

State of Rhode Island and Providence Plantations
Department of Environmental Management
Office of Water Resources

NOTICE OF PROPOSED RULE-MAKING

**ADOPTION OF REVISED STORMWATER MANUAL;
TOLLING OF DEVELOPMENT RELATED PERMITS;
AMENDMENTS TO THE RULES AND REGULATIONS GOVERNING
THE ADMINISTRATION AND ENFORCEMENT OF THE FRESH
WATER WETLANDS ACT; AND
AMENDMENTS TO THE WATER QUALITY REGULATIONS**

The Director of the Department of Environmental Management (DEM) proposes adoption of the Rhode Island Stormwater Design and Installation Standards Manual (Stormwater Manual); proposes amendments to the Rules and Regulations Governing the Administration and Enforcement of the Fresh Water Wetlands Act (Fresh Water Wetlands Regulations); and proposes amendments to the Water Quality Regulations. In accordance with State law and pursuant to the RI Administrative Procedures Act, these proposed amendments to existing rules and regulations would, upon adoption, supersede the existing rules and regulations. DEM gives notice of the intent to hold a public hearing, accept public comment on both the proposed Stormwater Manual and the proposed amendments to the subject regulations, and afford interested parties an opportunity to submit data, views, or arguments orally or in writing. The public hearing will held at 3:00 p.m. on Thursday, September 16, 2010 in Room 300 at DEM's Offices in the Foundry Building at 235 Promenade Street, Providence, RI. The room is accessible to the disabled and interpreter services for the hearing impaired will be requested 48 hours prior to the hearing. A request for this service can be made in writing or by calling (401) 222-6800 or dialing 711 (RI Relay).

The primary purpose of the proposed Stormwater Manual is to implement the "Smart Development for a Cleaner Bay Act of 2007" (the Act) (RIGL §23-45-61.2-1, *et seq.*). This Act requires that the Department of Environmental Management (DEM) and the Coastal Resources Management Council (CRMC) amend the 1993 version of the Stormwater Manual. [The CRMC will shortly be filing separate regulations to incorporate the proposed Stormwater Manual into their regulatory requirements.] As stated in the Act, "The changes shall include, but not be limited to, incorporation into existing regulatory programs that already include the review of stormwater impacts 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.”

To effectively avoid, minimize and manage the impacts of stormwater on stream channels, water quality, groundwater, wetland habitat, and flooding, DEM and CRMC are proposing extensive updates to the 1993 Stormwater Manual. The changes reflect the state of the art in science and engineering practice concerning stormwater management. The proposed Stormwater Manual specifies standards and design requirements for stormwater management on new development, redevelopment, and infill projects and, most importantly, requires Low Impact Development (LID) as the “industry standard” for handling and treating stormwater, representing a fundamental shift in how development projects are planned and designed. Drafts of the manual have undergone two rounds of public workshops in the last 18 months and the proposed manual is significantly revised as a result of comment from various stakeholders.

The proposed amendments to the Fresh Water Wetlands Regulations and the Water Quality Regulations are necessary in order to reference and incorporate the new Stormwater Manual provisions into the regulatory requirements of these regulations, as well as to stipulate appropriate timetables to begin requiring use of the new Stormwater Manual. The Department is proposing to begin requiring compliance with the new Stormwater Manual on most applications beginning on January 1, 2011. In addition, amendments are proposed to the Fresh Water Wetlands Regulations and the Water Quality Regulations to address the 2010 revisions to the RIGL §42-17.1-2.5 regarding tolling of expiration periods of development permits.

DEM has complied with the requirements of RIGL §42-35-3 by considering alternative approaches to the proposed regulations and has determined that there is no alternative approach that would be as effective and less burdensome. DEM has also determined that the proposed regulations do not overlap or duplicate any other state regulation. DEM has complied with the requirements of RIGL §42-35-3.3 by determining that the proposed regulations will not result in a significant adverse economic impact on small business or any city or town, and by submitting copies of the proposed regulations to the Governor’s Office and Economic Development Corporation.

The proposed Stormwater Manual can be viewed on the DEM website at <http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm>
The proposed Fresh Water Wetlands Regulations can be viewed at <http://www.dem.ri.gov/programs/benviron/water/permits/fresh/index.htm> , and the Water Quality Regulations can be viewed at http://www.dem.ri.gov/programs/benviron/water/quality/surf_wq/index.htm . These documents can also be reviewed in person at the DEM Offices at 235 Promenade Street, Providence, RI by

contacting **Lisa McGreavy at 222-4700 Ext. 7611**

All interested parties are invited to submit written comments on the proposed Stormwater Manual and proposed rule amendments by 4:00 p.m. on Friday, September 17, 2010, the close of the comment period, to:

Lisa McGreavy
Office of Water Resources
RI Department of Environmental Management
235 Promenade Street
Providence, RI 02908
or by e-mail to
Stormwater@dem.ri.gov

Signed this 17th day of August 2010.

Russell J. Chateaufneuf, P.E., Chief
Groundwater and Wetlands Protection
Office of Water Resources
RI Department of Environmental Management

State of Rhode Island and Providence Plantations
Department of Environmental Management
Office of Water Resources
August 10, 2010

CONCISE SUMMARY OF PROPOSED:

- **ADOPTION OF REVISED STORMWATER MANUAL;**
- **TOLLING OF DEVELOPMENT RELATED PERMITS;**
- **AMENDMENTS TO THE RULES AND REGULATIONS GOVERNING THE ADMINISTRATION AND ENFORCEMENT OF THE FRESH WATER WETLANDS ACT; AND**
- **AMENDMENTS TO THE WATER QUALITY REGULATIONS**

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**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Water Resources**

WATER QUALITY REGULATIONS



July 2006
Amended May 2009
August 2010

AUTHORITY: These regulations are adopted in accordance with Chapter 42-35 pursuant to Chapters 46-12 and 42-17.1 of the Rhode Island General Laws of 1956, as amended

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Water Resources

WATER QUALITY REGULATIONS

TABLE OF CONTENTS

| | | |
|----------|--|-------------------------|
| RULE 1. | PURPOSE..... | 1 |
| RULE 2. | LEGAL AUTHORITY | 1 |
| RULE 3. | SUPERSEDED RULES | 1 |
| RULE 4. | LIBERAL APPLICATION | 1 |
| RULE 5. | SEVERABILITY | 1 |
| RULE 6. | APPLICATION OF THESE REGULATIONS | 23 |
| RULE 7. | DEFINITIONS..... | 2 |
| RULE 8. | SURFACE WATER QUALITY STANDARDS..... | 10 |
| RULE 9. | EFFECT OF ACTIVITIES ON WATER QUALITY STANDARDS | 23 |
| RULE 10. | PROCEDURE FOR DETERMINING ADDITIONAL REQUIREMENTS FOR EFFLUENT LIMITATIONS, TREATMENT AND PRETREATMENT..... | 24 |
| RULE 11. | PROHIBITED DISCHARGES..... | 25 |
| RULE 12. | STRATEGIC PLAN CONSISTENCY..... | 25 |
| RULE 13. | APPROVALS | 26 |
| RULE 14. | APPLICATION FOR APPROVALS | 27 |
| RULE 15. | PROCEDURES FOR REVIEW OF APPLICATIONS FOR ORDERS OF APPROVAL AND WATER QUALITY CERTIFICATIONS..... | 28 <u>29</u> |
| RULE 16. | EFFECT OF APPROVAL | 30 |
| RULE 17. | MODIFICATION, SUSPENSION OR REVOCATION OF APPROVAL..... | 31 |
| RULE 18. | ANTIDegradation OF WATER QUALITY STANDARDS | 31 <u>32</u> |
| RULE 19. | MODIFICATION OF WATER QUALITY STANDARDS | 32 <u>33</u> |
| RULE 20. | VARIANCES | 35 <u>36</u> |

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Water Resources

WATER QUALITY REGULATIONS

TABLE OF CONTENTS

| | | |
|----------|----------------------|-------------|
| RULE 21. | APPEALS | <u>3637</u> |
| RULE 22. | SAMPLING | <u>3738</u> |
| RULE 23. | EFFECTIVE DATE | <u>3839</u> |

TABLE OF TABLES

| | | |
|----------|---|----|
| TABLE 1. | CLASS-SPECIFIC CRITERIA - FRESHWATERS | 16 |
| TABLE 2. | CLASS-SPECIFIC CRITERIA - SEAWATERS | 18 |
| TABLE 3 | SALTWATER DISSOLVED OXYGEN CRITERIA..... | 19 |

APPENDICES

| | | |
|-------------|--|-----|
| APPENDIX A. | WATER QUALITY CLASSIFICATIONS | A-1 |
| APPENDIX B. | RIDEM AMBIENT WATER QUALITY GUIDELINES FOR TOXIC POLLUTANTS..... | B-1 |
| APPENDIX C. | ANTIDEGRADATION IMPLEMENTATION POLICY..... | C-1 |
| APPENDIX D. | SPECIAL RESOURCE PROTECTION WATERS (SPRW)..... | D-1 |
| APPENDIX E | RHODE ISLAND SITE SPECIFIC AQUATIC LIFE WATER QUALITY CRITERIA DEVELOPMENT POLICY | E-1 |

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Water Resources

WATER QUALITY REGULATIONS

Rule 1. PURPOSE

It is the purpose of these regulations to establish water quality standards for the state's surface waters. These standards are intended to restore, preserve and enhance the physical, chemical and biological integrity of the waters of the State, to maintain existing water uses and to serve the purposes of the Clean Water Act and Rhode Island General Laws Chapter 46-12. These standards provide for the protection of the surface waters from pollutants so that the waters shall, where attainable, be fishable and swimmable, be available for all designated uses, taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and also taking into consideration their use and value for navigation, and thus assure protection of the public health, safety, welfare, a healthy economy and the environment.

Rule 2. LEGAL AUTHORITY

The authority for these regulations is vested in the Director by Chapter 46-12, Water Pollution, Chapter 42-17.1, Environmental Management and Chapter 42-17.6, Administrative Penalties For Environmental Violations of the General Laws of Rhode Island, as amended. These rules and regulations are further promulgated pursuant to the requirements and provisions of all chapters of the General Laws of Rhode Island relating to the duties and responsibilities of the Director for the waters of the state, and in accordance with the requirements of Chapter 42-35, Administrative Procedures Act.

Rule 3. - SUPERSEDED RULES

Upon adoption, these rules and regulations will supersede "Water Quality Regulations for Water Pollution Control" dated August 6, 1997 and re-filed with the Secretary of State on December 31, 2001.

Rule 4. - LIBERAL APPLICATION

The terms and provisions of these rules and regulations shall be liberally construed to allow the Department to effectuate the purposes of state law.

Rule 5. - SEVERABILITY

If any provision of these rules and regulations or the application thereof to any person or circumstance is held invalid by a court of competent jurisdiction, the remainder of the rules and regulations shall not be affected thereby. The invalidity of any rule or rules or parts of any rule or rules shall not affect the validity of the remainder of these rules and regulations.

Rule 6. - APPLICATION OF THESE REGULATIONS

A. Nothing in these rules and regulations shall be deemed to interfere with the Director's power and duty to issue an immediate order pursuant to section 46-12-10 of the General Laws of Rhode Island.

B. These regulations apply to all waters of the State, all systems or means of wastewater treatment, including sewers, all discharges into surface waters, all activities which will likely impact water quality and/or activities that will likely cause or contribute to flow alterations. These regulations shall also apply to those activities regulated by the federal government, other state agencies, programs within the Department and/or local governmental entities. All departmental regulations should be construed to be consistent and/or complementary and any perceived conflicts are unintentional. Should a perceived conflict arise between or among these regulations and the requirements imposed by the other departmental regulations or other governmental entities, the most stringent requirement shall govern.

Rule 7. - DEFINITIONS

For the purposes of these regulations, the following terms shall have the following meanings:

"Acute toxicity" means lethal or sublethal severe adverse effect(s) to an organism when exposed to a toxic pollutant(s) for a relatively short period of time. In aquatic toxicity tests, an effect observed in 96 hours or less is typically considered acute.

"Administrator" means the administrator of the United States Environmental Protection Agency or any subordinate or subordinates to whom the Administrator delegates the powers and duties vested in that office.

"Applicable standards and limitations" means all state, interstate and federal standards and limitations to which a discharge or activity is subject under the Clean Water Act or any State Acts including but not limited to effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, and pretreatment standards under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the Clean Water Act.

"Applicant" means a person who applies for any approvals for any discharge, activities, projects, or facilities in accordance with the requirements of these regulations.

"Application" means all forms, documents, and other information required by the Department to apply for a permit, order, certificate, or other approval from the Department in accordance with the requirements of these regulations.

"Approval" means an authorization, Order of Approval, permit, certification, license or equivalent determination issued pursuant to regulations promulgated by the Department.

"Aquaculture facility" means a defined managed water area or facility for the maintenance or production of harvestable freshwater, estuarine or marine plants and/or animals. Defined managed water area as used in this definition, means the portions of the waters of the state within which the permittee or permit applicant confines and/or plans to confine the cultivated species, using a method or plan of operation (including but not limited to, physical confinement) which, on the basis of reliable scientific evidence, is expected to ensure that specific individual organisms comprising an aquaculture crop will enjoy increased growth and be harvestable within a defined geographical area.

"Aquatic Research Related Activities" means an activity in which research is conducted to evaluate the effect of various factors on the health, growth, or reproduction of aquatic organisms.

"Best Management Practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of and impacts upon waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"Best Professional Judgment (BPJ)" means a determination, based on best engineering and/or scientific practices and best management practices, involving any pollutant, combination of pollutants or practice(s), on a case by case basis, which is determined by the Director to be necessary to carry out the provisions of the Clean Water Act and any applicable chapters of the General Laws of Rhode Island. BPJ can be used to set Best Available Technology Economically Achievable, Best Conventional Pollutant Control Technology, Best Practicable Control Currently Available or Best Management Practices limitations pursuant to the Clean Water Act either in the absence of an applicable promulgated effluent guideline or where promulgated effluent limitation guidelines only apply to certain aspects of the discharge's operation or to certain pollutants.

"Bioassay" means a toxicity testing procedure using aquatic organisms to determine the concentration or amount of a toxic pollutant(s) causing a specified response in the test organisms under stated test conditions.

"Brackish water" means those waters of the state in which the natural level of salinity is greater than 1 (one) part per thousand but less than 10 (ten) parts per thousand, 95 percent or more of the time.

"CFR" means the Code of Federal Regulations.

"Chronic toxicity" means lethal or sublethal adverse effect(s) to an organism or its progeny, based on various physiological measurements including but not limited to growth, survival, or reproductive success when exposed to a toxic pollutant(s) for a relatively long period of time. The methods commonly used to estimate chronic effects involve exposures of typically seven (7) days or less.

"Clean Water Act (CWA)" refers to the Federal Water Pollution Control Act (33 U.S.C. § 1251) et seq. and all amendments thereto.

"Coldwater Fishery" means waters in which naturally occurring water quality and/or habitat allow the maintenance of naturally reproducing indigenous coldwater fish populations.

"Combined Sewer" means a sewer which serves as a sanitary sewer and a storm sewer.

"Combined Sewer Overflow (CSO)" means flow from a combined sewer that is discharged into a receiving water without going to a treatment works. A CSO is distinguished from bypasses which are diversions of waste streams from any portion of a treatment works.

"Contiguous zone" means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

"Controlled relay" means the transplant of shellfish from certain Class SB, SB1 and/or SC waters to Class SA waters suitable for shellfish harvesting under the coordination and authority of the RIDEM for the purpose of natural purification and controlled harvest.

"Cultural eutrophication" means the human-induced acceleration of primary productivity in a surface waterbody resulting in nuisance conditions of algal blooms and/or dense macrophytes.

"Department" or "Departmental" or "DEM" or "RIDEM" or "Director" means the Rhode Island Department of Environmental Management or the director of the Department of Environmental Management or any designee to whom the Director delegates the powers and duties vested in that office.

"Depuration" means the artificial holding of shellfish for purification purposes.

"Designated Bathing Beach" means bathing beaches licensed by the Rhode Island Department of Health.

"Designated uses" are those uses specified in water quality standards for each waterbody or segment whether or not they are being attained. In no case shall assimilation or transport of pollutants be considered a designated use.

"Discharge" means to cause or allow the addition or release of any pollutants to the waters of the State or placement of any pollutant where it is likely to enter the waters of the State and includes but is not limited to surface water runoff, spilling, depositing, placing, leaking, pumping, pouring, emitting, emptying, or dumping. This definition includes additions of pollutants into waters of the State from both point and nonpoint sources. This term does not include an addition of pollutants by an indirect discharge.

"Discharger" means any person who causes, or allows, any discharge.

"Dredging" means the excavation of sediments from beneath surface waters by mechanical or hydraulic means.

"Effluent limitations" means any restriction imposed by the Director on quantities, discharge rates and concentrations of pollutants which are discharged from point sources into surface waters of the state or the contiguous zone.

"Effluent limitation guidelines" means a regulation published by the Administrator under Section 304(b) of the Clean Water Act to adopt or revise effluent limitations.

"Effluent limited waters" means any segment of a surface waterbody where the water quality currently meets or is expected to meet applicable water quality standards after the application of the technology-based effluent limitations required by Sections 301(b) and 306 of the Act.

"EPA" means the United States Environmental Protection Agency.

"Existing use" means those designated uses and any other uses that do not impair the designated uses and that are actually attained in a waterbody on or after November 28, 1975; except that in no case shall assimilation or transport of pollutants be considered an existing use.

"Facility" means any building, structure and operation, including land or appurtenances thereto, on one contiguous site.

"Filling" means to place dirt, soil, stones, gravel, sand, sediment, tree stumps, brush, leaves, solid waste, debris, garbage, trash, pollutants, or any other material, substance, or structure, either foreign or related, on or in any waters of the state or in such a way as to alter the natural character, function or value of any waters of the state.

"Fish and Wildlife" means birds, fish, shellfish, mammals and all other classes of wild aquatic and land organisms and all types of vegetation upon which they are dependent, including all indigenous species.

"Flow Alteration" means the withdrawal of water from a surface water, either directly or indirectly, or the alteration of the normal flow patterns of a surface water due to a project which diverts or holds the surface water.

"Freshwater" means those waters of the State in which the natural level of salinity is equal to or less than one (1) part per thousand, 95 percent or more of the time.

"Groundwater" means water found underground which completely fills the open spaces between particles of soil and within rock formations.

"Habitat" means the area which provides direct support for a given species, population or community. It includes all environmental features that comprise an area such as air, water, vegetation, soil, substrate and hydrologic characteristics.

"Hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

"Hazardous waste" means any waste as defined in accordance with Section 23-19.1-4 of the General Laws of Rhode Island of 1956, as amended, and regulations adopted pursuant thereto.

"High quality waters" include all Class A and SA surface waters as well as other surface waters whose quality exceeds the minimum water quality criteria for any State aquatic life and/or human health criteria or water quality standards assigned to them; or whose quality and characteristics make them critical to the propagation or survival of important living natural resources; or those waters constituting a Special Resource Protection Water or an Outstanding National Resource Water.

"Indirect discharge" means any discharge into a treatment works.

"Kettlehole" means a pond or freshwater wetland in a depression in the earth's surface formed by the melting of a wholly or partially buried block of glacial ice.

"Lake, pond or reservoir" means any body of water, whether naturally occurring or created in whole or in part, excluding sedimentation control or stormwater retention/detention basins, unless constructed in waters of the State.

"Load allocation" means the portion of a receiving water's loading capacity that is attributed either to one of its nonpoint sources of pollution or to natural background sources.

"Loading Capacity" means the maximum amount of loading that a surface water can receive without violating water quality standards.

"Low quality waters" or "degraded" means any water whose quality falls below any of the criteria of rule 8.D. in accordance with Applicable Conditions of rule 8.E. and corresponding to its classification as designated in rule 8.C., as determined by the Director, shall be considered degraded for that particular criterion and in violation of its water quality standards and, therefore, unsatisfactory for any designated uses which the Director determines are affected by the particular criterion which is violated. Waters in their natural hydraulic condition may fail to meet their assigned water quality criteria from time to time due to natural causes, without necessitating the modification of assigned water quality standard. Such waters will not be considered to be violating their water quality standards if violations of criteria are due solely to naturally occurring conditions unrelated to human activities.

"Marina" means:

- a) a dock, pier, mooring, wharf, float or combination of such facilities that may accommodate five (5) or more recreational vessels as a commercial operation or in association with a club; or
- b) any dock, pier, mooring, wharf, float or combination of such facilities used as a commercial operation, aside from a) above, at which any vessel is serviced or maintained.

"Marine Sanitation Device (MSD)-Type I" means a marine toilet which, under prescribed test conditions, will produce an effluent that will not exceed a fecal coliform bacteria count of one thousand (1,000) parts per hundred (100) milliliters, and have no visible solids.

"Marine Sanitation Device (MSD)-Type II" means a marine toilet which, under prescribed test conditions, will produce an effluent that will not exceed a fecal coliform bacteria count of two hundred (200) parts per hundred (100) milliliters, and have suspended solids not greater than one hundred and fifty (150) milligrams per liter.

"Marine Sanitation Device (MSD)-Type III" means a marine toilet which is designed to prevent the discharge from the vessel of any treated or untreated sewage, or any waste derived from sewage.

"Marine toilet" means any toilet or receptacle for the containment of human wastes located on or within any vessel, as defined herein, not including a portable potty.

"Mixing Zone" means a limited area or volume in the immediate vicinity of a discharge where mixing occurs and the receiving surface water quality is not required to meet applicable standards or criteria, provided the minimum conditions described in rule 8.D.1.e and 8.D.1.f. of these regulations are attained.

"Municipality" means a quasi-governmental corporation, association or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes; a city, town, county, district, or a designated and approved management agency under Section 208 of the Clean Water Act.

"Natural background conditions" means all prevailing dynamic environmental conditions in a waterbody or segment thereof, other than those human-made or human-induced.

"New discharge" means any discharge which commenced subsequent to November 28, 1975, unless appropriate approvals had been granted.

"No Discharge Area/Zone" means an area of the surface waters of the state which has been requested by the Director of the Department of Environmental Management and declared by the United States Environmental Protection Agency, pursuant to Section 312 of the Clean Water Act, to be an area in which any discharge of sewage from vessels is prohibited.

"Non-contact cooling water" means water which is used to reduce temperature and does not come into direct contact with any raw material, intermediate product (other than heat), or finished product.

"Nonpoint Source" or "NPS" means any discharge of pollutants that does not meet the definition of Point Source in section 502.(14). of the Clean Water Act and these regulations. Such sources are diffuse, and often associated with land-use practices, and carry pollutants to the waters of the State, including but not limited to, non-channelized land runoff, drainage, or snowmelt; atmospheric deposition; precipitation; and seepage.

"Nutrient" means a chemical element or compound such as but not limited to nitrogen or phosphorous which is essential to and promotes the growth and development of marine or freshwater plant species.

"Outstanding National Resource Waters (ONRW)" means waters of National and State Parks, Wildlife Refuges, and other such waters designated as having special recreational or ecological value.

"Person" shall include an individual, trust, firm, joint stock company, corporation (including a quasi-governmental corporation), partnership, association, syndicate, municipality, municipal or state agency, fire district, club, non-profit agency or any subdivision, commission, department, bureau, agency or department of state or federal government (including any quasi-governmental corporation) or of any interstate body.

"Point source" 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 pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

"Pollutant" means any dredged material, solid waste, incinerator residue, sewage, garbage, sewage sludge, sediment, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial or municipal or agricultural waste or effluent, petroleum or petroleum products, including but not limited to oil; or any material which will likely alter the physical, chemical, biological or radiological characteristics and/or integrity of water.

"Pollution" means the human-made or human-induced alteration of the physical, chemical, biological or radiological characteristics and/or integrity of water.

"Pretreatment requirements" means any limitation or prohibition on quantities, quality, rates, and/or concentrations of pollutants directly or indirectly discharged into or otherwise introduced into a treatment works that are imposed by federal or state regulation or by the treatment works.

"Primary Contact Recreational Activities" means any recreational activities in which there is prolonged and intimate contact by the human body with the water, involving considerable risk of ingesting water, such as swimming, diving, water skiing and surfing.

"Priority pollutant" means those pollutants listed pursuant to Section 307(a)(1) of the Clean Water Act (see Appendix B).

"Public Drinking Water Supplier" means any city, town, district, or other municipal, public, private corporation or company, or non-profit entity authorized to engage in the collection and treatment of surface water for the purposes of distribution of drinking water in Rhode Island and whose source of drinking water is a surface water in Rhode Island.

"Public Drinking Water Supply" means the source of surface water for a public drinking water supplier.

"Pycnocline" means a steep density gradient in an estuary caused by differences in temperature or salinity between the bottom and surface layers of water that limits mixing of the two layers.

"Rhode Island Pollutant Discharge Elimination System (RIPDES)" means the Rhode Island system for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing point source discharge permits and imposing and enforcing pretreatment requirements pursuant to Title 46, Chapter 12 of the General Laws of Rhode and the federal Clean Water Act.

"RIPDES Regulations" means the Rhode Island Pollutant Discharge Elimination System Regulations promulgated by the Department and any amendments thereto.

"Runoff" means water that drains from an area as surface flow.

"Sanitary sewer" shall mean a sewer which conveys sewage.

"Seawater (Saltwater)" means those waters of the State in which the natural level of salinity is equal to or greater than ten (10) parts per thousand, 95 percent or more of the time.

"Secondary Contact Recreational Activities" means any recreational activities in which there is minimal contact by the human body with the water, and the probability of ingestion of the water is minimal, such as boating and fishing.

"Sewage or wastewater" means human waste, or wastes from toilets and other receptacles intended to receive or retain body waste, and any wastes, including wastes from households, commercial establishments, and industries.

"Sewage from vessels" means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels, and regulated under Section 312 of the Clean Water Act or under Rhode Island law.

"Sewage sludge or sludge" means residue, partially solid, or solid, treated or untreated, resulting from the treatment of sewage, including such residues from the cleaning of sewers, by processes such as settling, flotation, filtration and centrifugation, and does not meet the criteria for a hazardous waste.

"Sewer" means a pipe or conduit that conveys wastewater or stormwater.

"Site" means the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

"Special Resource Protection Waters (SRPW)" means surface waters identified by the Director as having significant recreational or ecological uses, and may include but are not limited to: wildlife refuge or management areas; public drinking water supplies; State and Federal parks; State and Federal designated Estuarine Sanctuary Areas; waterbodies containing critical habitats, including but not limited to waterbodies identified by the RIDEM Natural Heritage Program as critical habitat for rare or endangered species; wetland types or specific wetlands listed as rare, threatened, endangered, of special interest or of special concern by the Rhode Island Natural Heritage Program; waterbodies identified by the U. S. Department of the Interior on the Final List of Rivers for potential inclusion in the National Wild and Scenic Rivers System.

"State Guide Plan" shall mean goals, policies, or plan elements for the physical, economic, and social development of the state, adopted by the State Planning Council in accordance with §42-11-10 of the General Laws of Rhode Island, 1956, as amended.

"Storm sewer" means a sewer which conveys stormwater.

"Stormwater" means precipitation induced runoff.

"Surface water" means any waters of the state that are not groundwaters.

"Total Maximum Daily Load" or "TMDL" means the amount of a pollutant that may be discharged into a waterbody and still maintain water quality standards. The TMDL is the sum of the individual wasteload allocations for point sources and the load allocations for nonpoint sources and natural background taking into account a margin of safety.

"Toxicity" means the chemical, biological or biochemical adverse effect(s) of a pollutant or combination of pollutants on organisms.

"Toxic Pollutant" means any pollutant that has the potential to cause toxicity.

"Treatment works" means any devices and systems for the storage, treatment, recycling, and reclamation of wastewater; any devices and systems for the storage, treatment, recycling and reclamation of sewage from vessels used to implement section 201 of the Act; or any devices and systems necessary to recycle or reuse water at the most economical cost over the design life of the works. These include intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances, extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment (including land for composting sludge, temporary storage of such compost and land used for the storage of treated wastewater in land treatment systems prior to land application); or any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of wastewater, including wastewater in combined sewers.

"Undesirable or Nuisance Species" means any plant or animal aquatic species which becomes so numerous due to pollutants or physical or hydrological modifications that it interferes with, or indicates an impairment of, the designated use(s) of a waterbody.

"Use Attainability Analyses" means a structured scientific assessment of the factors affecting the attainment of a use which may include physical, chemical, biological, and economic factors. The physical, chemical and biological factors affecting the attainment of a use shall be evaluated through a waterbody survey and assessment. Waterbody surveys and assessments shall be sufficiently detailed to evaluate at a minimum:

- a. current aquatic uses achieved in the waterbody;
- b. causes of any impairment of the aquatic uses and why the impairment cannot be rectified; and
- c. aquatic uses(s) that can be attained based on the physical, chemical, and biological characteristics of the water body.

"Vessel" means any boat or other watercraft whether moved by oars, paddles, sails or other power mechanism, inboard or outboard, or any other boat or structure floating upon the water whether or not capable of self-locomotion, including house boats, floating businesses, barges and similar floating objects.

"Warmwater Fishery" means waters in which naturally occurring water quality and/or habitat support populations of warmwater fish.

"Wasteload allocation" means the portion of a receiving water's loading capacity that is allocated to one of its point sources of pollution.

"Wastewater" refer to definition of sewage.

"Waterbody segment" means a defined section or described area which is part of a larger surface waterbody of the state.

"Water quality criteria" means elements of the State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use.

"Water quality limited waters" means any segment of a surface waterbody where the water quality does not meet applicable water quality standards, and is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by Sections 301(b) and 306 of the Act.

"Water quality standard" means provisions of State or Federal law which consist of a designated use(s) and water quality criteria for the waters of the State. Water Quality Standards also consist of an antidegradation policy.

"Waters of the State" or "The Waters" means all surface water and groundwater of the State of Rhode Island, including all tidewaters, territorial seas, wetlands, and land masses partially or wholly submerged in water; and both inter- and intra-state bodies of water which are, have been or will be used in commerce, by industry, for the harvesting of fish and shellfish or for recreational purposes.

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Freshwater wetlands are determined by the Department in accordance with the Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act, as amended. Coastal wetlands are determined by rules and regulations under the jurisdiction of the Coastal Resources Management Council.

Rule 8. - SURFACE WATER QUALITY STANDARDS

A. Purpose. A water quality standard defines the water quality goals of a surface waterbody, or portion thereof, by designating the use or uses of the water and by setting criteria necessary to protect the uses. Water quality standards are intended to protect public health, safety and welfare, enhance the quality of water and serve the purposes of the Clean Water Act and Chapter 46-12 of the General Laws of Rhode Island. "Serve the purposes of the Act" (as defined in Section 101(a)(2) and 303(c) of the Clean Water Act) means that water quality standards should, whenever attainable, provide water quality, including quantity, for the protection and propagation of fish and wildlife and for recreation in and on the water and take into consideration their use and value as public water supplies, propagation of fish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation.

Such standards serve the dual purposes of establishing the water quality goals for a specific surface water body or waterbody segment and serve as the regulatory basis for the establishment of water-quality-based-treatment controls and strategies beyond the technology-based levels of treatment required by Sections 301(b) and 306 of the Clean Water Act.

B. Water Use Classification - The surface waters of the state shall be assigned to one of the classes listed below. Each class is defined by the designated uses, which are the most sensitive and therefore governing water uses which it is intended to protect. Surface waters may be suitable for other beneficial uses, but shall be regulated to protect and enhance the designated uses. In no case shall waste assimilation or waste transport be considered a designated use.

(1). Freshwater:

(a). Class AA[@] - These waters are designated as a source of public drinking water supply (PDWS) or as tributary waters within a public drinking water supply watershed (the terminal reservoir of the PDWS are identified in Appendix A), for primary and secondary contact recreational activities and for fish and wildlife habitat. These waters shall have excellent aesthetic value.

(b). Class A - These waters are designated for primary and secondary contact recreational activities and for fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These waters shall have excellent aesthetic value.

(c). Class B^{*} - These waters are designated for fish and wildlife habitat and primary and secondary contact recreational activities. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These waters shall have good aesthetic value.

(d). Class B1^{*} - These waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class B criteria must be met.

(e). Class C - These waters are designated for secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These water shall have good aesthetic value.

[@] Class AA waters used for public drinking water supply may be subject to restricted recreational use by State and local authorities.

^{*} Certain Class B and B1 waterbody segments may have partial use designations assigned to them as noted in rule 8.B.(3) below.

(2). Seawater:

(a). Class SA^{*@} - These waters are designated for shellfish harvesting for direct human consumption, primary and secondary contact recreational activities, and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation and industrial cooling. These waters shall have good aesthetic value.

(b). Class SB* - These waters are designated for primary and secondary contact recreational activities; shellfish harvesting for controlled relay and depuration; and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value.

(c). Class SB1* - These waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class SB criteria must be met.

(d). Class SC - These waters are designated for secondary contact recreational activities, and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value.

* Certain Class SA, SB and SB1 waterbody segments may have partial use designations assigned to them as noted in rules 8.B(3) below.

@ Some Class SA waters contain Closed Safety Zones which are waters in the vicinity of an approved sanitary discharge which may be impacted in the event of complete failure of treatment and are therefore, currently prohibited to shellfishing. Although shellfishing use is restricted, all SA criteria must be met.

(3). Partial Uses - In accordance with rule 19 of these regulations, the Department may designate a partial use for the above listed water use classifications. Partial use denotes specific restrictions of use assigned to a waterbody or waterbody segment that may affect the application of criteria. For example, a partial use designation may be appropriate where waters are impacted by activities such as combined sewer overflows and concentrations of vessels. Additional partial uses may be so designated by the Director if provided in accordance with rule 19.

(a). CSO - These waters will likely be impacted by combined sewer overflows in accordance with approved CSO Facilities Plans and in compliance with rule 19.E.1 of these regulations and the Rhode Island CSO Policy. Therefore, primary contact recreational activities; shellfishing uses; and fish and wildlife habitat will likely be restricted.

(b). Concentration of Vessels - These waters are in the vicinity of marinas and/or mooring fields and therefore seasonal shellfishing closures will likely be required as listed in the most recent (revised annually) RIDEM document entitled Shellfish Closure Areas-, however, all Class SA criteria must be attained.

Please note that partial use designations are represented by the lower case letters, "a" or "b", which appear in brackets { } next to the classification as found in Appendix A.

C. Water Quality Classifications - All surface waters of the State have been categorized according to the water use classification of rules 8.B.(1), (2), and (3) based on considerations of public health, safety and welfare, recreation, propagation and protection of fish and wildlife, and economic and social benefit. The surface waters of the State are classified according to the list of water segments in Appendix A. For waterbodies not listed in Appendix A, the following apply:

(1). All streams tributary to Class A waters shall be Class A.

- (2) All waters tributary to Class AA waters shall be Class AA.
- (3). All freshwaters hydrologically connected by surface waters and upstream of Class B, B1, SB, SB1, C or SC waters shall be Class B unless otherwise identified in Appendix A of these regulations.
- (4). All other fresh waters, including, but not limited to, ponds, kettleholes and wetlands not listed in Appendix A shall be considered to be Class A.
- (5). All seawaters not listed in Appendix A shall be considered to be Class SA. All saltwater and brackish wetlands contiguous to seawaters not listed in Appendix A shall be considered to be Class SA.
- (6). All saltwater and brackish wetlands contiguous to seawaters listed in Appendix A shall be considered the same class as their associated seawaters.

D. Water Quality Criteria - The following physical, chemical and biological criteria are parameters of minimum water quality necessary to support the surface water use classifications of rule 8.B. and shall be applicable to all waters of the State.

(1). General Criteria - The following minimum criteria are applicable to all waters of the State, unless criteria specified for individual classes are more stringent:

(a). At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that:

- i. Adversely affect the composition of fish and wildlife;
- ii. Adversely affect the physical, chemical, or biological integrity of the habitat;
- iii. Interfere with the propagation of fish and wildlife;
- iv. Adversely alter the life cycle functions, uses, processes and activities of fish and wildlife; or
- v. Adversely affect human health.

(b). Aesthetics - all waters shall be free from pollutants in concentrations or combinations that:

- i. Settle to form deposits that are unsightly, putrescent, or odorous to such a degree as to create a nuisance, or interfere with the existing or designated uses;
- ii. Float as debris, oil, grease, scum or other floating material attributable to wastes in amounts to such a degree as to create a nuisance or interfere with the existing or designated uses;
- iii. Produce odor or taste or change the color or physical, chemical or biological conditions to such a degree as to create a nuisance or interfere with the existing or designated uses; or,
- iv. Result in the dominance of species of fish and wildlife to such a degree as to create a nuisance or interfere with the existing or

designated uses.

(c). Radioactive substances - The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish and wildlife, or result in concentrations in organisms producing undesirable conditions.

(d). Nutrients - Nutrients shall not exceed the limitations specified in rule 8.D.(2) and 8.D.(3) and/or more stringent site-specific limits necessary to prevent or minimize accelerated or cultural eutrophication.

(e). Thermal Mixing Zones - In the case of thermal discharges into tidal rivers, fresh water streams or estuaries, where thermal mixing zones are allowed by the Director, the mixing zone will be limited to no more than one quarter (1/4) of the cross sectional area and/or volume of river flow, stream or estuary, leaving at least three quarters (3/4) free as a zone of passage. In wide estuaries and oceans, the limits of mixing zones will be established by the Director.

(f). Non-thermal Mixing Zones - In the case of non-thermal discharges, in applying these standards the Director may recognize, where appropriate, a limited acute and/or chronic mixing zone(s) on a case-by-case basis. The locations, size and shape of these zones shall provide for the maximum protection of fish and wildlife.

(g). At a minimum, all mixing zones must:

- i. Meet the criteria for aesthetics, in accordance with rule 8.D.(1).b;
- ii. Be limited to an area or volume that will prevent interference with the existing and designated uses in the associated waterbody segment and beyond;
- iii. Allow an appropriate zone of passage for migrating fish and other organisms, prohibit lethality to organisms passing through the mixing zone, and protect for spawning and nursery habitat; and
- iv. Not allow substances to accumulate in sediments, fish and wildlife or food chains such that known or predicted safe exposure levels for the health of humans or fish and wildlife will be exceeded.

(h). For activities that will likely cause or contribute to flow alterations, streamflow conditions must be adequate to support existing and designated uses.

(2). Class-specific Criteria for Freshwaters - see Table 1

(3). Class-specific Criteria for Seawaters - see Tables 2 and 3

E. Applicable Conditions - The water quality standards apply under the most adverse conditions, as determined by the Director according to sound engineering and scientific practices on a case-by-case basis unless defined below.

(1). The ambient water quality criteria are applicable at or in excess of the following flow conditions:

(a). Aquatic Life Criteria - The acute and chronic aquatic life criteria for freshwaters shall not be exceeded at or above the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years (7Q10). The acute and chronic aquatic life criteria for seawater shall not be exceeded beyond the boundary of the mixing zone(s), as defined and determined by rules 8.D.(1).e, f and g of these regulations, and thence throughout the waterbody. If a mixing zone has not been established, these criteria shall not be exceeded in any portion of the receiving water.

(b). Human Health Criteria - The freshwater human health criteria for non-carcinogens and carcinogens are applicable at or in excess of the harmonic mean flow, which is a long-term mean flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows. For seawaters, the ambient human health water quality criteria for carcinogens and non-carcinogens are applicable when the most adverse hydrographic and pollution conditions occur at the particular point of evaluation.

F. Federal Approval and Periodic Review - These water quality standards are subject to approval by the administrator pursuant to section 303(c) of the Clean Water Act. In accordance with paragraph 303(c)(1) of the Act, the Water Quality Standards shall be reviewed periodically but at least once every three years, and amended as necessary.

G. Symbolic Representative of Water Quality Standards - The Director shall issue maps from time to time which indicate assigned water use classification.

TABLE 1. 8.D.(2). Class-Specific Criteria - Fresh Waters

| CRITERION | CLASS AA ¹ | CLASS A | CLASS B, B1, B{a}, B1{a} | CLASS C |
|--|--|---------|---|---|
| 1. Dissolved Oxygen | <p><u>Cold Water Fish Habitat</u> - Dissolved oxygen content of not less than 75% saturation, based on a daily average, and an instantaneous minimum dissolved oxygen concentration of at least 5 mg/l, except as naturally occurs. For the period from October 1st to May 14th, where in areas identified by the RI Division of Fish and Wildlife as cold water fish spawning areas the following criteria apply: For species whose early life stages are not directly exposed to the water column (ie, early life stages are intergravel), the 7 day mean water column dissolved oxygen concentration shall not be less than 9.5 mg/l and the instantaneous minimum dissolved oxygen concentration shall not be less than 8 mg/l. For species that have early life stages exposed directly to the water column, the 7 day mean water column dissolved oxygen concentration shall not be less than 6.5 mg/l and the instantaneous minimum dissolved oxygen concentration shall not be less than 5.0 mg/l. (See Appendix A for coldwater designated waters)</p> <p><u>Warm Water Fish Habitat</u> - Dissolved oxygen content of not less than 60% saturation, based on a daily average, and an instantaneous minimum dissolved oxygen concentration of at least 5.0 mg/l, except as naturally occurs. The 7 day mean water column dissolved oxygen concentration shall not be less than 6 mg/l. (See Appendix A for warmwater designated waters)</p> | | | |
| 2. Sludge deposits, solid refuse, floating solids, oil, grease, scum | None allowable. | | | None in such amounts that would impair any usages specifically assigned to this class. |
| 3. Color and turbidity. | None in such concentrations that would impair any usages specifically assigned to this class. Turbidity not to exceed 5 NTU over background. | | None in such concentrations that would impair any usages specifically assigned to this class. Turbidity not to exceed 10 NTU over natural background. | |
| 4. Fecal Coliform Bacteria (MPN/100ml) | <p>Drinking Water Supply Criteria: - applied at the terminal reservoir of the system - Not to exceed a geometric mean value of 20 MPN/100 ml and not more than 10% of the samples shall exceed a value of 200.</p> | | | None in such concentrations that would impair any usages specifically assigned to this class. |
| | <p>Primary Contact Recreational/Swimming Criteria- Not to exceed a geometric mean value of 200 MPN/100 ml and not more than 10% of the total samples taken shall exceed 400 MPN/100 ml, applied only when adequate enterococci data are not available.</p> | | | |
| 5. Enterococci | <p align="center">Primary Contact Recreational/Swimming Criteria</p> <p>Non-Designated Bathing Beach Waters Geometric Mean Density: 54 colonies/100 ml Designated Bathing Beach Waters Geometric Mean Density: 33 colonies/100 ml Single Sample Maximum*: 61 colonies/100 ml</p> <p>* Criteria for determining beach swimming advisories at designated beaches as evaluated by Health.</p> | | | None in such concentrations that would impair any usages specifically assigned to this class. |
| 6. Taste and odor | None other than of natural origin and none associated with nuisance algal species. | | None in such concentrations that would impair any usages specifically assigned to this class nor cause taste or odor in edible portions of fish. | |
| 7. pH (Standard Units) | 6.5 - 9.0 or as naturally occurs. | | | |

TABLE 1. 8.D.(2). Class-Specific Criteria - Fresh Waters, cont.

| CRITERION | CLASS AA* | CLASS A | CLASS B, B1, B{a}, B1{a} | CLASS C |
|---|---|---------|--------------------------|---------|
| 8. Temperature/ Temperature increase | No activity shall raise the temperature of the receiving waters above the recommended limit on the most sensitive receiving water use nor cause the growth of undesirable or nuisance species of biota. In no cases shall an activity cause the temperature to exceed 83 degrees F. Heated discharges into designated coldwater habitats (See Appendix A for coldwater designated waters) shall not raise the temperature above 68 degrees F outside an established thermal mixing zone. In no case shall the temperature of the receiving water be raised more than 4 degrees F. | | | |
| 9. Chemical constituents | <p>a. None in concentrations or combinations that could be harmful to humans or fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the palatability of same, or impair waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines as found in Appendix B.</p> <p>b. The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director based on results of bioassay tests conducted in accordance with the terms and conditions provided in the RIDEM Site Specific Aquatic Life Water Quality Criteria Development Policy.</p> | | | |
| 10. Nutrients | <p>a. Average Total Phosphorus shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria, except as naturally occurs, unless the Director determines, on a site-specific basis, that a different value for phosphorus is necessary to prevent cultural eutrophication.</p> <p>b. None in such concentration that would impair any usages specifically assigned to said Class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication, nor cause exceedance of the criterion of 10(a) above in a downstream lake, pond, or reservoir. New discharges of wastes containing phosphates will not be permitted into or immediately upstream of lakes or ponds. Phosphates shall be removed from existing discharges to the extent that such removal is or may become technically and reasonably feasible.</p> | | | |
| <p>¹ Class AA waters used for public drinking water supply may be subject to restricted recreational use by State and local authorities.</p> | | | | |

TABLE 2. 8.D.(3). Class-Specific Criteria - Sea Waters

| CRITERION | CLASS SA, SA{b} | CLASS SB, SB1, SB{a}, SB1{a} | CLASS SC |
|--|---|---|---|
| 1. Dissolved Oxygen | See Table 3 | | |
| 2. Sludge deposits, solid refuse, floating solids, oil, grease, scum | None allowable. | | None in such amounts that would impair any usages specifically assigned to this class. |
| 3. Color and turbidity | None in such concentrations that would impair any usages specifically assigned to this class. Turbidity not to exceed 5 NTU over background. | None in such concentrations that would impair any usages specifically assigned to this class. Turbidity not to exceed 10 NTU over background. | |
| 4. Fecal Coliform Bacteria (MPN/100ml) | Shellfishing Criteria: - Not to exceed a geometric mean MPN value of 14 and not more than 10% of the samples shall exceed an MPN value of 49 for a three-tube decimal dilution. | | None in such concentrations that would impair any usages specifically assigned to this class. |
| | Primary Contact Recreational/Swimming Criteria - Not to exceed a geometric mean value of 50 MPN/100 ml and not more than 10% of the total samples taken shall exceed 400 MPN/100 ml, applied only when adequate enterococci data are not available. | | |
| 5. Enterococci | <p align="center">Primary Contact Recreational/Swimming Criteria Geometric Mean Density: 35 colonies/100 ml Single Sample Maximum*: 104/100 ml * Criteria for determining beach swimming advisories at designated beaches as evaluated by HEALTH.</p> | | None in such concentrations that would impair any usages specifically assigned to this class. |
| 6. Taste and odor | None allowable except as naturally occurs. | None in such concentrations that would impair any usages specifically assigned to this class nor cause taste or odor in edible portions of fish or shellfish. | |
| 7. pH (Standard Units) | 6.5 - 8.5 but not more than 0.2 units outside of the normally occurring range. | | |
| 8. Temperature/ Temperature Increase | Activities shall not increase the temperature except where the increase will not exceed the recommended limit on the most sensitive receiving water use and in no case shall an activity cause the temperature to exceed 83 degrees F nor raise the normal temperature more than 1.6 degrees F, 16 June through September and not more than 4 degrees F from October through 16 June. All measurements shall be made at the boundary of such mixing zones as is found to be reasonable by the Director. | | |
| 9. Chemical constituents | a. None in concentrations or combinations that could be harmful to humans or fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the palatability of same, or impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines as found in Appendix B. b. The ambient concentration of a pollutant in a water body shall not exceed the RI DEM Ambient Water Quality Criteria & Guidelines (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guideline is modified by the Director based on results of bioassay tests conducted in accordance with the terms and conditions provided in the RIDEM Site Specific Aquatic Life Water Quality Criteria Development Policy. | | |
| 10. Nutrients | None in such concentration that would impair any usages specifically assigned to said Class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication. Shall not exceed site-specific limits if deemed necessary by the Director to prevent or minimize accelerated or cultural eutrophication. Total phosphorus, nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies. Where waters have low tidal flushing rates, applicable treatment to prevent or minimize accelerated or cultural eutrophication may be required for regulated nonpoint source activities. | | |

Table 3
Saltwater Dissolved Oxygen Criteria

- I. For **surface waters above a seasonal pycnocline**, not less than an instantaneous value of 4.8 mg/l more than once every three years, except as naturally occurs.
- II. For waters **below the seasonal pycnocline**, Aquatic Life Uses are considered to be protected if conditions do not fail to meet protective thresholds, as described below, more than once every three years. DO criteria presented here shall be protective of the most sensitive life stage – survival effects on larvae which affects larval recruitment – for both persistent and cyclic conditions. This criteria evaluates effects of exposure to low DO over time on larval recruitment. Because larval recruitment occurs over the whole season, the low DO exposure effects are cumulative. Exposures are evaluated on a daily basis to determine the total seasonal exposure. The criteria to protect larval survival is established to limit the number of exposure days over the range of low DO conditions such that the cumulative percentage of larvae affected shall not exceed a 5% reduction in larval recruitment over the season. If the Director determines that a smaller percent impairment on larval recruitment is necessary on a site specific basis, a criteria modification will be processed in accordance with Rule 19.F. Protection of larval survival will also afford adequate protection of juvenile and adult life stages. The critical recruitment season for evaluation of DO exposure is defined as May 1 through October 31. While recruitment may occur at other periods of the year, this timeframe reflects periods when hypoxia are most prevalent.

Waters with a DO concentration above an instantaneous value of 4.8 mg/l shall be considered protective of Aquatic Life Uses. When instantaneous DO values fall below 4.8 mg/l, the waters shall not be:

1. Less than 2.9 mg/l for more than 24 consecutive hours during the recruitment season; nor
2. Less than 1.4 mg/l for more than 1 hour more than twice during the recruitment season; nor
3. Shall they exceed the cumulative DO exposure presented in Table 3.A.

The method for calculating cumulative low DO exposure throughout the recruitment season is as follows:

- A. For **persistent low DO conditions** (low DO conditions that vary little within a day, e.g., <0.5 mg/l), the limit represents allowable DO conditions below 4.8 mg/l provided the exposure duration (number of days observed) does not exceed the corresponding allowable number of days (as presented in Table 3.A.) that ensure adequate larval recruitment over the course of the season. The cumulative seasonal low DO effects are evaluated by totaling the fractions of the observed (or projected) exposure duration (in days) divided by the allowable number of days for each DO concentration. The sum of the decimal fractions shall not exceed 1.0. The minimum daily DO measurement is used to represent the daily DO value. The criteria for 24 hour DO concentration and allowable number of days as presented in Table 3.A. are calculated using the following equation:

$$\sum t_i(\text{actual})/t_i(\text{allowed}) < 1.0$$

$$DO_i = 13.0/(2.80 + 1.84e^{(-0.10t_i)})$$

Where DO_i = allowable concentration (mg/l)
 t_i = exposure interval duration (days)
i = exposure interval

- B. For **cyclic low DO conditions** (DO conditions that fluctuate broadly within a day, e.g.>0.5 mg/l) the limit represents the allowable number of days at a given daily larval percent mortality that protects against greater than 5% cumulative impairment of larval recruitment over a recruitment season. The maximum daily percent larval mortality is a function of DO minimum for any exposure interval/range (mg/l) and the duration of the interval (hours) and is determined using the Time-to-death (TTD) curves presented in Figure 3.A. (from EPA-

822-R-00-012, November 2000) The maximum daily percent larval mortality from cyclic exposures is determined from the observed data point falling closest to a TTD curve of greatest effect (ie., highest percent mortality). The calculated maximum daily percent larval mortality shall not exceed the allowable number of days as presented in Table 3.A and Figure 3.B. Cumulative cyclic low DO effects observed over the course of the season are evaluated by tallying the number of days at each percent mortality observed for the season. The observed number of days at each percent mortality are divided by the allowable number of days for each percent mortality. The sum of the decimal fraction shall not exceed 1.0.

Table 3.A.
Saltwater DO Criteria For Waters Below the Seasonal Pycnocline

| 24 Hour (Daily) DO Exposure Concentration (mg/L) | Daily Percent Larval Mortality (%) | Allowable Number of Days Without Exceeding a 5% Reduction in Seasonal Larval Recruitment |
|--|------------------------------------|--|
| 4.6 | 4.96 | 42 |
| 4.5 | 6.05 | 30 |
| 4.4 | 7.36 | 24 |
| 4.3 | 8.93 | 20 |
| 4.2 | 10.79 | 18 |
| 4.1 | 12.98 | 16 |
| 4 | 15.55 | 14 |
| 3.9 | 18.51 | 12 |
| 3.8 | 21.88 | 10 |
| 3.7 | 25.69 | 9 |
| 3.6 | 29.89 | 8 |
| 3.5 | 34.47 | 7 |
| 3.4 | 39.36 | 6 |
| 3.3 | 44.46 | 5 |
| 3.2 | 49.69 | 4 |
| 3.1 | 54.92 | 3 |
| 3 | 60.05 | 2 |
| 2.9 | 64.97 | 1 |

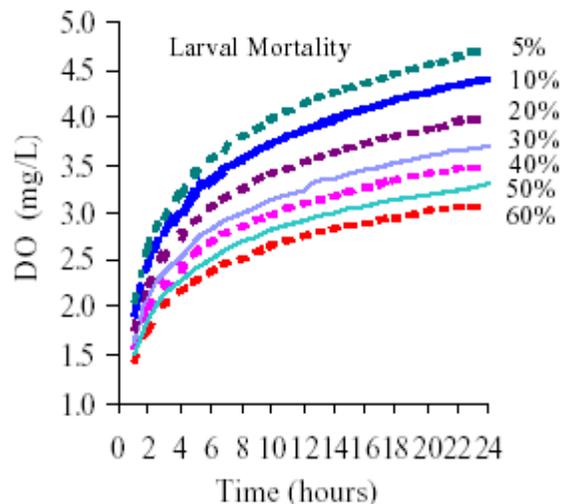


Figure 3.A. Time To Death (TTD) Curves for 5-60% Mortality

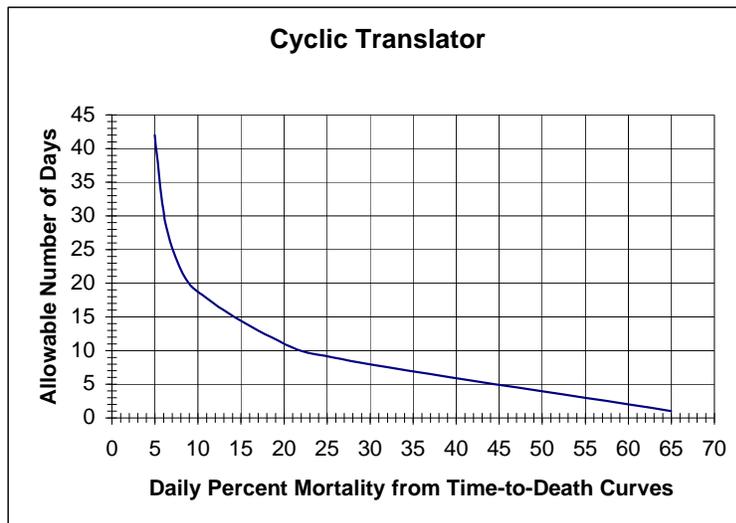


Figure 3.B. Cyclic Translator for Waters Below the Seasonal Pycnocline

For seasons with both cyclic and persistent cycles of low DO, all the data will be treated as cyclic exposure patterns with the persistent data set at the 24 hour/1-day exposure duration. Daily percent mortalities will be determined from Figure 3.A., and Table 3.A. will be used to determine the acceptable number of days the low DO pattern can occur over the course of the season.

III. For **waters without a seasonal pycnocline**, DO concentrations above 4.8 mg/l shall be considered protective of Aquatic Life Uses. When instantaneous DO values fall below 4.8 mg/l, the waters shall not be:

1. Less than 3.0 mg/l for more than 24 consecutive hours during the recruitment season; nor
2. Less than 1.4 mg/l for more than 1 hour more than twice during the recruitment season; nor
3. Shall they exceed the cumulative DO exposure presented in Table 3.A.

Cumulative low DO exposures in the 2.95 - 4.8 mg/l range shall be evaluated as described above in Section II but shall not exceed the information presented in Table 3.B.

For persistent low DO conditions in waters without a seasonal pycnocline, the criteria for 24 hour DO concentration and allowable number of days as presented in Table 3.B are calculated using the following equation:

$$DO_i = 17.523/3.3 + 2.01e^{(-0.091 t_i)}$$

Where DO_i = allowable concentration (mg/l)
 t_i = exposure interval duration (days)
 i = exposure interval

For cyclic low DO conditions in waters without a seasonal pycnocline, the daily percent mortalities for observed data are determined from Figure 3.A. and shall not exceed the allowable number of days presented in Table 3.B and Figure 3.C.

Table 3.B.
Saltwater DO Criteria For Waters without a Seasonal Pycnocline

| 24 Hour (Daily) DO Exposure Concentration (mg/L) | Daily Percent Larval Mortality (%) | Allowable Number of Days Without Exceeding a 5% Reduction in Seasonal Larval Recruitment |
|--|------------------------------------|--|
| 4.6 | 4.96 | 16 |
| 4.5 | 6.05 | 14 |
| 4.4 | 7.36 | 12 |
| 4.3 | 8.93 | 11 |
| 4.2 | 10.79 | 10 |
| 4.1 | 12.98 | 8 |
| 4.0 | 15.55 | 7 |
| 3.9 | 18.51 | 6 |
| 3.8 | 21.88 | 5 |
| 3.7 | 25.69 | 4 |
| 3.6 | 29.89 | 3 |
| 3.5 | 34.47 | 2 |
| 3.4 | 39.36 | 1 |

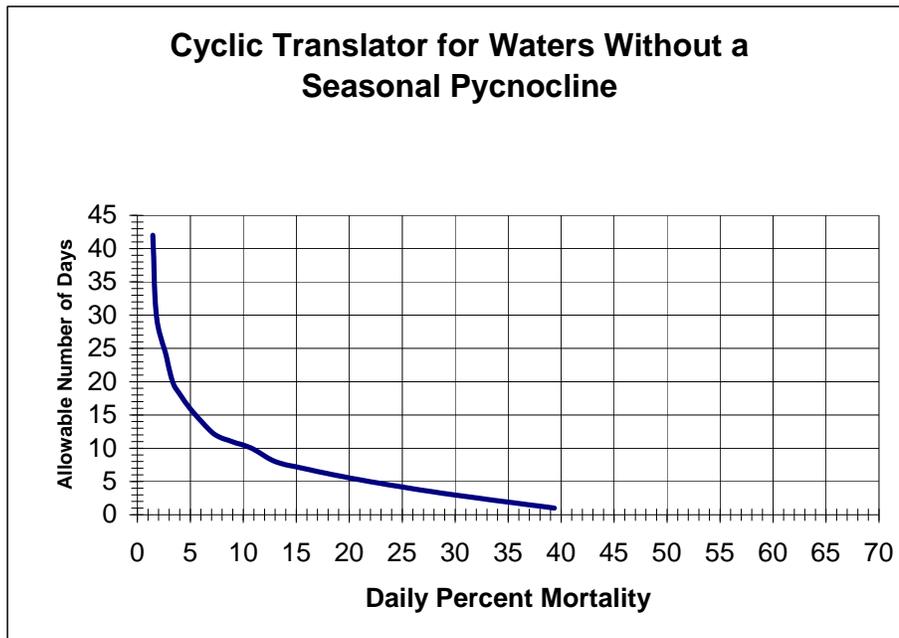


Figure 3.C. Cyclic Translator for Waters Without a Seasonal Pycnocline

For seasons with both cyclic and persistent cycles of low DO, all the data will be treated as cyclic exposure patterns with the persistent data set at the 24 hour/1-day exposure duration. Daily percent mortalities will be determined from Figure 3.A., and Table 3.B. will be used to determine the acceptable number of days the low DO pattern can occur over the course of the season.

Rule 9. - EFFECT OF ACTIVITIES ON WATER QUALITY STANDARDS

A. Activities Shall Not Violate Water Quality Standards - No person shall discharge pollutants into any waters of the State or perform any activities alone or in combination which the Director determines will likely result in the violation of any State water quality criterion or interfere with one or more of the existing or designated uses assigned to the receiving waters or to downstream waters in accordance with rules 8.B., 8.C., 8.D., and 18 of these regulations. In addition, Best Management Practices, as determined by the Director, shall be used to control erosion, sedimentation and runoff in accordance with rule 15.

B. Activities Shall Not Further Degrade Low Quality Waters - No person shall discharge pollutants into any waters of the State, or perform any activities alone or in combination which the Director determines will likely result in the additional degradation of water quality of the receiving waters or downstream waters which are already below the water quality standard assigned to such waters.

C. Activities Shall Not Violate Antidegradation - No person shall discharge pollutants into any waters of the State, or perform any activities alone or in combination which the Director determines will likely result in a violation of the Antidegradation provisions of these regulations (rule 18).

D. Mixing zone - Due to discharges to surface waters, the Director may recognize, where appropriate, a limited mixing zone on a case-by-case basis. In no case may a mixing zone cause a loss of, or impair, any existing or designated use.

E. Restrictions to New Discharges - New discharges into Class AA, A or SA waters (refer to Appendix A) or into waters designated Class B, C, SB or SC which have attained the Class A or SA standard shall be allowed, provided the discharge will not impair existing uses nor attainment of designated uses and all other provisions of these regulations are complied with including all required approvals, and it complies with the following restrictions:

(1). New discharges into the terminal reservoir of a public drinking water supply shall be prohibited with the exception of discharges of stormwater drainage. New discharges into all other waters of the public drinking water supply shall be prohibited with the exception of the types listed in rule 9.E.(2).(a) through (f). Notification will be made to the affected public drinking water supplier and the Department of Health of a proposed new discharge to a public drinking water supply which is under review by this Department in accordance with these regulations.

(2). New discharges into waters that are not public drinking water supplies may include:

- (a). discharges of stormwater drainage;
- (b). discharges from industrial non-contact cooling water;
- (c). discharges from construction site dewatering provided that the applicant has demonstrated to the satisfaction of the Director that no reasonable alternatives exist;
- (d). discharges from groundwater remediation projects provided that the applicant has demonstrated to the satisfaction of the Director that no reasonable alternatives exist;

- (e). discharges from aquaculture facilities as appropriately authorized by all required state agencies;
- (f). discharges from water main maintenance such as main flushing and cleaning operations;
- (g). discharges of dredged material;
- (h). discharges from farming activities into surface waters which are hydrographically disconnected from all other surface waters;
- (i). placement of suitable solid materials in appropriate amounts for the purpose of the formation of an artificial reef as approved by the Director;
- (j). discharges from aquatic research related activities provided that the applicant has demonstrated to the satisfaction of the Director that no reasonable alternatives exist;
- (k) discharges from desalination facilities into seawaters; and
- (l). other new discharges provided the applicant demonstrates to the satisfaction of the Director that:
 - i. the discharge serves a compelling public purpose which provides benefits to the public as a whole as opposed to individual or private interests;
 - ii. there is no reasonable alternative means of, or location for, serving the compelling public purpose cited; and
 - iii. the discharge will not impair existing uses nor attainment of designated uses.

Rule 10. - PROCEDURES FOR DETERMINING ADDITIONAL REQUIREMENTS FOR EFFLUENT LIMITATIONS, TREATMENT AND PRETREATMENT

A. Effluent Limited and Water Quality Limited Waters - No person shall discharge pollutants into any surface waters of the State or discharge to a treatment works unless the discharge complies with any additional effluent limitations and receives any additional treatment/pretreatment which the Director determines is necessary to comply with rule 9 of these regulations, or to prevent overloading or damaging effect upon a treatment works. In order to determine which waters require additional effluent limitations, treatment or pretreatment to comply with rule 9 of these regulations, or to prevent overloading or damaging effects upon a treatment works, the Director will categorize the surface waters of the State into effluent limited and water quality limited waters. Such classifications will be recorded in the 305(b) biennial state of the State's waters reports, and will be revised as necessary.

B. Total Maximum Daily Loads in Water Quality Limited Waters - For water quality limited waters, the Director shall identify those pollutants within discharges to the water quality limited waters which do or have the reasonable potential to cause or contribute to a violation of rule 9 of these regulations. The Director shall develop a total maximum daily load (TMDL) for each of these pollutants. The TMDL shall determine the maximum amount of the pollutant that can be discharged into the water quality limited waters and be in compliance with rule 9 of these

regulations. The TMDL shall be based on best available scientific information and allocation of the TMDL may be based on, but not limited to, technical feasibility of pollutant removal, the relative costs of treatment to the contributing discharges, and the relative contribution from each source. The Director shall not be required to allocate the full amount of the pollutant specified in rule 9, but may designate a portion of the allocation as a reserve or margin of safety as deemed necessary.

Rule 11. - PROHIBITED DISCHARGES

- A. General - The prohibitions enumerated in this rule apply to all pollutants, regardless of the effect on water quality standards or the treatment which the pollutants receive.
- B. Pollutants - No person shall discharge pollutants into the waters of the State except as in compliance with the provisions of Chapter 46-12, or other applicable chapters, of the Rhode Island General Laws or these regulations, and pursuant to the terms and conditions of an approval issued by DEM thereunder.
- C. Urban Runoff - No person shall discharge storm water, gutter runoff, sump discharges, or street runoff to a treatment works designed to receive only wastewater.
- D. Hazardous Waste and Hazardous Substances - No person shall discharge hazardous waste or hazardous substances into any waters of the State or discharge hazardous waste or hazardous substances into a wastewater treatment works, except as in compliance with the provisions of Chapter 46-12, or other applicable chapters of the Rhode Island General Laws or these regulations, and in accordance with the terms and conditions of an approval issued by the Director or municipality as may be required under the Rhode Island Pretreatment Regulations.
- E. Oil, Petroleum Products, Solvents - No person shall discharge oil, petroleum products or industrial solvents into treatment works designed to treat or control only wastewater or stormwater unless it conforms with Federal, State and local pretreatment requirements. No person shall discharge oil or petroleum products into the waters of the State except as in compliance with the provisions of Rhode Island General Laws Chapter 46-12, or other applicable chapters of the Rhode Island General Laws or these regulations, and in accordance with the terms and conditions of an approval issued by DEM thereunder.
- F. Discharges of Sewage from Vessels
- (1). No person shall discharge any sewage from a vessel into the waters of the State.
 - (2). No person shall operate or moor in the waters of the State a vessel equipped with a marine toilet that is: (a) not a type approved pursuant to the CWA; (b) an approved type that is not in proper working condition. or (c) that does not have the vessel's marine toilets properly sealed to prevent overboard discharges by one of the following means: the through-hull fitting is plugged; or the Y-valve is secured to the holding tank position by means of a padlock, wire tie, or by removing the seacock handle. All sewage must be discharged to an approved marina pump-out facility.

Rule 12. - STRATEGIC PLAN CONSISTENCY

In addition to the other requirements of these regulations, no person shall discharge any pollutants into any waters of the State so as to violate any legally applicable requirements of a plan approved by the Governor of Rhode Island and the administrator pursuant to sections 208(6), 319 and 320 of the Clean Water Act.

Rule 13. - APPROVALS

A. No person shall: discharge any pollutant into, or conduct any activity which will likely cause or contribute pollution to, the waters of the State; or construct, install, or modify any treatment works including the extension of sewers to an existing sewer system, without having obtained all required approvals from the Director. The types of approval for the purposes of these regulations may include the following:

(1). Rhode Island Pollutant Discharge Elimination System (RIPDES) permit by DEM, Water Resources in accordance with the RIPDES Regulations.

(2). Order of Approval from DEM, Water Resources for any treatment works in accordance with Rules 14 through 17 below.

(3). Water Quality Certificate (WQC) - the activity(ies) listed below require approval in the form of a certification by DEM, Water Resources that the proposed activity(ies) does not violate these regulations. A WQC shall have the full force and effect of a permit issued by the Director.

(a). In accordance with Section 401 of the CWA, applicants for any project which may result in a discharge to waters of the State and which requires a federal permit must directly apply for and receive a Water Quality Certification from DEM, Water Resources, except as described in footnotes ^{*(1)(3) & (4)} and ^{***} below.

(b). Those projects involving one or more of the activities listed below which are within the jurisdiction of the Rhode Island Coastal Resources Management Council in accordance with R.I.G.L. Section 46-23, and which do not require an approval in accordance with the Rhode Island Freshwater Wetlands Act (R.I.G.L. Section 2-1-18 et. seq.) or any rules and regulations promulgated thereto, must directly apply for and receive Water Quality Certification from DEM, Water Resources except as described in the footnotes below.

- i. Dredging and Dredged Material Disposal^{(1)*}
- ii. Filling of Waters of the State
- iii. Residential development of six (6) or more units
- iv. Any **residential**, commercial, industrial, state or municipal land development that results in the creation of **1040,000** square feet or more of additional impervious area
- v. Five (5) or more acres of land disturbance^{(3)***}
- vi. Marinas - construction of new facilities or expansion of existing facilities
- vii. Flow Alterations**
- viii. Harbor Management Plans for those elements which will likely affect water quality
- ix. A Point Source Discharge of Pollutants^{(3)***}
- x. Any redevelopment project as defined in the 2010 Rhode Island Stormwater Design and Installation Standards Manual (RISDIS Manual)

Footnotes:

^{(1)*} With regard to marine dredging, discharge of dredge material and placement of dredge material in tidal waters, the application process and decision for the water quality review will be conducted in accordance with the Rules and

Regulations for Dredging and the Management of Dredged Material.

(2)** Flow Alterations for agricultural irrigation will be managed through coordination with DEM/Agriculture.

(3)*** The permit required under the Rhode Island Pollutant Discharge Elimination System Regulations may act as the Water Quality Certification for the discharge.

(4) The permit required under the RIDEM Rules and Regulations Governing the Administration and Enforcement of the Fresh Water Wetlands Act (Fresh Water Wetlands Regulations) may act as the Water Quality Certification for the discharge, including stormwater discharge.

(c). Where a project or activity listed in Rule 13(A)(3) also requires a permit by any one of the following DEM permit programs, the WQC decision may be incorporated into the decision issued under said program:

Wetlands permit or determination in accordance with the Rules and Regulation Governing the Administration and Enforcement of the Freshwater Wetlands Act

ISDS permit or determination in accordance with regulations Establishing Minimum Standards Relating to the Location, Design, Construction and Maintenance of Individual Sewage Disposal Systems

RIPDES permit in accordance with the Regulations for the Rhode Island Pollutant Discharge Elimination System

Marine dredging and dredged material disposal permit in accordance with the Rules and Regulations for Dredging and the Management of Dredged Material

UIC permit in accordance with the Underground Injection Control Program Rules and Regulations.

Where the Director determines that a WQC decision will be incorporated with one of the above permit decisions, the corresponding public notice requirements and appeal procedures contained in the regulations of the associated permit program will apply in lieu of those contained in Rule 15 and Rule 21 herein, respectively. However, when the activity is subject to Rule 13.A.(3).(a), and the listed permit decision does not require public notification, the requirements of Rule 15 will be applied. All other provisions contained in these regulations shall apply.

Rule 14. - APPLICATION FOR APPROVALS

- A. Application - More than one of the approvals noted in Rule 13 may be required. Applications for RIPDES permits shall be submitted and processed in accordance with the RIPDES Regulations. Applications for Orders of Approval and Water Quality Certifications will be on forms provided by or in the manner prescribed by, DEM, to be submitted to the Director and shall contain such documentation and/or information as the Director may require, including but not limited to:

- (1). When applicable, documentation that the proposed project is consistent with the currently approved wastewater facility plan or information necessary to modify an approved wastewater facility plan, including but not limited to the project needs, conformance with State Guide Plan policies, goals, and objectives, the basis of design, including design assumptions, data, and calculations;
- (2). Comprehensive engineering report and detailed engineering plans and specifications for the proposed project;
- (3). Timetable for and duration of the proposed construction or other activity;
- (4). Any additional information as may be deemed necessary by the Director to fully assess the impact of the proposed activity upon the waters of the State or to support any changes in the scope of the project, actual or anticipated;
- (5). Any additional information including proprietary data, where, in the opinion of the Director, such information is necessary to fully disclose all relevant facts concerning the application for an approval. The applicant may assert a claim of confidentiality for proprietary data as defined in R.I. Gen. Law 38-2-2 provided said information is clearly marked and segregated within the total information requested by the Department; and
- (6). A preponderance of clear and scientifically valid evidence having a probative value demonstrating, to the satisfaction of the Director, that the activity will not violate the surface water quality standards established by these Water Quality Regulations, and amendments thereto.

B. Professional Certification for Plans and Specifications - All engineering plans and specifications required under rule 14.A. shall be certified by a professional engineer registered in the State pursuant to Chapter 5-8 of the General Laws of Rhode Island of 1956, as amended.

C. Failure of the applicant to submit information deemed necessary by the Department in order to fully assess the impact of the proposed project on waters of the State or to support any changes in the scope of the proposed project, actual or anticipated, shall constitute valid cause for denial of the application.

D. Requirement pertaining to stormwater and the RISDIS Manual

(1). The 1993 RISDIS Manual will be superseded by the 2010 RISDIS Manual upon (effective date). Unless otherwise provided in this section, the requirements of the 2010 RISDIS Manual as amended shall apply to all applications proposing the generation of stormwater discharges on any applicable project listed in Rule 13 submitted on or after January 1, 2011. The 2010 RISDIS Manual as amended may be used in lieu of the 1993 RISDIS Manual beginning on or after (effective date).

(2). Applicants for projects which have obtained Master Plan approval from the local planning board or commission on or before March 31, 2011 and are currently vested may elect to comply with the 1993 RISDIS Manual instead of the 2010 RISDIS Manual provided that a complete application for the project is submitted to the Director on or before June 30, 2011. Any application received after June 30, 2011 shall be required to comply the 2010 RISDIS Manual, including any future phases of a phased project having received local Master Plan approval as of March 31, 2011. Applicants shall submit, at the time of application, a copy of the Master Plan approval documents demonstrating eligibility under this subsection. This subsection applies only to projects which require

Master Plan approval.

(3). Projects that propose a subsurface discharge of stormwater subject to requirements of the 2010 RIDISM Manual as amended and the RIDEM Underground Injection Control (UIC) Rules and Regulations or the RIDEM Groundwater Discharge Rules and Regulations will be considered approved and registered under said regulation(s) upon issuance of a project approval under these Rules.

Rule 15. - PROCEDURES FOR REVIEW OF APPLICATIONS FOR ORDERS OF APPROVAL AND WATER QUALITY CERTIFICATIONS

A. In consideration of the application, the Department may use, but is not limited to, the following documents: Guides for the Design of Wastewater Treatment Works (TR-16), published by the New England Interstate Water Pollution Control Commission; Design of Municipal Wastewater Treatment Plants (WEF Manual of Practice #8 & ASCE Manual and Report on Engineering Practice #76), jointly published by the Water Environment Federation and the American Society of Civil Engineers; the most recent version of the Rhode Island Soil Erosion and Sediment Control Handbook, developed jointly by R.I. DEM and U.S. Department of Agriculture Natural Resources Conservation Service; State of Rhode Island Stormwater Design and Installation Standards Manual (1993 or 2010 version, as applicable), developed jointly by R.I. DEM and Coastal Resources Management Council; Storm Water Management for Construction Activities (EPA 832-R-92-005), by U.S. Environmental Protection Agency; the Technical Support Document for Water Quality-based Toxics Control, March 1991, EPA/505/2-90-001; Evaluation of Dredged Material Proposed for Ocean Disposal Testing Manual, February 1991, EPA-503/8-91/001; Interim Regional Policy for New England Stream Flow Recommendations, U. S. Department of Interior, Fish and Wildlife Service; Water Quality Standards Handbook, 2nd. Ed., August 1994, EPA-823-B-94-005a; and standards or policies accepted by the Department.

B. Application Completeness

(1). Upon receipt of an application, the Department will review the application for completeness and shall notify the applicant in writing whether the application is complete. Where the Department has deemed an application to be deficient, the processing of the application will be suspended and the applicant shall correct said deficiencies to the satisfaction of the Department.

C. At any time during review, the Director may:

(1). Require that the applicant provide such information as the Director deems necessary for the review of the application;

(2). Issue an approval requiring such terms, conditions, management practices and operation and maintenance requirements as deemed necessary to comply with the requirements of applicable state or federal laws; or

(3). Deny the application for failure to satisfy the requirements of applicable State or Federal Laws and advise the applicant of the right to appeal under rule 21 of these regulations. A denial may be based on, but is not limited to any or all of the following:

(a). A treatment works which is overloaded or inadequate to accept and treat any additional load of pollutants in which case the Director, shall, where appropriate,

also deny applications for new sewer connection or additional discharges to the system;

(b). An activity or a treatment works or any part thereof, which is likely to substantially contribute to an increase in non-point source pollution which will likely result in a violation of state or federal laws or these regulations or any other regulations of the Department;

(c). A treatment works or any part thereof, or a project which is not consistent with the approved Wastewater Facilities Plan;

(d). Failure to submit any information required by the Department; or

(e). Failure to provide a preponderance of clear and scientifically valid evidence having a probative value demonstrating, to the satisfaction of the Director, that the activity will not violate the surface water quality standards established by these Water Quality Regulations, and amendments thereto.

D. Public Notice and Consideration of Public Comment for Applications for Water Quality Certification

(1). Certification Public Notice - Upon determination that an application for water quality certification is complete, the Director shall provide or have the applicant provide in a form approved in writing by the Department, written notice of the proposed project to all abutters of any property upon which the activity will occur, and to any other such persons, agencies or organizations deemed appropriate by the Director. At a minimum the chief elected officer of the city or town within which the activity will be conducted, shall be notified.

(a). For projects that the Director determines have the potential to result in impacts beyond the abutting property(ies) or that notification of abutters is impracticable, the notice shall be published in a daily or weekly newspaper with circulation in the involved area. The Department may also require the applicant to publish notice, in a form approved in writing by the Department, in an additional daily or weekly newspaper with circulation that includes the community nearest the proposed location, or statewide.

(2). Comment Period - The notice will provide for a thirty-day comment period during which time any person may provide written comments which may include a request for a hearing on the project or activity proposed by the application.

(3). Public Hearing - The Director shall provide an opportunity for oral comments if a hearing is requested by twenty-five (25) persons, or by a governmental subdivision or agency, or by an association having not less than twenty-five (25) members. The applicant, all persons receiving notice under Rule 15.D.(1), and all persons submitting comments or requesting a hearing under Rule 15.D.(2) shall be notified consistent with the requirements of Rule 15.D.(1), at least fourteen (14) days in advance, of the time and place of the hearing.

(4). Consideration of Comments - The Director shall consider all written and oral comments and may approve modifications to the application package made in response to comments received, without requiring another notice and comment period, provided the modifications are minor in nature and will have little or no adverse environmental impact..

(5). Notice of Decision - All persons who submit comments, either orally at the hearing or in writing, shall receive written notice of the final agency decision on the application.

(6). Modifications - The Director may approve modifications to an approved project or activity without further notice, provided that the project had been noticed in accordance with Rule 15.D., and such modifications are minor in nature and will have little or no adverse environmental impact.

Rule 16. - EFFECT OF APPROVAL

A. The issuance of an approval mandates compliance with all terms, conditions, management practices and operation and maintenance requirements set forth in the approval. Any violation of these may result in the finding of a prohibited discharge as set forth in rule 11 of these regulations.

B. The issuance of an approval does not relieve any person of the continuing responsibility to comply with any applicable rule of these regulations or applicable sections of the Clean Water Act.

C. The issuance of an approval by the Department does not relieve any person of the responsibility for obtaining any other necessary permits or approvals from any federal, state, regional, or local agency.

D. The issuance of an approval does not authorize any injury to persons or property or invasion of other private rights, or any infringement of Federal, State or local law or regulations.

Rule 17. - MODIFICATION, EXPIRATION, SUSPENSION OR REVOCATION OF APPROVAL

A. The Director may modify, suspend, or revoke, in whole or in part, an approval for cause, including, but not limited to:

(1). Information indicating that the project will likely result in probable harm to the environment or pose a threat to the health, safety and/or welfare of the public;

(2). The existence of a factor or factors which, if properly and timely brought to the attention of the Director, would have justified the application of more or less stringent conditions than required by these regulations, but only if such factor(s) arose after the approval was issued;

(3). Changes in effluent limitations in accordance with rule 10 of these regulations, or changes in the definition(s) of such limitations in the Clean Water Act or applicable Environmental Protection Agency regulations;

(4). Where circumstances on which the approval was based have materially and substantially changed since the approval was issued, including, but not limited to, a change in category of waters from effluent limited to water quality limited, or amendment of these regulations;

(5). The information or data submitted by the applicant or permittee either on the form(s) required or in any other material in support of the application is found to be false, misleading or erroneous; or

(6). The project is not undertaken in strict compliance with the conditions or provisions of any approval issued by the Department.

B. A Notice of Revocation/Suspension of an approval will be in the form of a letter notifying the permittee or subsequent transferee of the revocation or suspension and the reasons why the approval is being revoked or suspended.

C. The party served with a Notice of Revocation/Suspension of an approval may request an adjudicatory hearing to contest the revocation as set forth in the provisions of rule 21. A Notice of Revocation/Suspension of an approval automatically becomes a final order of the Director enforceable in Superior Court upon failure to request said adjudicatory hearing.

D. Request for modification of approval shall be in accordance with rules 14 and 15.

E. Pursuant to R.I. Gen. Laws §42.17.1-2.5, where a Water Quality Certification permit has been issued relating to development of property and which contains a permit expiration date, the permit shall expire on the expiration date contained in the permit or June 30, 2011 which ever date is later, provided that the subject permit was in effect on November 9, 2009 at the time of passage of Rhode Island Public Laws Chapters 09-198 and 09-199.

Rule 18. - ANTIDegradation OF WATER QUALITY STANDARDS

A. Purpose - The State Antidegradation Regulations are based on the federal Antidegradation Policy requirements (40 CFR 131.12) and have as their objective the maintenance and protection of various levels of surface water quality and uses. Antidegradation applies to all projects or activities subject to these regulations which will likely lower water quality or affect existing or designated water uses, including but not limited to all Water Quality Certification reviews and any new or modified RIPDES permits. For the disposal of dredged or fill material into the waters of the state, 40 CFR Part 230 Section 404(b)(1) guidelines shall be followed in the evaluation of 40 CFR 131.12(a)(1) and the Antidegradation Policy. The Antidegradation regulations consist of four (4) tiers of water quality protection.

B. Tier 1 - Protection of Existing Uses - Any existing in-stream water uses and level of surface water quality necessary to protect the existing uses, shall be maintained and protected.

C. Tier 2 - Protection of Water Quality in High Quality Waters - With the exception of Outstanding National Resource Waters, in surface waters where the existing water quality exceeds levels necessary to support propagation of fish and wildlife and recreation in and on the water, that quality shall be maintained and protected, except for insignificant changes in water quality as determined by the Director and in accordance with the Antidegradation Implementation Policy, as amended. An exception to this level of protection may only be allowed if it can be proven to the Director by a preponderance of clear and scientifically valid evidence having a probative value, and the Director finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the RI Continuing Planning Process, that allowing significant water quality degradation is necessary to accommodate important economic and social benefit in the area in which the receiving waters are located. In allowing such significant degradation or lower water quality, the Director shall assure water quality adequate to fully protect existing and designated uses. In allowing a change in water quality, significant or insignificant, all reasonable measures to minimize the change shall be implemented. Adequate

scientifically valid documentation shall be provided to the Director demonstrating that designated and existing uses, water quality to protect those uses, and all applicable water quality standards, will be fully protected. Further, the highest statutory and regulating requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control shall apply.

D. Tier 2½ -Protection of Water Quality for SRPWs - Where high quality waters constitute a SRPW, there shall be no measurable degradation of the existing water quality necessary to protect the characteristic(s) which cause the waterbody to be designated as an SRPW. Notwithstanding that all public drinking water supplies are SRPWs, public drinking water suppliers may undertake temporary and short term activities within the boundary perimeter of a public drinking water supply impoundment for essential maintenance or to address emergency conditions in order to prevent adverse effects on public health or safety, provided that these activities comply with the requirements set forth in rule 18.B. (Tier 1 Protection of Existing Uses) and rule 18.C. (Tier 2 Protection of Water Quality in High Quality Waters).

E. Tier 3 -Protection of Water Quality for ONRWs - Where high quality waters constitute an Outstanding National Resource, as defined in rule 7, that water quality shall be maintained and protected. The State may allow some limited activities that result in temporary and short-term changes in the water quality of an ONRW. Such activities must not permanently degrade water quality or result in water quality lower than that necessary to protect the existing uses in the ONRW.

F. Implementation - The Antidegradation provisions shall be implemented in accordance with the Antidegradation Implementation Policy (Appendix C), as amended.

Rule 19. - MODIFICATION OF WATER QUALITY STANDARDS

A. Authority - The Director has the power and duty in accordance with rule 2 of these regulations and section 46-12-3 (g) of the General Laws of Rhode Island of 1956, as amended, to promulgate water quality standards.

B. Request for Modification - Any person may request that the Director modify a water quality standard. The request must include a preponderance of clear and scientifically valid evidence having a probative value to demonstrate that such modification is consistent with these regulations. In addition, a Use Attainability Analyses (UAA) must be conducted:

- (1). for a request to remove a designated use specified in Section 101(a)(2) of the Act; or
- (2) to propose a subcategory of uses specified in Section 101(a)(2) of the Clean Water Act which require less stringent criteria.

C. Promulgation of Modifications - If the Director determines that modification is appropriate the Director shall initiate promulgation of such modification in accordance with Chapter 42-35 of the R.I. Gen. Laws.

D. General Standards for Conducting the Review - Water quality standards shall protect the public health, safety and welfare, enhance the quality of water and serve the purpose of the Clean Water Act. The Director will take into consideration the conservation, protection, use and value of the waters for public water supplies, propagation of fish and wildlife, recreational purposes, agricultural, industrial, and other purposes, and for navigation.

The Director shall attempt to establish water quality standards which will result in the

achievement of the national water quality goal specified in paragraph 101(a)(2) of the Clean Water Act, wherever attainable. In determining whether such standards are attainable for any particular segment, the Director shall take into consideration environmental, technological, social and economic factors. Designation of uses which do not support the protection and propagation of fish and wildlife, and recreation in and on the water (Section 101(a)(2) of the Act), may be granted if supported by a Use Attainability Analyses to the satisfaction of the Director.

The Director shall take into consideration the water quality standards of downstream waters and shall assure that water quality standards provide for the attainment of the water quality standards of downstream waters.

The Director shall adhere to the antidegradation principles of the Antidegradation Policy.

E. Modifications of Designated Uses - Modifying a designated use may result in modifying the applicable criteria of the affected/identified water segment, to criteria necessary to protect the new designated use of that affected/identified water segment. In no case may a criteria be modified if it would adversely affect existing uses or other designated uses.

(1). Downgrading Designated Uses

(a). In waters in which the designated use(s) is not the existing use(s), any person may request that the Director, or the Director may propose, that the designated use be downgraded, or may designate a partial use (rule 8.B.(3)), only where it is demonstrated through the UAA process (except as noted in (b) below) by a preponderance of clear and scientifically valid evidence having a probative value to the satisfaction of the Director that attaining the designated use is not feasible because:

- i. Naturally occurring background pollutant concentrations or natural background conditions prevent the attainment of the use;
- ii. Naturally occurring ephemeral, intermittent or low flow conditions or water levels not human-made or human-induced prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met;
- iii. Human-made or human-induced conditions prevent the attainment of the use and cannot be remedied per item (vi), or would cause more environmental damage to correct than to leave in place;
- iv. Existing dams, diversions or other types of permitted hydrologic modifications which meet all applicable permit and/or water quality certificate requirements preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use;
- v. Physical conditions related to the naturally occurring features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality and not human-made or human-induced, preclude attainment of

aquatic life protection uses; or

- vi. Controls more stringent than those required by sections 301(b)(1)(A) and (B) and 306 of the Clean Water Act for point source dischargers, and reasonable best management practices for nonpoint source dischargers, would result in substantial and widespread economic and social impact.

It must also be demonstrated to the Director's satisfaction that downgrading or altering the water quality use will not affect the quality of waters beyond the area in which i, ii, iii, iv, v or vi applies nor violate rule 18 (Antidegradation of Water Quality Standards) of these regulations. The Director shall hold a public hearing on such downgrading requests that are determined to have merit.

(b). For the following waters, a partial use designation of SA{b} may be proposed and will not be considered a downgrade and will not require a use attainability analysis, unless the Director determines it is necessary to comply with Rule 18 (Antidegradation of Water Quality Standards):

- i. SA waters along the western shore of Aquidneck Island located between a straight line extending northerly from the boundary of Lots 8 and 9, Portsmouth Town Map 17 to the end of Coddington Cove Breakwater in Middletown, that extend 500 feet seaward from the mean high water mark.

- ii. SA waters along the western shore of Warwick Neck from the southern most point of the Harbor Light Marina parking lot to the northern side of the end of Randall Street, that extend 500 feet seaward from the mean high water mark.

- iii. SA waters along the eastern shore of Horse Neck from the eastern most extension of Burr Avenue, to the eastern most groin at Oakland Beach, that extend 500 feet seaward from the mean high water mark.

- iv. SA waters from the northernmost point along the east bulkhead wall in the small embayment on the south side on the Allens Harbor entrance channel to the extension of a line from nun buoy 10 through FG Buoy 11 to the shore at Quonset Point, that extend 500 feet seaward from the mean high water mark.

(c). A designated use may not be downgraded if such uses will be attained by implementing effluent limits required under sections 301(b) and 306 of the Clean Water Act for point sources and by implementing cost-effective and reasonable best management practices for nonpoint source control.

(2). Upgrading Designated Uses - Any person may request that the Director or the Director may propose to upgrade the classification of a water quality segment, including a request to designate a waterbody or waterbody segment as a Special Resource Protection Water (SRPW) or an Outstanding National Resource Water (ONRW). Where current water use classifications specify water uses less sensitive than those which are

presently being achieved, the Director shall propose to upgrade the classification of the waters in question to reflect the uses actually being attained. The Director shall hold a public hearing on such requests that are determined to have merit. At the hearing, the applicant must prove by a preponderance of clear and scientifically valid evidence having probative value to the satisfaction of the Director that such a reclassification satisfies the standards of rule 19.D. or that rule 18 applies.

F. Modification of Criteria - Any person may request that the Director, or the Director may propose to modify an aquatic life water quality criteria. The request and development of site specific criteria shall be in accordance with the most recent RIDEM Site Specific Aquatic Life Water Quality Criteria Development Policy. If the Director determines the criteria modification is appropriate, the Director shall promulgate such modification in accordance with Chapter 42-35 of the R.I. Gen. Laws.

Modification of criteria of a water segment shall not result in a modification of the designated use of the water segment. Newly developed criteria must still protect the existing and designated uses of the water segment.

Rule 20 - VARIANCES FROM WATER QUALITY STANDARDS

A. Conditions for Granting Variances - A variance from the water quality standards may be granted by the Director when the Director has a reasonable belief that the standard can ultimately be attained. A variance from meeting the standard is granted to the discharger for the particular constituent that is causing non-attainment of the standard. All other applicable criteria and standards must be met by the discharger. The criteria protective of the standard must be maintained for all other dischargers on the waterbody. A variance can be granted only under the following conditions:

(1). Non-attainment of the standard is attributed to one of the following:

- (a). Naturally occurring background pollutant concentrations or natural background conditions prevent the attainment of the use;
- (b). Naturally occurring ephemeral, intermittent or low flow conditions or water levels not human-made or human-induced prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met;
- (c). Human-made or human-induced conditions prevent the attainment of the use and cannot be remedied per item (f), or would cause more environmental damage to correct than to leave in place;
- (d). Existing dams, diversions or other types of permitted hydrologic modifications which meet all applicable permit and/or water quality certificate requirements preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use;
- (e). Physical conditions related to the naturally occurring features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality and not human-made or human-induced, preclude attainment of aquatic life protection uses; or

(f). Controls more stringent than those required by sections 301(b)(1)(A) and (B) and 306 of the Clean Water Act for point source dischargers, and reasonable best management practices for nonpoint source dischargers, would result in substantial and widespread economic and social impact.

(2). Treatment more advanced than that required by section 301(b)(1)(A) and (B) has been carefully considered, and that alternative effluent control strategies have been evaluated.

B. Time Limit for Variances - Variances from the water quality standards shall be for a specific period of time not to exceed three (3) years. A variance may be reinstated only upon demonstration that the conditions for granting the variance still apply and reasonable progress toward meeting the standard has been made.

C. Public Notice - The Director may grant a variance, in accordance with this rule, only after public notice, opportunity for comment and a public hearing, in accordance with Rhode Island General Laws Chapter 42-35.

D. Variances for RIPDES Permitted Discharges - Those persons holding a RIPDES permit, or applying for a RIPDES permit, must request a variance in accordance with rules 56-59 of the RIPDES Regulations.

E. Compliance With Other Water Quality Regulations - Issuance of a variance pursuant to this rule does not relieve the holder of the variance from complying with requirements of these regulations which have not been the subject of a variance.

Rule 21. - APPEALS

A. General - The procedures for appeal of Departmental decisions pursuant to the provisions of Section 42-35 of the R.I. General Laws are contained in the "Administrative Rules of Practice and Procedure for the Department of Environmental Management Administrative Adjudication Division for Environmental Matters".

B. Appeal Procedures for Applications for Orders of Approval and Water Quality Certifications - The applicant may appeal to the Director for review of the decision on an application for approval by filing an appeal with DEM/Administrative Adjudication.

(1). Filing of Appeal - All appeals shall be in writing and shall be filed with and received by DEM/Administrative Adjudication within thirty (30) days after the effective date of the denial of the subject application.

(2). Contents of Appeal - Every appeal shall comply in all respects with the "Administrative Rules of Practice and Procedure for the Department of Environmental Management Administrative Adjudication Division for Environmental Matters" and at a minimum contain the following:

(a). A detailed basis upon which the appeal is taken;

(b). A plat plan of the area of the subject application; and

(c). A list of the names and addresses of the applicant, the municipality in which the property is located and all abutters.

- (3). Notice of Administrative Hearing - Upon the filing of an appeal with DEM/ Administrative Adjudication, and once the hearing schedule allows, DEM/Administrative Adjudication shall notify the following, by first class mail, of the date, time and place of the adjudicatory hearing, in conformance with R.I. General Laws Section 42-35-9, as amended: the applicant, the municipality in which the property is located, all abutters and all other persons who received notice pursuant to Rule 15.D.(1) herein.

C. Appeal Procedure for Notice of Violations, Suspensions or Revocations - Any person who has received a Notice of Violation (NOV) alleging violation of these regulations, or whose approval has been suspended or revoked, may appeal to the Director for review of the decision on which the NOV, suspension or revocation is based by filing an appeal with DEM/Administrative Adjudication.

(1). Filing of Appeal - All appeals shall be in writing and shall be filed with and received by DEM/Administrative Adjudication within twenty (20) days after the date of the receipt of the subject NOV, revocation or suspension.

(2). Contents of Appeal - Every appeal shall contain a detailed basis upon which the appeal is taken.

Rule 22. - SAMPLING

A. Water Quality Testing - Surface water samples shall be collected, preserved, and analyzed in accordance with 40 CFR, Part 136, Guidelines establishing Test Procedures for the Analysis of Pollutants. Other methods recommended by the EPA may be used, if legally acceptable.

B. Bioassays - Bioassays shall be performed in accordance with the latest editions of EPA documents entitled *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, and *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates* or other methods if approved by the Director and legally acceptable. A more detailed explanation of state requirements pertaining to bioassays is given in the most recent RIDEM bioassay protocol.

Rule 23. - EFFECTIVE DATE

The foregoing Water Quality Regulations, after due notice and hearing, are hereby adopted and filed with the Secretary of State this _____ day of ~~May, 2009~~, 2010 to become effective twenty (20) days thereafter, in accordance with the provisions of Chapters 46-12, 42-17.1 42-17.6 and 42-35 of the General Laws of Rhode Island, 1956, as amended.

W. Michael Sullivan, PhD, Director
Department of Environmental Management

Notice Given on: November 5, 2008
Public Hearing held: December 8, 2008
Filing Date: _____
Effective Date: _____



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

August 17, 2010

TO: Peter Dennehy, RI Department of Administration
Sherri Lynn Carrera, RI Economic Development Corporation
Rita Menard, Governor's Legal Office

FROM: Russell J. Chateaufneuf, P.E., Chief, Office of Groundwater and Wetlands
Protection, Department of Environmental Management

SUBJECT: **Economic Impact and Regulatory Flexibility** -- Proposed Revisions to the Rhode Island Stormwater Design and Installation Standards Manual (Stormwater Manual), Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (Freshwater Wetlands Regulations), and the Water Quality Regulations

Authority:

The Stormwater Manual is adopted in accordance with Chapter 42-35 pursuant to Chapter 45-61.2-1, 46-12, and 42-17 of the Rhode Island General Laws of 1956 ("RIGL"), as amended.

The Wetlands Regulations are adopted in accordance with Chapter 42-35 pursuant to Chapter 2-1-20.1, 42-17.1, and 41-17.6 of the Rhode Island General laws of 1956 ("RIGL"), as amended.

The Water Quality Regulations are adopted in accordance with 42-35 pursuant to Chapters 46-12 and 42-17.1 of the Rhode Island General laws of 1956 ("RIGL"), as amended.

Summary of Proposed Rule Changes:

The primary purpose of the proposed Stormwater Manual is to implement the "Smart Development for a Cleaner Bay Act of 2007" (the Act) (RIGL §23-45-61.2-1, *et seq.*). This Act requires that the Department of Environmental Management (DEM) and the Coastal Resources Management Council (CRMC) amend the 1993 version of the Stormwater Manual. The Freshwater Wetlands Regulations and Water Quality Regulations are amended to reflect the adoption of the Stormwater Manual as noted in the following: The CRMC will be filing separate regulations to incorporate the new Stormwater Manual into their regulatory requirements. As stated in the Act, "The changes shall include, but not be limited to, incorporation into existing regulatory programs that already include the review of stormwater impacts 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.”

To effectively manage the impacts of stormwater and prevent adverse impacts to water quality, habitat and flood storage capacity, DEM and CRMC are updating the 1993 Stormwater Manual to reflect current science and engineering practice concerning stormwater management and to incorporate low impact development (LID) methods throughout. The revised Manual specifies requirements and provides guidance for stormwater management on new development, redevelopment, and infill projects and most importantly, incorporates LID as the “industry standard” for all sites, representing a fundamental shift in how development projects are planned and designed.

DEM and CRMC have issued two prior drafts of the Manual for public review prior to formal public notice (May 2009 and April 2010). Workshops and meetings were held in 2009 to discuss the new concepts in the Manual and again in 2010 to discuss the changes from the 2009 version to the April 2010 version. Comments were solicited and received on both versions of the Manual.

The proposed amendments to the Freshwater Wetlands Regulations and the Water Quality Regulations are necessary in order to reference and incorporate the new Stormwater Manual provisions into the regulatory requirements of these regulations, as well as to stipulate appropriate timetables to begin requiring use of the new Stormwater Manual. For example, the new Stormwater Manual requires analysis of the 1, 10, and 100 year frequency storm events, whereas the existing Freshwater Wetlands Regulations require analysis of the 2, 10, 25 and 100 year storm event. In addition, the Department is proposing to begin requiring compliance with the new Stormwater Manual on most applications beginning on January 1, 2011.

The amendments also include language to incorporate the new permit **tolling law** that was passed by the Assembly in late June regarding extension of expiration times of permits related to development projects. The assembly granted 20 months extension on all development permits valid on November 9, 2009, and additional time on permits issued after that date up until June 30, 2011.

The analysis below is based on considering the potential impact of the Stormwater Manual and amendments to the Freshwater Wetlands Regulations and the Water Quality Regulations pursuant to the requirement of RIGL § 42-35.1-1, *et seq.*

Economic Impact:

Per RIGL § 42-35.1-3

1) “An identification and estimate of the number of small businesses subject to the proposed regulation.”

No specific category of small business is specifically targeted by these amendments. All future development undertaken by any small business that involves stormwater management and which is subject to the state’s regulations pertaining to stormwater will

have to comply with the new requirements. Thresholds for permitting are specified based on project size, location or impact. Some projects proposed by small businesses may not be affected by the new requirements. It is not possible to estimate the number of small businesses subject to the proposed rules.

2) “The projected reporting, record keeping and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.”

As part of the state permitting requirements for projects with a stormwater management component, applicants will have to complete a Stormwater Management Checklist, which is intended to document the applicant’s efforts to comply with the Manual requirements. Professionals are currently required to be engaged for the design work related to stormwater controls and preparation of plans, reports and other supporting documents. This includes preparing operation and maintenance recommendations for stormwater control facilities. No extra professional skill is required beyond that necessary to submit the development application to the state.

The number and types of available best management practices (BMPs) have been expanded. Stormwater controls, particularly on large projects, are expected to become smaller in size, increase in number, and be more varied and dispersed as compared to the current practices. Detailed recommendations and guidance is provided in the new Stormwater Manual that should ease the preparation of plans and written procedures needed to ensure proper operation and maintenance of the stormwater facilities. Administrative costs are not expected to increase significantly.

3) “A statement of the probable effect on impacted small businesses.”

The probable impact on a particular small business that is undergoing some type of development that affects stormwater management will depend on many factors, including: the extent of incorporation of Low Impact Development (LID) techniques into a project, the extent of redevelopment that may be proposed at an existing developed site, the stormwater pollutant load associated with any proposed industrial or commercial activity, the amount of impervious area to be constructed, the physical characteristics and limitations of a site, and the proximity to a threatened or impaired water body.

In general, the threshold of what projects require compliance with stormwater controls remains unchanged as compared to current practice. Existing impervious surfaces (e.g. parking areas or buildings) 10,000 square feet in size or more that will be demolished and rebuilt will likely need to add new stormwater controls. However, on constrained sites, relief is provided in that only 50% of the standard need be achieved as compared to an undeveloped site.

Planning and engineering costs are typically higher initially as designers unfamiliar with the techniques gain proficiency using the new Manual, but over time costs may be expected to be reduced. Emphasis on reduced pavement areas where allowable should decrease construction costs (e.g. minimizing parking area requirements or allowing pervious parking instead of paved). Reduction in runoff resulting from use of LID can reduce the size and cost of stormwater facilities, including maintenance.

Maintenance costs associated with the improved BMPs may be increased in some cases in order to ensure proper operation and achievement of water quality protection goals. Improvements to flood protection may be expected as a result of updating (increasing) the rainfall depths for the 100 year rainfall events based on the latest published data.

With respect to permit tolling, we expect a slight reduction in permit preparation expenditures and permit fee payments by small businesses due to the elimination of the need for renewals or re-permitting on many projects not initiated because of the economic down turn.

4) “A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.”

DEM has not identified a less intrusive or less costly alternative method to achieve the requirements mandated by the Smart Development for a Cleaner Bay Act of 2007 or resulting from advancements in knowledge and science. DEM has met extensively with the building community (primarily the Rhode Island Builders Association) and conducted several workshops around the state to receive comment and address the concerns of builders and community officials. As a result, the Manual has been substantially revised, improving the clarity of the requirements and adding flexibility that allows design options that better meet the needs of the development community. These changes have resulted in reduce costs to comply with the new requirements.

In addition, the majority of the Manual provisions are based on the successful practices of other states who have already adopted improved stormwater controls based on advances in science and technology in recent years.

Regulatory Flexibility:

Per RIGL § 42-35.1-4

DEM has considered, without limitation, each of the following methods of reducing the impact of the proposed regulation on small businesses and determined that there is no alternative approach that would be as effective and less burdensome, given the requirements of the Smart Development for a Cleaner Bay Act of 2007 and the improvements needed stemming from advancements in knowledge and science:

- 1) The establishment of less stringent compliance or reporting requirements for small businesses;
- 2) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;
All applicants will be given until January 1, 2011 to begin complying with the new Manual. Free training will be given this fall to facilitate applicants’ and designers’ preparation of correct plans and applications. Applicants involved in more lengthy planning processes will be given until June 30, 2011 to comply. Applicants who wish to proceed under the existing Manual requirements and regulations must submit their applications prior to these dates.

- 3) The consolidation or simplification of compliance or reporting requirements for small businesses;
DEM expects to consolidate its permitting requirements in the Office of Water Resources so as to enable submittal of one application document to satisfy permitting requirements for stormwater designs under one permit, thus reducing and simplifying the permitting process.
- 4) The establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation;
Performance standards are provided. Applicants may propose alternative designs using other products and techniques provided data is submitted that shows that the alternatives are at least equivalent to the design and installation standards required in the new Manual.
- 5) The exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

There are no exemptions for small businesses. Any project producing stormwater runoff must comply with all standards and requirements of the Manual; individual applications involving a single family house lot however are not required to achieve all the standards.

Russell Chateauf, Chief, Groundwater and Wetlands Protection

Russell.chateauf@dem.ri.gov

401-222-4700 x7700

*State of Rhode Island and Providence Plantations
Department of Administration
Budget Office*

Fiscal Note for Proposed Administrative Rules (R.I.G.L. 22-12-1.1)

Name of Administrative Rule: Rhode Island Stormwater Design and Installation Standards Manual (Stormwater Manual),
Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (Freshwater Wetlands Regulations), and
Water Quality Regulations

Date of Notice: To be determined, anticipated August 13, 2010

Date of Hearing: To be determined, anticipated September 16, 2010

RIGL: The Stormwater Manual is adopted in accordance with Chapter 42-35 pursuant to Chapter 45-61.2-1, 46-12, and 42-17 of the Rhode Island General Laws of 1956 (“RIGL”), as amended.

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FISCAL IMPACT

| | <i>State Revenues</i> | | <i>State Expenditures</i> | | <i>City/Town Expenditures</i> |
|---------|---------------------------|---------|-------------------------------|---------|-----------------------------------|
| FY 2011 | \$Indeterminate | FY 2011 | \$Indeterminate | FY 2011 | \$Indeterminate |
| FY 2012 | \$ Indeterminate | FY 2012 | \$Indeterminate | FY 2012 | \$Indeterminate |
| FY 2013 | \$ Indeterminate | FY 2013 | \$Indeterminate | FY 2013 | \$Indeterminate |

Summary of Rule Change:

The primary purpose of the proposed Stormwater Manual is to implement the “Smart Development for a Cleaner Bay Act of 2007” (the Act) (RIGL §23-45-61.2-1, *et seq.*). This Act requires that the Department of Environmental Management (DEM) and the Coastal Resources Management Council (CRMC) amend the 1993 version of the Stormwater Manual. The Freshwater Wetlands Regulations and Water Quality Regulations are amended to reflect the adoption of the Stormwater Manual as noted in the following: The CRMC will be filing separate regulations to incorporate the new Stormwater manual into their regulatory requirements. As stated in the Act, “The changes shall include, but not be limited to, incorporation into existing regulatory programs that already include the review of stormwater impacts the following requirements:

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

To effectively manage the impacts of stormwater and prevent adverse impacts to water quality, habitat and flood storage capacity, DEM and CRMC are updating the 1993 Stormwater Manual to reflect current science and engineering practice concerning stormwater management and to incorporate low impact development (LID) methods throughout. The revised Manual specifies requirements and provides guidance for stormwater management on new development, redevelopment, and infill projects and most importantly, incorporates LID as the “industry standard” for all sites, representing a fundamental shift in how development projects are planned and designed.

DEM and CRMC have issued two prior drafts of the Manual for public review prior to formal public notice (May 2009 and April 2010). Workshops and meetings were held in 2009 to discuss the new concepts in the Manual and again in 2010 to discuss the changes from the 2009 version to the April 2010 version. Comments were solicited and received on both versions of the Manual.

The proposed amendments to the Freshwater Wetlands Regulations and the Water Quality Regulations are necessary in order to reference and incorporate the new Stormwater Manual provisions into the regulatory requirements of these regulations, as well as to stipulate appropriate timetables to begin requiring use of the new Stormwater Manual. For example, the new Stormwater Manual requires analysis of the 1, 10, and 100 year frequency storm events, whereas the existing Freshwater Wetlands Regulations require analysis of the 2, 10, 25 and 100 year storm event. In addition, the Department is proposing to begin requiring compliance with the new Stormwater Manual on most applications beginning on January 1, 2011.

The amendments also include language to incorporate the new permit **tolling law** that was passed by the Assembly in late June regarding extension of expiration times of permits related to development projects. The assembly granted 20 months extension on all development permits valid on November 9, 2009, and additional time on permits issued after that date up until June 30, 2011.

Summary of State Fiscal Impact:

DEM has determined that administering the amended Stormwater Manual can be accomplished with very limited or no effect on state revenues and expenses. DEM expenses are zero. RIDOT and other state agencies with stormwater facilities servicing new roadways or expansion of impervious areas may, in some cases, be expected to incur slight increases in costs to design and maintain stormwater facilities in compliance with the new manual. Any increase is considered exceedingly small compared with the current maintenance need associated with the built environment or the cost of designing and maintaining the new buildings or roadways serviced by the facilities. RIDOT projects involving resurfacing activities only are not required to adhere to the new manual. Similarly, full scale reconstruction projects are granted a 50% waiver from the requirements and may be able to reuse existing facilities with some added design modifications with relatively minor expense.

With respect to permit tolling, we expect a slight reduction in permit fee receipts as a result of the elimination of the need for renewals or re-permitting on projects not initiated because of the economic down turn. Note however that the losses in fee receipts are negligible in comparison to losses already being incurred due to the reduced permit volume in these programs which deal heavily with new building construction and new development.

Summary of City or Town Fiscal Impact:

The proposed Stormwater Manual and subject rule amendments do not impose new requirements on existing facilities maintained by cities and towns. Hence the “built” environment is not subject to this rulemaking. (Note: It is widely believed that fiscal outlays by most cities and towns (and RIDOT as well) for stormwater

management is far from adequate to meet current needs. Separate efforts have been underway towards attempts to address the deficiency.) Potentially, DEM foresees an increase in the costs to comply with the required maintenance (schedules and practices) for stormwater facilities compliant with the new manual in cities and towns that do not adopt ordinances to implement or embrace low impact development (LID) practices and techniques. LID is considered state of the art in stormwater impact prevention and control and is required to be adopted by DEM and CRMC pursuant to the Act. Maintenance requirements of BMPs designed in accordance with LID design principles are considered to be similar to conventional or current practices, although different equipment and personnel training are typically necessary. These changes can be made over time as equipment service life ends and workers are trained. DEM is developing a companion guidance manual on the various LID strategies and design practices (expected release this fall) to assist communities in the transition to LID approaches. DEM is expecting to add maintenance of LID facilities to its ongoing stormwater training program with local communities in conjunction with the University of RI Nonpoint Education for Municipal Officials program operated with existing budgeted funding support from the state under auspices of the URI Cooperative Extension Program.

Approved:

Thomas Mullaney
Executive Director/State Budget Officer

Date