RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Environmental Permitting and Land Use

DEM RHODE ISLAND

Rocky Point State Park, Warwick. Photo: Sarah Petrarca

our mission

To protect, restore, manage, and promote Rhode Island's environment and natural resources to preserve and improve our quality of life.

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Programs Impacting Land Use

- Key principle behind each: Utilize site design to minimize environmental impacts
- Setback standards are a key mechanism in all of these- give systems room to work

- On-Site Wastewater Treatment Systems (OWTS)
- Stormwater Management
- Wetlands

DEM's role/intersection in local land development permitting is limited to DEM's statutory authorities and related federal regulations, pertaining to OWTS, UIC, RIPDES, Water Quality & Freshwater Wetlands that have the objectives of protecting the environment and public health. Not all land development is subject to DEM review.

On-Site Wastewater Treatment Systems

- Purposes of OWTS Program
  - Systems are designed & installed to operate properly
  - Sanitary wastewater discharged INTO the ground will have sufficient time in the ground to neutralize bacteria, viruses, and nutrients
  - Septic Systems have sufficient distance from private wells to protect drinking water sources
  - Septic Systems have sufficient distance from surface water bodies and wetlands to prevent pollution and excess nutrient loading

On-Site Wastewater Treatment Systems

- Dependent on soil types and water table
- Minimum design flows required for different uses
- Minimum Setback Distances from Drinking Water Wells
- Minimum Setback Distances from Drinking Water Supplies, Adjacent Wetlands, and drainage pathways
- Advanced treatment to reduce nitrogen pollution required in certain coastal areas

OWTS Design Flow (gpd)	Distance in Feet from Leachfield/Septic Tank Effluent Pipe, Tanks/Building Sewer (Notes 1 and 5)	Distance in Feet from All OWTS Components (Notes 1 and 5)	
	Private Drinking Water Well (Note 2)	Public Well – Drilled (rock), Driven, or Dug	Public Well – Gravel Packed, Gravel Developed
< 1,000	100/75/50 (Notes 3 and 4)	200	400
1,000 – <2,000	150/75/50	200	400
2,000 – <5,000	200/75/50	200	400
5,000 – <10,000	300/75/50	300	400
= 10,000	400/75/50	400	400

Stormwater Management Overview = Shared Regulatory Authority

Federal

- EPA requires regulation of stormwater discharges into surface waters under the Clean Water Act
- EPA requires regulation of the subsurface discharge of stormwater with some exceptions (Underground Injection Control Program)

State

- DEM implements federal requirements via RIPDES, UIC. Stormwater & FWW rules & MS4 program
- DEM conducts detailed stormwater reviews for projects involving 5 acres or more of land disturbance ***with discharge to surface water/wetland*** and all proposed UIC discharges
- Applications of 1 to 5 acres of land disturbance get limited DEM review; may trigger a full review if situation warrants.
- State regulatory programs do not have oversight over all proposed land development.

Local

- MS4 program requires local ordinances related to stormwater management in designated MS4 areas; municipality may elect to apply ordinances townwide
- Municipalities own/operate stormwater infrastructure and review/approve connections to their systems
- Municipalities conduct technical reviews of stormwater plans for proposed projects and may review aspects not part of DEM review; e.g. street flooding, capacity of local drainage system.

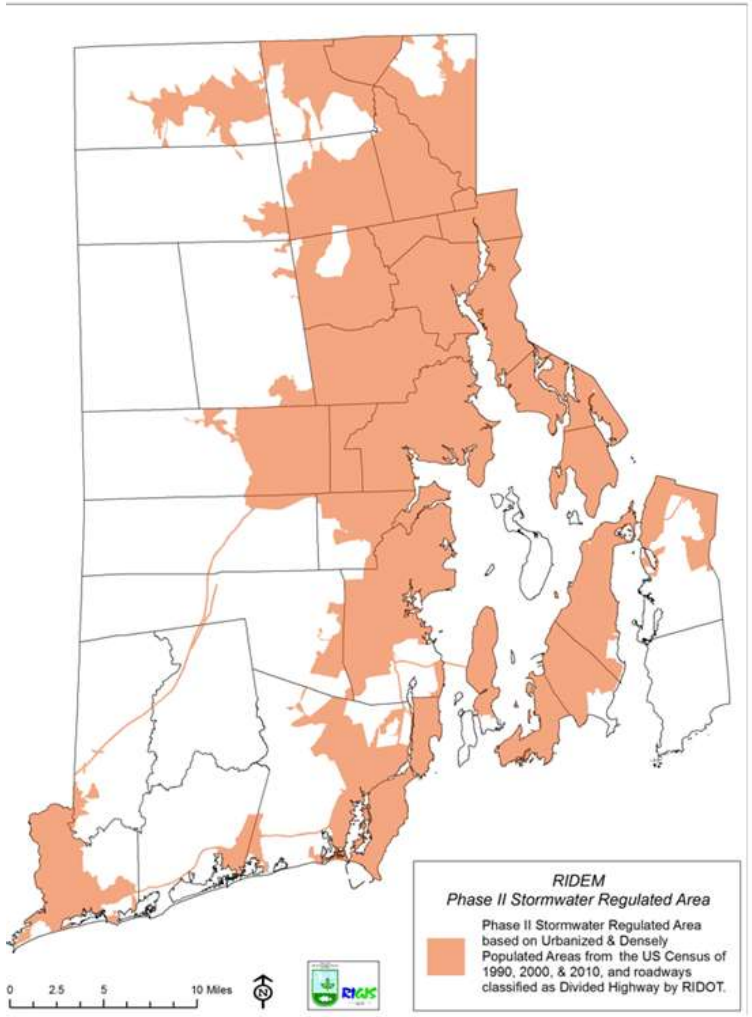
DEM Stormwater Programs

- Purposes of Stormwater Program
  - Direct and Control flow of water- Maximize Infiltration
  - Control Water Pollution/ Protect Public Health
- Types of DEM Stormwater Permits/Approvals:
  - **RIPDES Construction General Permit (CGP)** - Stormwater discharges with land disturbance of 1 acre of more
  - **RIPDES Multi-Sector General Permit-** 29 Industrial Classifications set by EPA
  - **Underground Injection Control (UIC)** – permits required for subsurface discharge of stormwater (residential roofs typically exempt)
  - **Freshwater Wetlands Permitting** - Rules include standards for Stormwater Management, Erosion and Sedimentation Control and Flood Protection.

For land development projects, DEM conducts a single stormwater management technical review that integrates the requirements across applicable programs.

Municipal Separate Storm Sewer System (MS4)

- City/Town/Publicly Owned Drainage Infrastructure
- 42 MS4 Systems in Rhode Island- mostly urbanized areas
- Under the DEM rules and MS4 permit, municipalities must have ordinances that require sediment and erosion controls, control of other wastes at construction sites, and procedures for reviewing proposed stormwater BMPs to minimize water quality impacts. Applies to projects of 1 acre or more of land disturbance with stormwater directed into the MS4 system.
- MS4 permit requires local inspections during and near/at completion of construction.



State-Level Stormwater Standards

- Rhode Island General Law, Section 45, Chapter 61.2, entitled “The Smart Development for a Cleaner Bay Act of 2007” adopted low impact design as state policy and required DEM and CRMC to update the 1993 Stormwater Design and Installation Standards Manual. New manual produced in 2010.
- State standards/requirements for stormwater best management practices (BMPs) are reflected in DEM **Rule 250-RICR-150-10-8**
- Standards build in flexibility including definition of Maximum Extent Practicable. Standards can be met by typical engineering solutions and can consider local ordinances and site constraints
  - Recharge Standard based on site specific soils
  - Waivers for infiltration based on site constraints
  - Reduced depth to groundwater and bedrock for infiltration of residential runoff.

Stormwater Management Design Standards

- **Groundwater Recharge**: Stormwater to be recharged within the same subwatershed to maintain baseflow.
- **Conveyance and Natural Channel Protection** that requires Open drainage and pipe conveyance systems must be designed to provide adequate passage for flows
- **Overbank Flood Protection** that requires Downstream overbank flood protection. Our review stops when it reaches municipal conveyance system but designers must demonstrate that runoff from the site for storms actually reach proposed structures.

For Construction General Permit applications on projects between 1 and 5 acres, P.E. certifies that these standards are met and the application goes through a very limited DEM review.

Stormwater Design Setbacks

- Private Wells
- Surface water and Wetlands
- Buildings and Structures
- OWTS
- Stormwater Management Standards and Performance Criteria, when applicable, are significantly simplified for single-family lots of record

	Minimum Horizontal Setbacks	
	From small-scale facilities serving residential properties (feet)	From all other infiltration facilities (feet)
Private Drinking Water Wells	50	100
Surface Water Drinking Water Supply Impoundment with Supply Intake1	100	200
Tributaries that Discharge to the Surface Drinking Water Supply Impoundment1	50	100
Coastal Features	50	50
All Other Surface Waters	50	50
Up-gradient from Natural slopes > %15	25	50
Down-gradient from Building Structures2	10	25
Up-gradient from Building Structures2	10	50
Onsite Wastewater Treatment Systems	15	25

1 Refer to DEM Rules Establishing Minimum Standards Relating to Location, Design, Construction and Maintenance of Onsite Wastewater Treatment Systems, Figures 14-16 for maps of the surface water drinking water impoundments.

2 Setbacks from building structures applies only where basement or slab is below the ponding elevation of the infiltration facility.

Municipal Review: Stormwater Management

- Overlapping authorities in several areas: State Stormwater, Wetlands, MS4
  - Shared responsibility- Federal, State, Municipal
  - Some areas where only municipal authority applies
- DEM focuses on its stormwater reviews on the impacts to waters of the State.
- MS4 Regulations and RIPDES CGP permitting allow the municipality to accept the State review of Stormwater Management.
- If the discharge is directed to conveyances that are part of or affect the municipal drainage system, only the municipality would be in a position to determine what the capacity of the receiving system is and if it is adequate.
- Municipal review is needed to address municipal knowledge of localized flooding concerns or to address goals of the local flood management plans or hazard mitigation plans required by FEMA and RI EMA.

Purpose of Freshwater Wetlands Program

Protect the Functions and Values of Wetlands:

- Flood Control and Storage
- Wildlife Habitat
- Improve Water Quality
- Recreation Values
- Groundwater and Surface Flow Protection

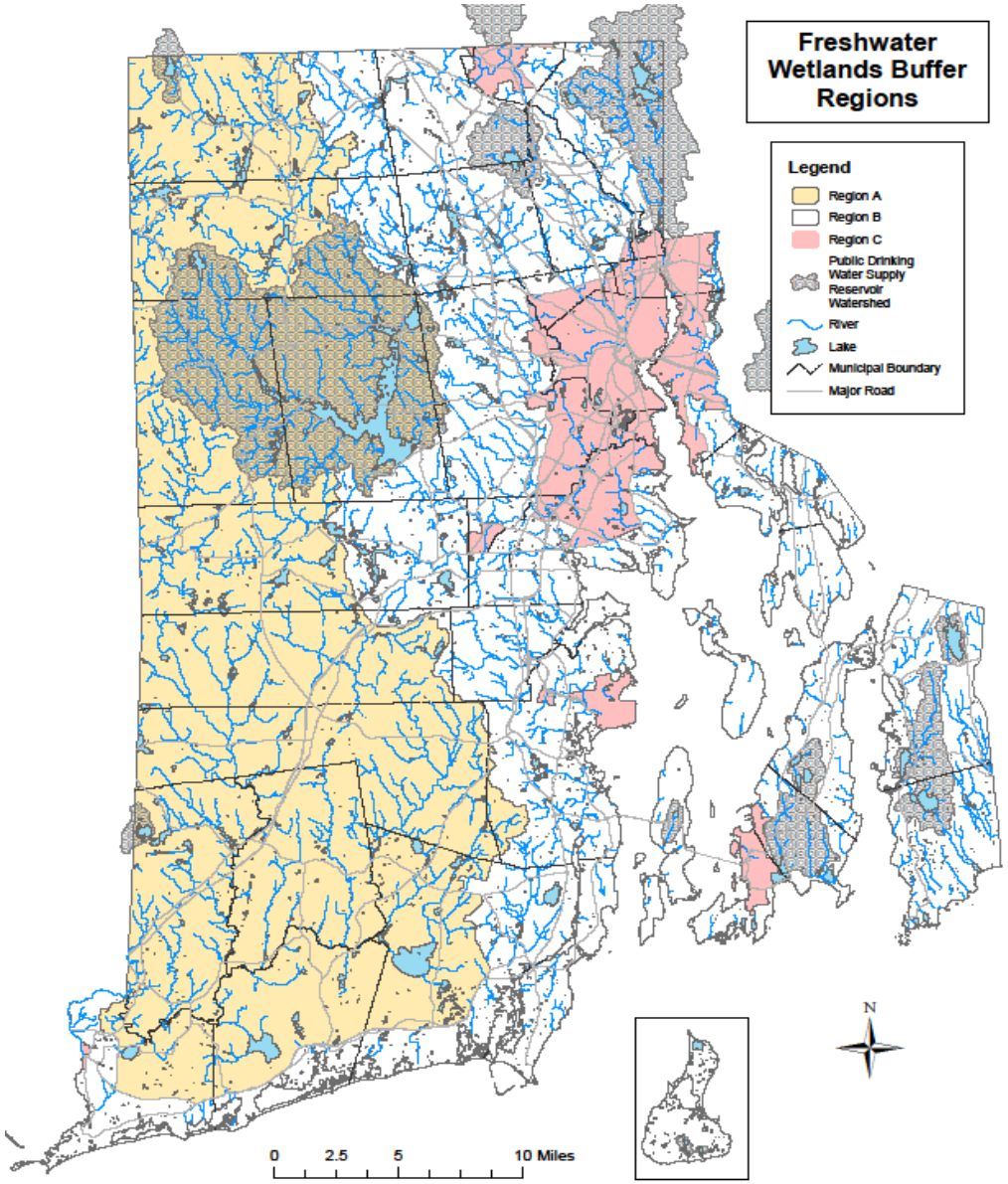
New Regulations Effective on July 1, 2022

Key New or Revised Definitions

- **Jurisdictional Area** – area to be regulated includes - freshwater wetlands, buffers, floodplains, areas subject to storm flowage, areas subject to flooding, and contiguous areas that extend outward:
  - 1) Two hundred feet (200') from the edge of a river or stream;
  - 2) Two hundred feet (200') from the edge of a drinking water supply reservoir; and
  - 3) One hundred feet (100') from the edge of all other freshwater wetlands (including ponds).
- **Freshwater Wetlands** – Now defined as the resource area only (i.e. bog, marsh, swamp, vernal pool, pond, river, etc.). Upland areas previously called perimeter and riverbank wetlands are now regulated as buffer zones.
- **Buffer** - An area of undeveloped vegetated land adjacent to a freshwater wetland that is to be retained in its natural undisturbed condition, or land that is to be created to resemble a naturally occurring vegetated area.
- **Buffer Zone** - An area of land within a jurisdictional area that is contiguous to a freshwater wetland and whose distance from the freshwater wetland is designated.
- *Changes created consistency between terminology used in DEM and CRMC rules.*

Tiered Approach to Buffer Zone Protection

- **Public Drinking Water Supply Watersheds** - includes watersheds of surface water supply reservoirs.
- **Non-urban Region** – Covers most of the State with mixed land uses. Further designated with 2 river protection regions.
- **Urban Region** – Includes densely developed areas of the state including portions of watersheds that contain high impervious cover and areas that are already developed or altered.



Establishing Buffer Standards-Rule 2.7

- **Tiered protection approach** – taking into consideration:
  - Watershed protection needs
  - Wetland resource characteristic
  - Existing land use
- Buffer zones range from 25’ to 200’ and are assigned by resource type.
- Buffer zones are established within the limit of the jurisdictional area and may be equivalent to the JA.
- Buffer protection strengthened in water supply watersheds and for other prioritized resources: larger lakes, certain vegetated wetlands, vernal pools and rivers providing high value for fish and wildlife habitat.
- All wetlands are designated with a buffer. (Smaller sized wetlands previously lacked this protection.)

Buffer Protection Standard

- Buffer protection standard is to avoid alteration of naturally vegetated buffer in the buffer zone.
- Provides predictability for applicants.
- Landowners are **not** prohibited from proposing projects in buffer zone areas. Not all land in buffer zones qualifies as “buffer” due to prior development.
- Freshwater wetland rules also include setback standards for primary and accessory structures (measured in relationship to buffer).

Streamlining the State Permit Application Process

- Expanded Exempt Activities that have limited impacts. (Rule 2.6)
  - In several cases, text was clarified/modified in response to public input

- Developed simpler application categories.
  - General Permit
  - Freshwater Wetland Application (with no variance).

- Simplified Fee Schedule (Rule 2.8)

* Fees for municipal projects eliminated.

Municipal Coordination

- Notification of permit applications to designated municipal officials. Required by statute.
- Applicants for major land development or major subdivision projects required to document master plan approval prior to filing for a state freshwater wetlands permit.
- Municipality may petition the Agencies to increase the size of a buffer zone for a particular type of wetland resource (the requested buffer zone cannot exceed the jurisdictional area).
- Petition process does not apply to individual permit applications.

Phase Out of Municipal Ordinances

- ***After*** state promulgation of rules designating wetlands buffers and setbacks, municipalities are no longer authorized **to adopt or apply** zoning requirements for wetland buffers and onsite wastewater system setbacks to development proposals submitted after the effective date of the state rules.
- Local land use approvals issued and applications filed prior to state rule promulgation not affected.
- Municipalities must amend their ordinances (rescind requirements) within 12 months of the effective date of the state rules which is 7/1/2022.

Bringing it Together: Subdivision of Land

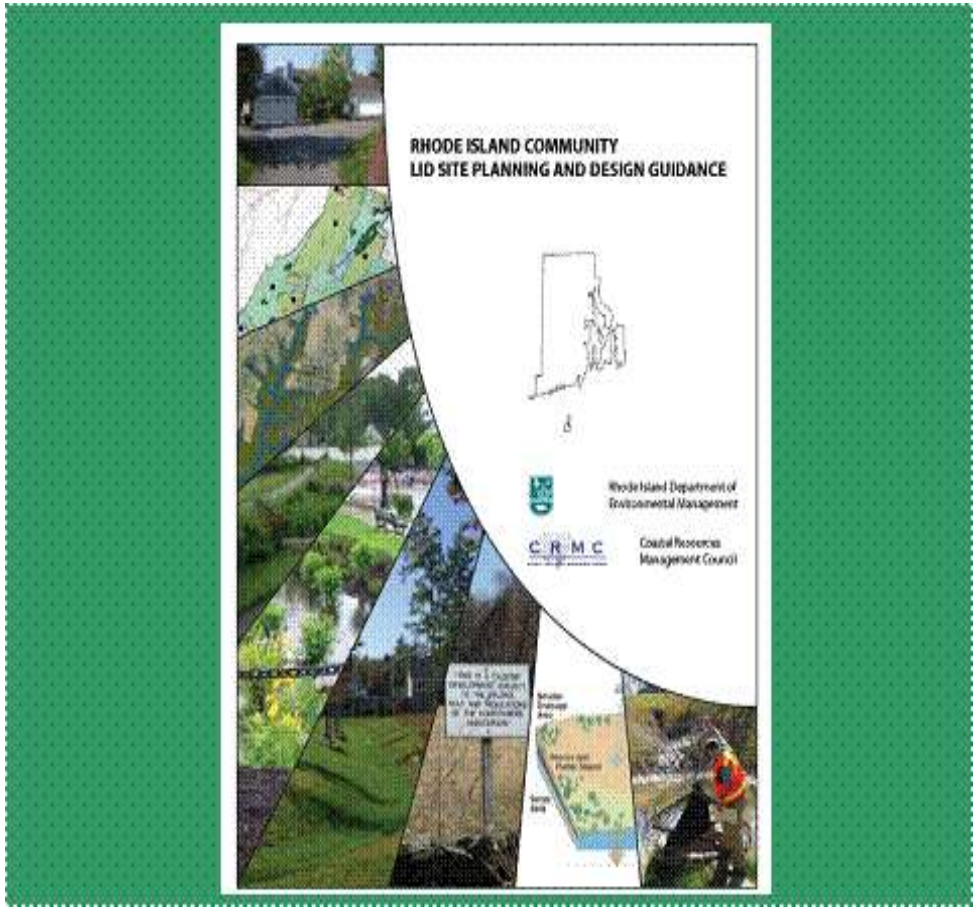
- Process generally begins at the local level where developers get direction on the number of allowable lots under local zoning. DEM does not dictate density or lot size.
- Larger subdivisions and major land developments requiring master plan approval need that before proceeding to seek State FWW permitting
- In unsewered areas, the DEM OWTS program makes determinations as to whether conditions will support OWTS – are soil/groundwater conditions acceptable.
- If wetlands are involved, need a wetlands permit
- Applicants do need to accommodate proper stormwater management in their subdivision plan.
- Subdivisions in rural areas that rely on both private wells and on-site wastewater disposal will not support the same density as projects serviced by one or more public utility.
- No new sub-standard lots- town determines “buildable”

Facilitating Low Impact Development

RI Community Low Impact Development Guide covering topics including Conservation Development, Buffer Standards, Site Clearing and Grading, Roadway Standards, Parking Requirements, Compact Development, LID Landscaping

LID checklist is part of stormwater application submittal requirements

Checklist available for municipalities to assess local ordinances in relation to LID



Water Infrastructure

- **Infrastructure Funding**: Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) constitute the largest financial assistance program for water infrastructure offering primarily low interest loans.
- **<u>Sewer Extension Projects (Public Entities)</u>**
  - Often requires an Order of Approval from DEM (30,000+ gal/day). If accessing CWSRF, must be reflected in approved Wastewater Treatment Facility Plan – Long-term; 20-year planning horizon; ensures sufficient capacity is available to maintain proper treatment.
  - To access CWSRF, projects need to be on DEM Project Priority List. Sewer extension projects (primarily to serve existing development) were listed for 7 communities in the FY23 PPL.
  - Sewer and pump station upgrade, repair and rehabilitation projects far outnumbered sewer extension projects in the FY23 PPL.
- **<u>Water Line Extension Projects</u>**
  - RI DOH is lead agency. DEM conducts environmental reviews if project is using DWSRF.

Either investment may offer opportunities to support more density in development.

Water Infrastructure

Stormwater

Projects to improve water quality may be eligible for CWSRF, state and federal grants..

Co-benefits of flood mitigation and resiliency.

Investment in “Green stormwater infrastructure” can be aligned with redevelopment initiatives such as Brownsfields Program and other programs: Municipal Resiliency, Urban Forestry.

Public funds generally not available for subsidizing new private development.

Thank you!

Terrence Gray, P.E.
Director
RI DEM