Urban Coastal Greenways
A New Approach to Address Redevelopment in the Urban Coastal Environment

Rhode Island Coastal Resources Management Council
Overview

• CRMC

• Regulatory Tools for Addressing NPS Pollution

• The Challenge: Metro Bay

• The Solution: Metro Bay SAMP and Urban Coastal Greenways Policy

• UCG Requirements
It shall be the policy of the state to preserve, protect, develop, and where possible, restore the coastal resources of the state...

...Preservation and restoration of ecological systems shall be the guiding principle upon which decisions are made.
CRMC Jurisdiction

• Tidal waters
• Shoreline Features
• Areas contiguous to shoreline features
  – 200ft. from inland edge
• Freshwater wetlands in the vicinity of the coast
RICRMP (a.k.a. the “Red Book”)

• Stormwater treatment standards (Section 300.6)

• Buffer program (Section 150)
Coastal Buffers

Dynamic → Sensitive → Useable land
Coastal Buffer

Land area adjacent to a shoreline feature that is vegetated with native plants and which provides a natural transition zone between the coast and adjacent upland development.
RICRMP Section 150: Coastal Buffers

Coastal Feature

Inland Edge of the Coastal feature

50' Vegetated Buffer

75' CRMC Setback

200' CRMC Jurisdiction

Buffer Boundary

Lawn

Boundary of Construction Area

Septic Tank & Field

Coastal Resources Management Council
CRMC Setback & Buffer Rules
(Redbook Sections 140 & 150)

• Applies to residential coastal lots
• Minimum 50’ setback from coastal feature
• Buffer width based on lot size and water type
• Minimal buffer management allowed
• **Variance is only option for reducing buffer…**
  *no Public Benefit from granting the variance*
Coastal Buffers for NPS Pollution Attenuation

- Slow water down
- Enhance sediment filtration
- Increase infiltration of surface water into the soil and groundwater
- Expose contaminants to extended periods of biological, physical and chemical removal mechanisms
- These functions increase with buffer width
Factors that Reduce Buffer Effectiveness

- Increased Slopes†
- Highly Permeable Soils †
- Dense Soils†
- High Sediment Loading
- Altered Hydrology
  - Impervious Surfaces
  - Subsurface Drains
  - Concentrated Flow (Dillaha, 1989)

†Desbonnet, 1994
Narragansett Bay Watershed Impervious Surface
Upper Providence River and Port of Providence
The Challenge:
A New Coastal Buffer Policy that...

• Acknowledges constraints of coastal *urban* redevelopment.

• *Protects or restores* coastal habitat.

• *Streamlines* permitting while allowing *flexibility* in meeting regulatory requirements.

• Reduces variance requests and increases *public benefit*.

• Increases *consistency* and *predictability* of process.
Metro Bay Region
SAMP Boundary

Cranston
Providence
Pawtucket
East Providence

~ 24 mi. of shoreline
Urban Coastal Greenways Policy
For the Metro Bay Region
Cranston, East Providence, Pawtucket, and Providence

An Amendment to the Providence Harbor
Special Area Management Plan

Adopted by the RI Coastal Resources Management Council
on October 10, 2006
Multiple Data Set Analyses to Determine UCG Zones
UCG Zones

- Areas of Particular Concern
- Inner Harbor and River Zone
- Capitol Center District
- Development Zone
- Residential Zone
Main Goals of the UCG Policy

• 15% Vegetation of Entire Development Site
  – Sustainable Vegetation
• 100% Stormwater Management
• Public Access
• Flexible Greenway Widths
  – by UCG Zone
  – Exceptions for “Small Parcels”
  – Compensation Options
    (i.e., public amenities or habitat restoration fund)
15% Vegetation Requirement

- Sustainably landscaped.
- May include green roofs, rain gardens, landscaping elements, surface stormwater treatments, etc.
- “Appropriate mix” of trees, shrubs, & low-maintenance grasses.
Stormwater Management Requirement

- Onsite treatment of water quality volume (first 1 inch from impervious surfaces)

- Addresses 80% TSS removal standard
Stormwater Management Requirement

- Use of Low Impact Development (LID) practices (i.e., bioretention, filter strips, green roofs, porous pavement, etc.) and other methods that support infiltration and groundwater recharge.

Source: Claytor 2005
Stormwater Management

“Applicants shall incorporate LID techniques such as filter strips, vegetated swales, vegetated detention ponds, bioretention areas, stormwater infiltration planters, green roofs, etc. to the maximum extent practicable.”

(UCG Section 150.1)
Low Impact Development

- Stormwater management strategy aimed at maintaining or restoring the natural hydrologic functions of a site:
  - Infiltration
  - Groundwater recharge
  - Runoff volume, peak flows and Tc
  - Water quality
Low Impact Development

- Uses small-scale, distributed practices to manage runoff close to source
  - Bioretention
  - Vegetated Swales
  - Green Roofs
  - Stormwater Planters
  - Permeable Paving
  - Rainwater Collection
Low Impact Development is Multipurpose!

• Many LID practices are appropriate for urban retrofits on space-constrained sites

• Many LID practices utilize vegetation – can be counted towards 15% site vegetation requirement and they function as desirable landscape amenities
The UCG Policy Will...

1. Streamline the permitting process for appropriate redevelopment and make the process more predictable;

2. Increase public access to and along the coast; and

3. Protect ecologically valuable habitat corridors and coastal waters within the urban setting.
Initial planting – May 2005

June 2006

Photos courtesy of Save The Bay
Save The Bay Center, Fields Point

Photos courtesy of Save The Bay

Green Roof

Bioretention

Permeable Parking Area
Additional Efforts

- Incorporating LID into Greenwich Bay SAMP

- CRMC Section 300.6 revisions: LID as primary means of stormwater management (CRMC jurisdiction)

- RI General Assembly legislation H6143 (Smart Development for a Cleaner Bay Act of 2007): LID as primary means of stormwater management (statewide)
Thanks to: Jim Boyd - CRMC

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Contact us for more information

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