to the waters of Rhode Island, the Council shall require the applicant to mitigate the pollutant loads to acceptable levels. Frequently, this can be accomplished using appropriate Best Management Practices in series in order to achieve higher pollutant removal efficiencies.

(g) Whenever possible, existing natural vegetation shall be left intact along natural drainage easements so as to minimize bank erosion.

(h) No connections to storm, surface, or subsurface drains shall be made to either an individual building sanitary sewer or individual (on-site) sewage disposal system (ISDS), nor shall any such drains be constructed within 25 feet of an existing ISDS.

(i) Wet ponds must have a permanent pool volume equal to the water quality volume calculated by multiplying one inch by the impervious surface area.

(j) Extended detention dry ponds must detain the water quality volume over a 36-hour period (brim draw-down time).

(k) Infiltration methods must be designed to retain and exfiltrate the water quality volume over a maximum 72-hour period.

(l) During the preparation of the stormwater management plan, the applicant shall: 1) protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; 2) limit increases of impervious surface areas, except where necessary; 3) limit land disturbing activities to reduce erosion and sediment loss; and 4) limit disturbances of natural drainage features and vegetation.

~~(m) All stormwater management plans shall have a maintenance plan which satisfies the recommended maintenance procedures outlined in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*.~~

~~3. Stormwater Management for Small Projects~~

~~(a) After construction has been completed and the site is permanently stabilized, the average annual TSS loadings must be reduced by 80 percent. New construction or modifications to single family dwellings are exempt, except when new impervious driveway surfaces (e.g., asphalt or concrete) are proposed. In such cases, adequate treatment of the first 0.5 inches of runoff from the new impervious driveway surface must be provided for in accordance with Section 300.6.E.3(h).~~

~~(b) To the maximum extent practicable, the post development peak runoff rate and average volume shall be maintained at levels similar to pre development levels.~~

~~(c) In order to reduce the inflow of pollutants carried by surface water runoff, all activities or alterations shall be required to minimize and/or mitigate any significant adverse impacts associated with surface runoff from the project. All applicants must provide appropriate measures to this end such as the use of infiltration devices, permeable surfaces, and the use of overland flow.~~

~~(d) Concentrated runoff shall be minimized to the maximum extent practicable. The use of sheet flow through vegetated areas shall be employed whenever practicable to prevent erosive flows. In addition, roof top runoff shall be directed away from erosion prone areas.~~

~~(e) Whenever possible, existing natural vegetation shall be left intact along natural drainage easements so as to minimize bank erosion.~~

~~(f) At a minimum, all drainage structures shall be designed to adequately convey the runoff from a ten-year storm event. In the event that a municipality in which the structure is located specifies a greater than 10-year storm event as a minimum design standard, then such greater design standard shall apply. The design of the drainage structure shall consider all impacts on adjacent properties and mitigate any adverse impacts.~~

~~(g) No connections to storm, surface, or subsurface drains shall be made to either a individual building sanitary sewer or individual (on-site) sewage disposal system (ISDS), nor shall any such drains be constructed within 25 feet of an existing ISDS.~~

~~(h) When applicable, the design and installation standards contained in Section 300.6.E.2 shall be met and the management of stormwater from small projects shall be consistent with the BMPs and the design and installation standards contained in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*.~~

~~4. For catch basins:~~

~~(a) Catch basins shall be employed when necessary to reduce runoff induced infiltration of particulates into water bodies.~~

~~(b) A maintenance and cleaning program for catch basins shall be detailed.~~

~~(c) Catch basins shall have a minimum sump depth of 3 feet.~~

~~(d) Wherever possible, catch basins with permeable sides and/or bottoms shall be used so as to minimize outflow.~~

2. The 1993 *Rhode Island Stormwater Design and Installation Standards Manual* ("Stormwater Manual") will be superseded by the 2010 Stormwater Manual upon effective date of adoption by the Council. Unless otherwise provided in this section, the requirements of the 2010 Stormwater Manual, as amended, shall apply to all CRMC applications submitted on or after January 1, 2011. The 2010 Stormwater Manual as amended may be used in lieu of the 1993 Stormwater Manual beginning on or after the effective date of adoption by the Council.

3. Applicants for projects which have a currently valid and vested Master Plan approval from a local planning board or commission before March 31, 2011 may elect to comply with the 1993 Stormwater Manual instead of the 2010 Stormwater Manual provided that a complete application for the project is submitted to the CRMC on or before June 30, 2011. Any project applicant that received Master Plan approval who submits an application to the CRMC after June 30, 2011 shall comply with the 2010 Stormwater Manual, including any future phases of a phased project having received Master Plan approval as of March 31, 2011. Applicants shall, at the time of application, submit a copy of the Master Plan approval document(s) demonstrating eligibility under this subsection. This subsection applies only to those projects which are required to obtain local Master Plan approval pursuant to R.I.G.L. § 45-23-40.

4. For stormwater management the Council requires, in accordance with the “Smart Development for a Cleaner Bay Act of 2007” (R.I.G.L. § 45-61.2), that all applicable projects meet the following requirements:

(a) Maintain pre-development groundwater recharge and infiltration on site to the maximum extent practicable;

(b) Demonstrate that post-construction stormwater runoff is controlled, and that post-development peak discharge rates do not exceed pre-development peak discharge rates; and

(c) Use low impact-design techniques as the primary method of stormwater control to the maximum extent practicable.

5. Residential, commercial, industrial or public recreational structures subject to Section 300.3 shall provide treatment and management of stormwater runoff for all new impervious surfaces equal to or greater than two-hundred (200) square feet in size, including building roof tops, pavement, driveways, sidewalks, parking areas, etc. Applicable projects shall submit a stormwater management plan that demonstrates compliance with the eleven (11) minimum stormwater management standards and performance criteria as detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*. Single-family dwelling projects, however, may meet these provisions as detailed in 300.6.E.9 below.

6. Roadways, highways, bridges, and other projects subject to Section 300.13 shall provide treatment and management of stormwater runoff for all new impervious surfaces. These projects shall submit a stormwater management plan that demonstrates compliance with the eleven (11) minimum stormwater management standards and performance criteria as detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*. Any improvement projects to existing roads, highways and bridges and other projects subject to Section 300.13 that result in the creation of new impervious surfaces shall provide treatment and management of stormwater as above for all new impervious surfaces. Maintenance activities such as pavement resurfacing projects, replacement of existing drainage systems, minor roadway repairs, or emergency roadway and drainage repairs are excluded from these requirements provided there is no expansion of the existing impervious surface area.

7. Any redevelopment that disturbs existing impervious surface coverage, regardless of the total area disturbed, shall comply with Minimum Stormwater Standard 6 (Redevelopment and Infill Projects) of the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*.

8. All stormwater management plans shall take into consideration potential impacts associated with the discharge of stormwater runoff into the coastal environment. Applicants shall address these potential impacts to include, but not limited to, the following: (i) impacts to coastal wetlands such as changes in species composition due to the introduction of freshwater to high marsh areas; (ii) changes in the salinity of tidal receiving waters; (iii) thermal impacts to receiving waters; (iv) effects of introducing stormwater runoff to receiving waters that have low dissolved oxygen concentrations; and (v) other potential water quality impacts as may be identified by CRMC staff.

9. Applicants for single-family residential dwellings shall treat the stormwater runoff water quality volume from all new impervious surfaces equal to or greater than two-hundred (200) square feet in size as indicated in (a) and (b) below. Applicants for single-family dwelling projects may use the design guidance and performance criteria in the *Rhode Island Stormwater Design and Installation Standards Manual* or equivalent guidance as approved by the CRMC. Pretreatment of stormwater runoff is not necessary for single-family residential applications.

(a) Stormwater runoff from **rooftops** shall be treated and managed with one or more as needed of the following methods:

(1) Disconnect each downspout to a qualifying pervious area (OPA) with a maximum of 1000 square feet of contributing rooftop area per OPA in accordance with the RI stormwater manual design criteria;

(2) Direct downspouts to a rain garden(s) located a minimum of 25-feet from any onsite wastewater treatment system; or

(3) Direct down spouts to an infiltration drywell.

(b) Stormwater runoff from **driveways and parking areas** shall be treated by one or more as needed of the following methods:

(1) Infiltration trench;

(2) Vegetated swale;

(3) Rain garden located a minimum of 25-feet from any onsite wastewater treatment system;

(4) Pervious surface construction (e.g., pervious asphalt and pervious concrete using the RI stormwater manual design criteria and paver block systems); or

(5) Sheet flow of runoff to qualifying pervious areas (OPA) using the RI stormwater manual design criteria.

10. New or enlarged stormwater discharges to salt marshes and well flushed tidal channels within high marshes shall only be permitted when the applicant can clearly demonstrate that no reasonable alternatives exist (e.g., no other discharge locations having a gravity flow outlet are available and impervious surfaces have been kept to an absolute minimum) and when no adverse impacts to the salt marsh will result. In these instances, the applicant shall meet all applicable standards contained in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*. This standard does not apply to low salt marsh environments with an average width along the property of less than 35 feet.

11. Stormwater open drainage and pipe conveyance systems must be designed to provide adequate passage for flows leading to, from, and through stormwater management facilities for at least the 10-year, 24-hour Type III storm event. Applicants may not be required to control post-development peak discharge rates at pre-development peak discharge rates provided the project design provides for non-erosive stormwater discharges to tidal waters.

12. Applicants may be required to submit a pollutant loading analysis to demonstrate that a proposed project will not unduly contribute to, or cause, water resource degradation when such projects are located in sensitive coastal resource areas. When a pollutant loading analysis is required, the applicant shall use the method detailed in Appendix H of the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*. If the Council determines that any proposed stormwater discharge will result in an unacceptable discharge of pollutants to the tidal waters of Rhode Island, the Council shall require the applicant to mitigate the pollutant loads to acceptable levels using the practices detailed in the stormwater manual. Frequently, this can be accomplished using these practices in series to achieve higher pollutant removal efficiencies.

13. The use of proprietary hydrodynamic (swirl) separator or filter devices shall be limited to pre-treatment applications only, unless the device has met the requirements of the Technology Assessment Protocol (TAP) as

as detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*. The CRMC may, however, approve such devices in situations where end-of-pipe retrofit solutions are the only alternative available when site constraints limit the use of standard low impact development methods for the treatment and management of stormwater runoff. In such circumstances, however, the use of such proprietary devices shall conform to the standards and performance criteria set forth in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual* to the maximum extent practicable.

514. For outfalls:

- (a) Work on outfalls, drainage channels, etc., shall proceed from the shoreline toward the upland in order that no unfinished or un-stabilized lower channel portions be subjected to erosion-producing velocities from upstream. If this cannot be accomplished, all flow shall be diverted from the unfinished areas until stabilization is completed.
- (b) Where possible, outfall pipe slopes shall be designed for an exit velocity of less than 5 feet per second.
- (c) Screens or grates shall be placed over the end of large outfalls to trap debris.
- (d) Beaches or other coastal features in front of outfalls shall be returned to original grade.
- (e) Riprap placed on beaches shall not increase the grade of the beach higher than one foot in order to maintain lateral access below mean high water.
- (f) Riprap shall be compact, hard, durable, angular stone, with an approximate unit weight of 165 lbs./cubic foot.
- (g) Riprap shall be placed with an adequate bedding of crushed rock or other suitable filtering material.

15. Applicants with projects subject to the stormwater management provisions herein shall submit the following information:

(a) New or modified single-family dwelling projects shall submit the following:

- (1) 8.5 x 11 inch site plan depicting the location of all structural stormwater (LID or otherwise) components; and
- (2) Operation & Maintenance Plan consistent with CRMC guidance to ensure long-term maintenance and operation of the stormwater structural practice(s) on the site.

(b) All other projects

- (1) 8.5 x 11 inch site plan depicting the location of all structural stormwater (LID or otherwise) components;
- (2) Operation & Maintenance Plan that meets the specifications detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual*; and
- (3) Following completion of the approved project, a post-construction certification by a Rhode Island registered P.E. and Rhode Island registered Landscape Architect, where required, demonstrating that all stormwater structures, LID components, and requisite planting materials necessary for the function of the stormwater management system were installed in accordance with the approved permit, specifications and approved site plans.

The purpose of the proposed changes is to incorporate revisions for consistency with the newly revised "Rhode Island Stormwater Design and Installation Manual"

The Council has complied with the requirements of R.I. Gen. Laws Section 42-35-3 by considering alternative approaches to the proposed regulation(s) and has determined that there is/are no alternative approach(es) that would be as effective and less burdensome. The Council has also determined that the proposed regulation(s) do(es) not overlap or duplicate any other state regulation. The Council has complied with the requirements of R.I. Gen. Laws Section 42-35-3.3 by submitting copies of the proposed regulation(s) to the Governor's Office and the Economic Development Corporation (EDC).

Parties interested in or concerned with the above proposed changes are invited to **submit written comments** by **November 20, 2010**. All such comments should be directed to Grover J. Fugate, Executive Director, at the above address.

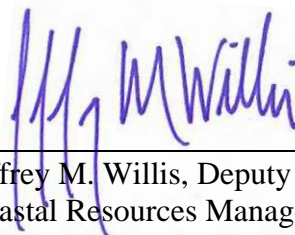
A public hearing has been scheduled for these proposed changes to be held in Conference Room A of the Administration Building, One Capitol Hill, Providence, RI, on Tuesday, December 14, 2010, at 6:00 p.m.

Copies of the proposed regulations are also available from the Coastal Resources Management Council offices and its website – www.crmc.ri.gov.

Individuals requesting interpreter services for the hearing impaired must notify the Council office at 783-3370, 72 hours in advance of the hearing date.

Further information may be obtained by contacting the Coastal Resources Management Council offices at 783-3370.

Signed this 19th day of October, 2010.



Jeffrey M. Willis, Deputy Director
Coastal Resources Management Council

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