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## 100. Executive Summary

This document, the Urban Coastal Greenway (UCG) Regulations for the **Metro Bay Region**, describes a new regulatory approach toward coastal vegetative buffers for the urbanized environment of northern Narragansett Bay. Urban Coastal Greenways offer a mechanism to redevelop the urban waterfront of the Metro Bay Region in a manner that integrates economic development, expanded public access *along* and *to* the shoreline, and the management, protection, and restoration of valuable coastal habitats.

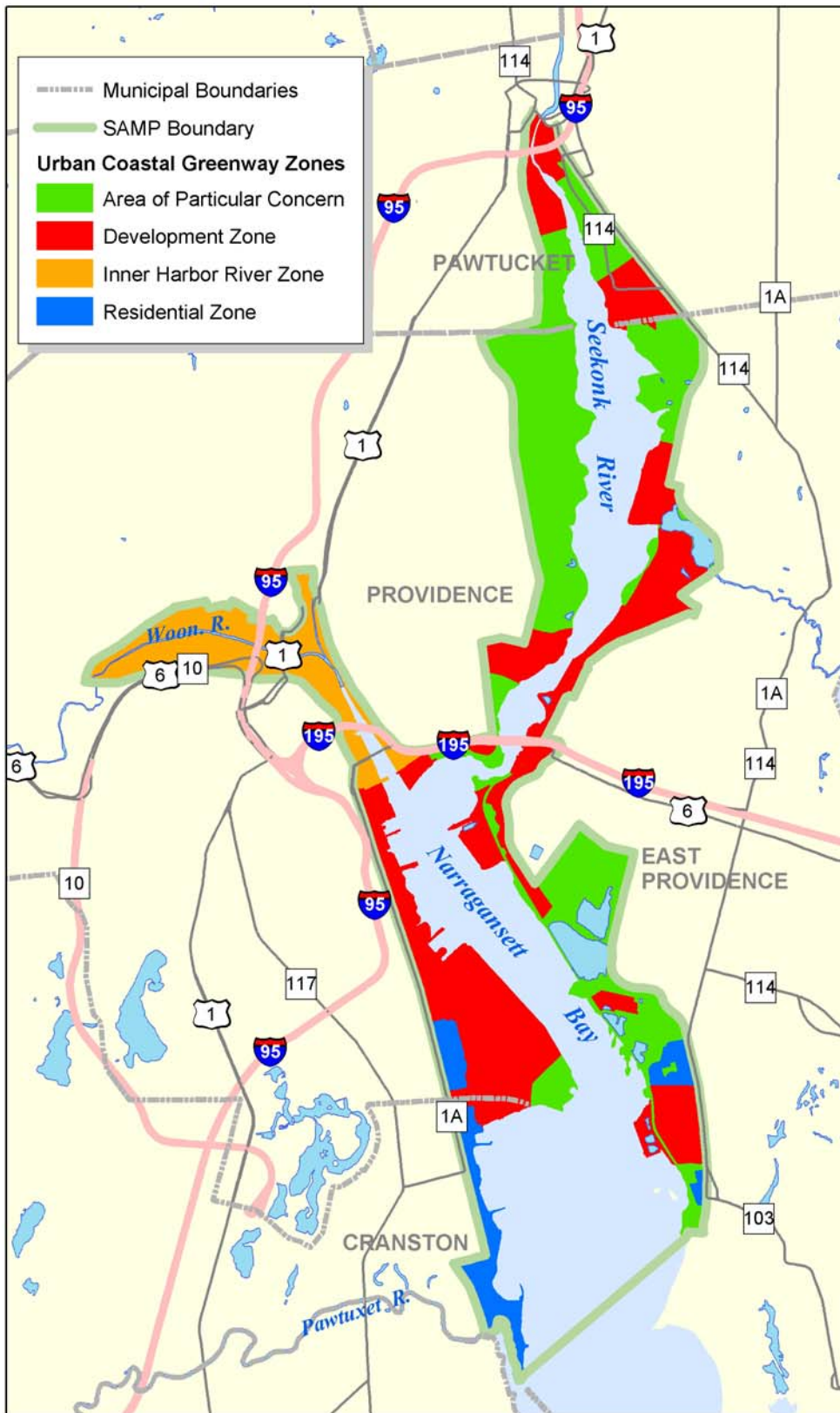
With the development of these new regulations, applicants have a choice between following the coastal buffer and setback regulations set forth in the **Rhode Island Coastal Resources Management Program (RICRMP)**, or utilizing the UCG option. The UCG policy is intended to provide a permitting option that clarifies and streamlines the regulatory process for urban coastal development, and to create greater flexibility in meeting the Coastal Resources Management Council requirements. The new policy therefore establishes specific standards regarding overall vegetation of the site, management of stormwater runoff, and public access, as described in UCG Section 150. The increased regulatory flexibility is reflected in the establishment of four Urban Coastal Greenway Zones within the planning boundary of the Metro Bay Special Area Management Plan (SAMP): Residential Zone, Area of Particular Concern Zone, Inner Harbor and River Zone, and Development Zone. The boundaries of these zones have been determined by the existing conditions of coastal habitat, public access infrastructure, single and two-family residential areas, and current municipal plans for development and/or redevelopment. The requirements for each Zone are described in UCG Sections 160 through 190, and are outlined in the flow chart below. Only projects that are located within CRMC jurisdiction are subject to the UCG Regulations, as described in UCG Section 130. The freshwater wetlands program administered by the CRMC will not be subject to the UCG program, however. The CRMC will provide a fifteen (15) day public notice period for all Urban Coastal Greenway projects. If there are no substantive objections following the public notice, an Administrative Assent will be issued for most projects that meet the Urban Coastal Greenway requirements.

Another novel component of the Urban Coastal Greenway policy is the inclusion of an option to reduce the UCG width through **compensation**. The compensation options generally allow an applicant to reduce the UCG from the standard width in return for site or coastal resource enhancements such as improved public access or habitat conservation and preservation. These options are described in Section 230 of this document.

Flexibility is crucial to the management and protection of coastal resources in urban environments. It is desirable to encourage responsible redevelopment of the Metro Bay Region shoreline in order to promote reuse of heretofore abandoned or underutilized brownfield sites, and also to discourage over-development of Rhode Island's dwindling rural and suburban green spaces. Similarly, it is important to protect existing natural coastal habitat that offers unique environmental and social benefits to the Metro Bay Region. The UCG Regulations provide a regulatory framework for accomplishing all of these objectives simultaneously.



Figure 1. Map depicting the area of the Metro Bay Region Special Area Management Plan (SAMP).



UCG Zones prepared by  
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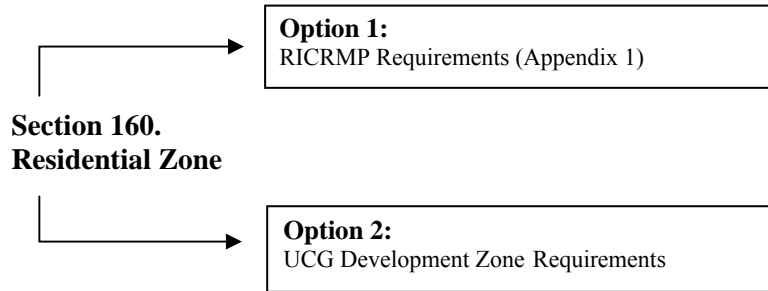
Map prepared by The  
 Providence Plan

Additional layers provided  
 by the Rhode Island  
 Geographic Information  
 System (RIGIS)

Figure 2. Urban Coastal Greenway Zone Map.

Figure 3. Decision Tree for Residential Zone and Area of Particular Concern Zone.

**RESIDENTIAL ZONE REQUIREMENTS:**



**AREA OF PARTICULAR CONCERN ZONE REQUIREMENTS:**

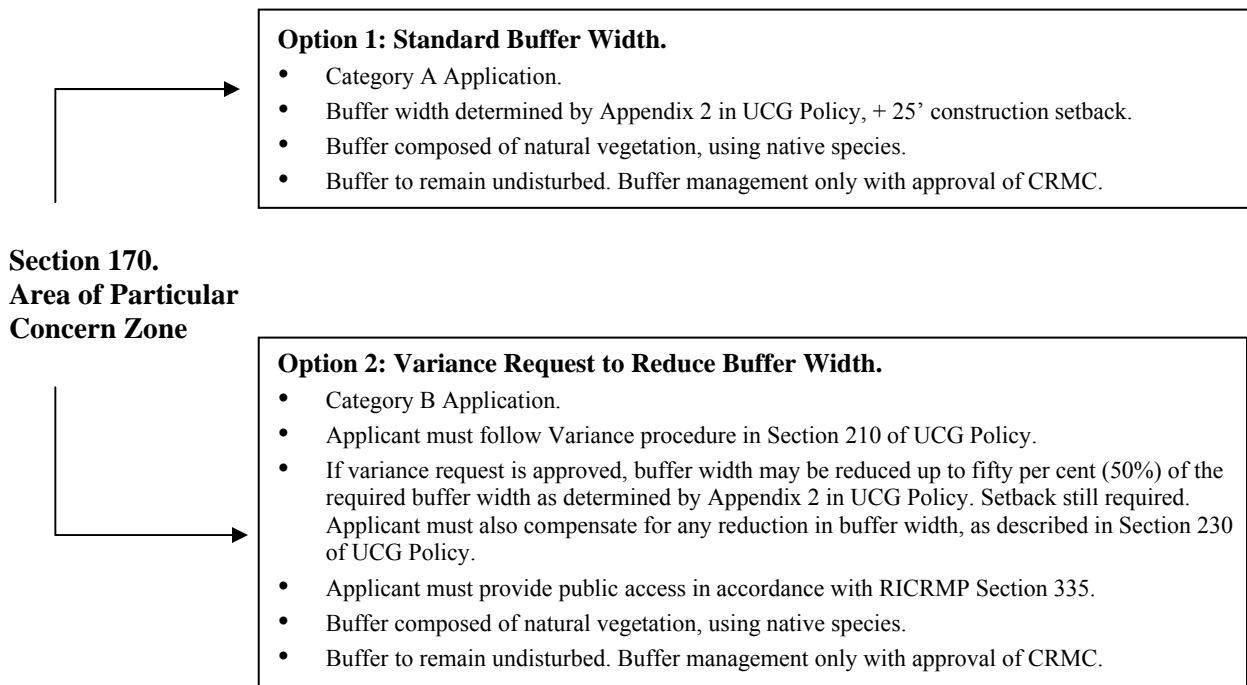
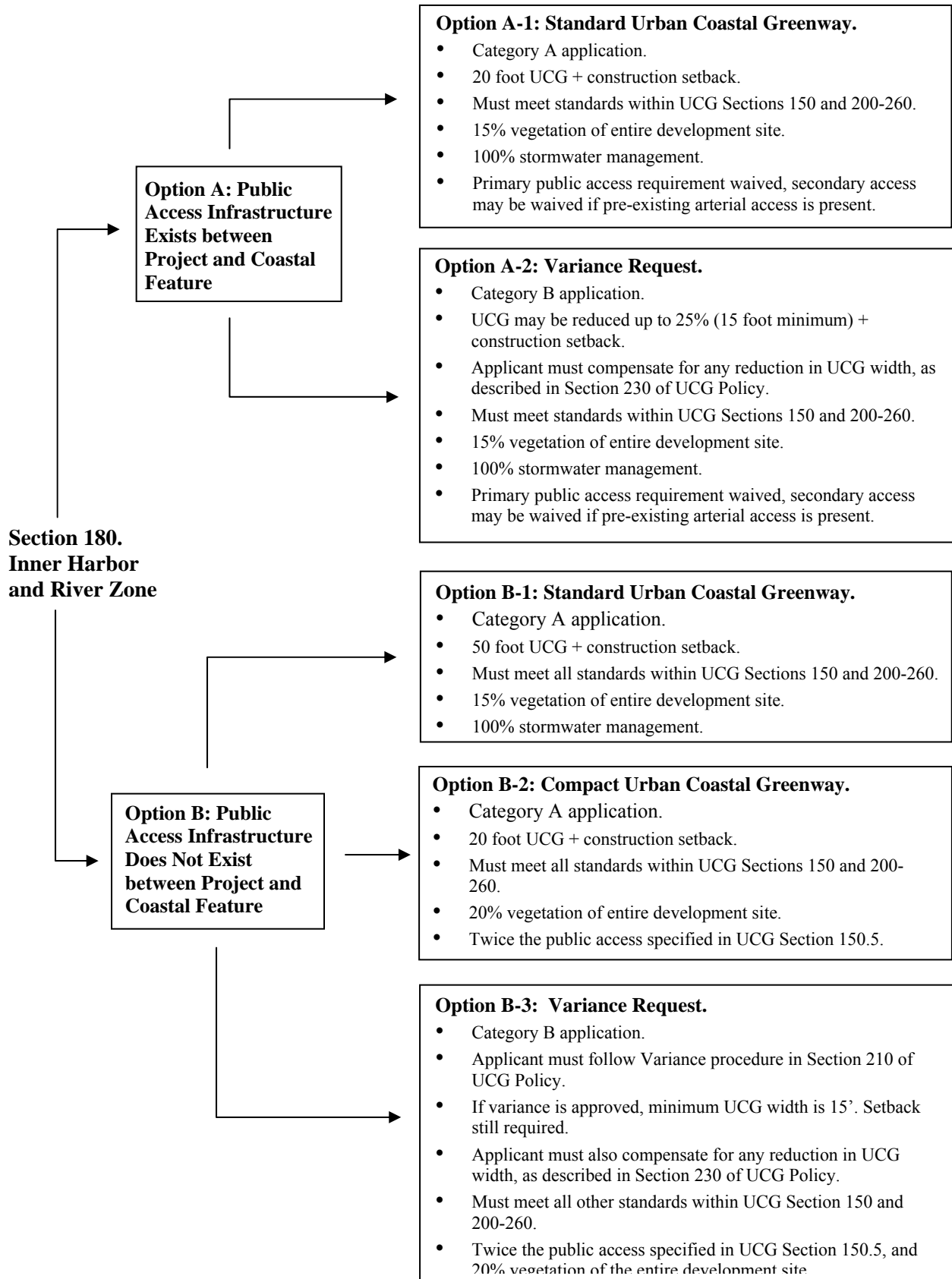


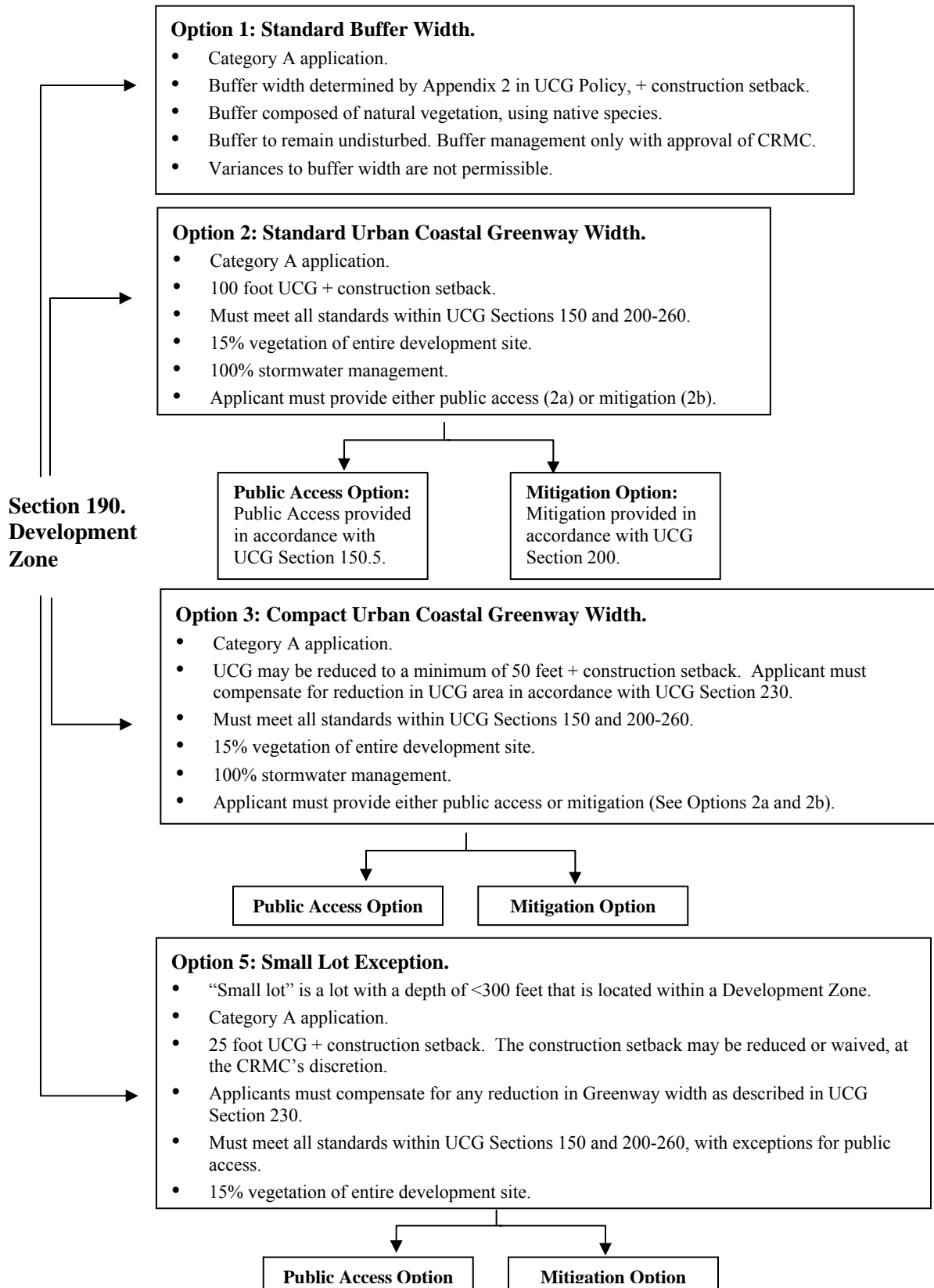
Figure 4. Decision Tree for Inner Harbor and River Zone.

**INNER HARBOR AND RIVER ZONE REQUIREMENTS:**



**Figure 5. Decision Tree for Development Zone.**

**DEVELOPMENT ZONE REQUIREMENTS:**





## **110. Title**

110.1. This policy shall be known as “The Urban Coastal Greenway Regulations for the Metro Bay Region” and may be referred to generally as the “Urban Coastal Greenway” or “UCG Regulations.”

## **120. Intent and Purpose**

120.1. The Rhode Island Coastal Resources Management Council’s (**RICRMC**, or the **Council**) rules governing coastal vegetative buffers have been used since 1983 to ensure the protection of Rhode Island coastal waters. The coastal buffer rules, however, have met with some difficulty in the more urban areas of Rhode Island. These original buffer regulations were not designed to accommodate the large-scale coastal redevelopment that is currently being proposed for the Metro Bay Region (Cranston, East Providence, Pawtucket, and Providence). The RICRMC buffer rules also were not designed for the specific challenges of urban environments. Specifically, the current coastal buffer regulations require that buffer zones be undisturbed, and allowed to grow naturally in order to gain the maximum wildlife habitat and water quality benefits possible. While it is still desirable to achieve the maximum habitat and water quality benefits possible within urban areas, the design of vegetative buffers must also acknowledge and cultivate the need for increased public access to the shoreline. In addition, urban buffers require thoughtful design and maintenance if they are to achieve water quality goals in areas dominated by impervious cover.

The RICRMC therefore endeavored to create a revised coastal vegetative buffer policy for the Metro Bay Region that could accommodate three primary goals: increased public access to the coast, improved water quality via on-site vegetative stormwater treatment, and the preservation and restoration of habitat corridors and the general aesthetic value of Rhode Island’s urban shoreline. Although the federal mandate governing the RICRMC’s activities also calls for the consideration of additional coastal values and functions, as discussed below, the Council recognizes that the use, size, and financial constraints of urban parcels require a more focused and flexible approach toward coastal management. This has been accomplished through the creation of four application zones in the Metro Bay Region. The balance between each of the RICRMC’s responsibilities is achieved through the use of these zones and is integral to the policy success.

The policy that follows, the “Urban Coastal Greenway Regulations for the Metro Bay Region”, is the result of RICRMC’s efforts to involve multiple interests in the development of this new urban approach toward coastal vegetative buffers. The Council envisions a continuous Urban Coastal Greenway corridor along upper Narragansett Bay that will ensure the protection of coastal resources, as well as enhancement of the unique views available to this state’s citizens and visitors as they travel along the urban coast of the Metro Bay Region. The Urban Coastal Greenways program will also secure the ability of urban residents and visitors alike to access the shoreline that is tied to the rich history, culture and natural beauty of Rhode Island. The RICRMC has provided a series

of options within this document to create a flexible approach toward meeting the Urban Coastal Greenway requirements.

120.2. Since the Providence Harbor Special Area Management Plan (SAMP) was adopted in 1983, the use of Rhode Island's urban shoreline has shifted from industrial and port-related to mixed commercial and residential. Public and professional opinions have also shifted toward greater support for urban greenspace. New development in the municipalities of the Metro Bay Region (Pawtucket, Providence, East Providence, and Cranston, see Figure 1) in conjunction with the development of many statewide programs with similar goals, provides a rare opportunity to create a continuous greenway along the coastline of upper Narragansett Bay that will facilitate mixed use of the waterfront while protecting water quality, public access, and important coastal habitats.

120.3. It is the responsibility of the Rhode Island Coastal Resources Management Council (RICRMC) to preserve, protect, develop, and where possible, restore the coastal natural resources of Rhode Island. The Federal Coastal Zone Management Act also charges the RICRMC with:

- (a) assisting in the redevelopment of deteriorating urban waterfronts, and considering the need for economic development that is compatible with the ecological, cultural, historic, and aesthetic values of the coastal zone;
- (b) ensuring the availability of public access points for coastal recreation;
- (c) considering the need for siting of facilities for national defense, energy, fisheries development, ports and transportation, as well as appropriate siting of new commercial and industrial developments;
- (d) timely review of projects through the streamlining of management activities; and
- (e) providing opportunities for public involvement in the decisions regarding coastal management.

120.4. The CRMC encourages the incorporation of public access on new developments in Section 335 of the RICRMP.

120.5. It is therefore the intent of this policy to establish a program that protects these ecological, economic, recreational, historic, cultural, and aesthetic values to the greatest extent practicable. This program, the "**Urban Coastal Greenway**", shall consist of a management area that is designed to accommodate development on the urban coastlines of Rhode Island while still meeting the mandates of the Coastal Zone Management Act. The purposes of the Urban Coastal Greenway Policy are:

- (a) to preserve, protect, restore, and enhance the overall quality of Narragansett Bay's urban coastal waters;

- (b) to capture nutrients, sediment and other waterborne pollutants from surface runoff;
- (c) to minimize flood impacts and shoreline erosion;
- (d) to protect, preserve, enhance, and restore coastal fish and wildlife habitat;
- (e) to preserve and enhance the experiences available along the urban coast;
- (f) to achieve responsible shoreline development that will allow a mixture of land uses (residential, recreational, commercial, and industrial) that orient to northern Narragansett Bay, including the Seekonk and Providence Rivers;
- (g) to preserve, enhance, or create an aesthetically pleasing view from the water, as well as from opposing shorelines;
- (h) to maintain the accessibility and natural habitat of the Metro Bay regional shoreline, as well as access to established pedestrian and bicycle trails; and
- (i) to provide safe public access to and along the shoreline.

120.6. While each of the purposes mentioned above will be considered in the establishment of Urban Coastal Greenways, the preeminent goals of this UCG policy are to prevent further degradation of coastal waters by treating stormwater (through vegetative means where possible), to protect and/or restore coastal habitats, and to ensure public access to the urban shoreline while preserving an aesthetically appealing view from both the water and the shore. In addition, the UCG policy offers a mechanism to encourage thoughtful economic development of the Metro Bay Region shoreline in a way that contributes to the CRMC's goals of enhancing the natural, recreational, and industrial history of the region.

120.7. The goals of the Urban Coastal Greenway Policy will be met through the application of the regulations below. Please refer to UCG Section 150 for the available coastal buffer options. UCG Sections 160 through 190 define the requirements of the Urban Coastal Greenway policy for each Zone. UCG Section 220 describes the policies and standards for Urban Coastal Greenways on RIDEM-designated brownfield sites, while UCG Section 230 describes the compensation options available in exchange for a reduction in UCG width. These regulations, when eligible, will supersede applicable sections of Table 1A, 110.1, 110.3, 140, 150, 300.2, 300.7, 320, and 325 of the RICRMP. All other RICRMP requirements will remain in full force and effect.

120.8. Application of the Urban Coastal Greenway Regulations.

- (a) The regulations herein shall apply to those projects or activities located solely within the boundaries of the Metro Bay Special Area Management Plan (Figure 1) and within the Council's coastal jurisdictional area.

- (b) Notwithstanding 120.8(a), a Council Assent is required for any alteration or activity that is proposed for (1) tidal waters; (2) shoreline features; and (3) areas contiguous to shoreline features. Contiguous areas include all lands and waters directly adjoining shoreline features that extend inland two hundred (200) feet from the inland border of that shoreline feature. A Council Assent is required for any alteration or activity any portion of which extends onto the most inland shoreline feature or its 200 foot contiguous area. Other activities may also require a Council Assent as specified in RICRMP Section 100.
- (c) Specific activities that trigger the Urban Coastal Greenway Regulations are explained in UCG Section 140.

## 130. Metro Bay Region Policies

### 130.1. Urban Coastal Greenways

- (a) The Council herein establishes an Urban Coastal Greenway (or “UCG”) Policy specifically for projects to be located exclusively within the Metro Bay SAMP boundary, and within the RICRMC jurisdiction of 200 feet landward from the coastal feature.
- (b) An “Urban Coastal Greenway” is a land area that:
1. lies within an area developed as urban industrial, commercial, **multi-residential**, or mixed-use where there is often minimal undeveloped land;
  2. is adjacent to a **coastal (shoreline) feature** that is, or will be, appropriately vegetated to provide **native plant communities** and/or **sustainable landscapes** which serve as a natural transition zone between the coast and adjacent upland development;
  3. may be connected to the upland by surface and subsurface hydrology; and
  4. is established and managed to protect aquatic, wetland, shoreline, and terrestrial environments from man-made disturbances and coastal flood hazards,
- (c) The Urban Coastal Greenway requirements apply landward from the coastal feature.
- (d) All applicants shall adhere to the Council’s requirements for buffers and setbacks as specified in the RICRMP. However, should an applicant opt to utilize the Urban Coastal Greenway policy, the applicant must follow the requirements specified within UCG Sections 150 through 260.
- (e) The establishment of an Urban Coastal Greenway is based upon the RICRMC’s legislative mandate to preserve, protect, develop, and where possible, restore Rhode Island’s coastal resources. The determination of the inland boundary of the UCG must balance this mandate with the property owner’s rights to develop and use the property.
- (f) The Urban Coastal Greenway policy allows flexibility for urban sites that is differentiated from the requirements of the RICRMP by three main tenets.
- The Urban Coastal Greenway policy allows the implementation of a sustainable landscape using plantings that are designed and managed for an urban environment.
  - The UCG policy strongly encourages a public access component that integrates the need for urban shoreline access with the spatial constraints of urban lots.

- The UCG policy allows varied stormwater management options that enhance the developer's ability to maximally utilize an urban lot.

(g) The Urban Coastal Greenway setback and buffer requirements may be waived on a site-specific basis for Council-approved water-dependent uses (e.g., docks, marinas, etc.).

### 130.2. High Priority Conservation and Restoration Areas

**High Priority Conservation Areas (HPCAs)** and **High Priority Restoration Areas (HPRAs)** have been designated within the Metro Bay SAMP boundary as described in Appendix 3, and graphically depicted in Appendix 4. HPCAs are those sites with habitat quality rankings of C4 (highest quality habitat) to C1. Likewise, HPRAs are sites suitable for restoration, with habitat quality rankings of R3 (highest priority restoration) to R1. High priority habitat areas shall be preserved and enhanced to the greatest extent possible, and shall also be afforded a higher level of protection. Fragmentation of the Urban Coastal Greenway corridor (specifically the alongshore component) shall be avoided wherever possible and the development of contiguous habitats will be required wherever possible.

### 130.3. Salt marshes

Any salt marsh (as defined in RICRMP Section 210.3) impacted by a development that falls within the Urban Coastal Greenway Requirements shall be preserved, restored, or replaced where necessary, in accordance with the requirements of RICRMP Section 300.12.

### 130.4. Building Massing

The massing of new structures and buildings should minimize shading of the shoreline and the Urban Coastal Greenway, such that the shoreline and UCG are not overwhelmed by tall and dense structures built to the setback line that rise vertically without relief from that line. Accordingly, structures should be designed to minimize the shadow cast upon the UCG and the adjacent shoreline. The RICRMC may negotiate and enter into agreements with the Metro Bay Region municipalities to allow for increased density on a development in exchange for appropriate building massing on the site.

### 130.5. Framing Elements

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public priority, in accordance with RICRMP Section 330. Permitted development shall be sited and designed to protect views to and along scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. Accordingly, the RICRMC promotes the use of framing elements to enhance significant views and vistas in the Metro Bay Region, and will

consider the installation of landscaping elements and light standards; the siting, profile, and massing of a proposed development; and the location of infrastructure and other urban elements that can be used to identify and/or “brand” the Urban Coastal Greenway in the implementation of this policy. In such cases, the RICRMC may require the submission of detailed landscape plans and may further require the submission of perspectives and artist renderings to aid in project review.

## **140. Activities That Trigger Urban Coastal Greenway Requirements**

140.1. The following activities shall be subject to the Urban Coastal Greenway (UCG) requirements when an applicant selects an option that requires the UCG:

- (a) **Development** – the construction of new commercial, industrial, or residential structures as defined in RICRMP Section 300.3. This also includes structures accommodating a mix of uses within a single development, building, or tract, as allowed by a municipality. The UCG requirements shall be applied when any portion of the development extends onto the most inland shoreline feature or its 200 foot contiguous area.
- (b) **Redevelopment** – the alteration or reconstruction of existing commercial, industrial, or multi-residential structures as follows:
  - 1. An increase in the **structural lot coverage** by twenty (20) per cent or more over existing conditions as of the date of adoption of the UCG Regulations. Structural lot coverage is that portion of the lot that is or may be covered by buildings and accessory buildings. In computing the 20% or more expansion, all structures within 200 feet of the coastal feature shall be considered as well as all structures subject to CRMC jurisdiction on the site; or
  - 2. The addition of 15 or more parking spaces to an existing commercial, industrial, multi-residential, or mixed-use development or structure(s). The UCG requirements shall be applied when any portion of a redevelopment activity extends onto the most inland coastal feature or its 200 foot contiguous area.

140.2. Where a property owner owns adjoining lots, these lots shall be evaluated as one project for the purposes of applying the Urban Coastal Greenway requirements and ensuring that the appropriate UCG is established and fragmentation is avoided.

140.3. The entire extent of a development project must be shown to the RICRMC as part of any application, regardless of parcel ownership. Additionally, the applicant must include any plans for phased development on the tract(s) of land. This is required so that the RICRMC can review proposals for jurisdiction and/or project impacts.

140.4. In any case when an applicant is not expanding the footprint of an existing structure in the course of a development project, the applicant must be cognizant that the Urban Coastal Greenway Regulations may still apply for any future development on that site. Accordingly, the applicant shall provide the CRMC with plans for meeting the UCG requirements on the entirety of the lot at the time of application and the applicant shall be bound by those plans once they are approved by the CRMC.



#### 140.5. Exemptions.

The Urban Coastal Greenway requirements shall not be applied to the following activities:

- (a) pre-existing structure(s), unless the structure(s) are razed for new development or meet the redevelopment threshold as defined above in UCG Section 140.1;
- (b) activities that qualify as maintenance pursuant to RICRMP Section 300.14;
- (c) new development of individual structures less than 200 square feet in total area; or
- (d) commercial or industrial port activities including, but not limited to: bulk material transport; energy facilities; ship building, repair, maintenance; or any activity subject to US Coast Guard Maritime Security (MARSEC) jurisdiction (See 33 CFR parts 104, 105, and 106).

## 150. Metro Bay Region Coastal Development Standards

### 150.1. Standards Applicable to Entire Development

Urban Coastal Greenway easements shall be recorded in the land evidence records of the appropriate municipality, and also with the Homeowner's Association, where appropriate.

Applicants following the Urban Coastal Greenway Policy shall adhere to the following standards on the entirety of the development parcel, as well as those as found in UCG Sections 150.2 through 260 below. All proposals will be subject to a fifteen (15) day public notice period. Following the notice period, any proposal that fully satisfies the UCG requirements stated within this document, and has not received a substantive objection, will be processed as a Category A (administrative) assent, with the exception of variance requests.

- (a) 15% Minimum Vegetation Requirement: Applicants must include sufficient sustainably landscaped areas in their proposals to achieve vegetative coverage of at least 15% of the surface area within the development parcel. This vegetation requirement may be met by the UCG, or through a combination of the UCG and additional plantings elsewhere on the property. All planting plans shall be prepared by a licensed landscape architect (See RIGL § 5-51-16). The landscape plan shall use groundcovers, underplantings, grasses, forbs, shrubs, and trees appropriately to achieve the goals of these regulations. These plantings may include landscaping elements, surface stormwater treatments, green roofs and rain gardens, or other **Low Impact Development** (LID) vegetation alternatives. Within the UCG, the plantings should include an appropriate mix of trees and shrubs, with minimal use of high maintenance lawn sods and grasses.
- (b) Stormwater Management: All new development proposals shall meet the requirement of 100% on-site management of the **water quality volume** (as specified in the most recent edition of the *Rhode Island Design and Installation Standards Manual*). This requirement shall be met through vegetative means (i.e. filter strips, vegetated swales, vegetated detention ponds, bioretention areas, stormwater infiltration planters, green roofs, etc.) in combination with practices that support infiltration and groundwater recharge. If site conditions and/or regulatory constraints do not allow these requirements to be met, appropriate non-vegetative stormwater treatment technologies may be permitted on a case by case basis. Applicants shall coordinate their stormwater management strategy with the RICRMC and the municipality of jurisdiction.
- (c) Public Access: It is the RICRMC's preference that applicants provide alongshore and arterial public access pathways within the development site, as described in UCG Section 150.5. Public access shall always be required:
  1. where the proposed project impinges upon public trust resources;

2. on sites that have become functional or *de facto* public access areas (i.e., picnic or fishing areas); and
3. on CRMC-designated rights of way (ROW) or previous easements granted under RICRMP Section 335.

Public access may not be required for development activities with Maritime Security (MARSEC) concerns, as designated by the United States Coast Guard.

- (d) **Construction Setback**: A construction setback is required for all new and existing residential, commercial, mixed-use and industrial structures for fire, safety, privacy, and maintenance purposes.
1. All structures must be setback from the inland edge of the UCG such that decks, patios, balconies, private lawn and driveway areas, etc., do not encroach upon the UCG. Structures designed to incorporate egress toward the UCG must be setback twenty-five (25) feet from the **landward edge** of the UCG, except as specified in UCG Sections 180 and 190.3 (Option 4). This is a permanent restriction and may not be altered at a later date.
  2. When the ground level of a structure will be used solely for parking or the building is designed to prevent egress or encroachments, and at the discretion of the RICRMC, an applicant may reduce or forego the construction setback and build to the landward edge of the UCG. At no time, however, shall there be any encroachments (including but not limited to patios, balconies, or accessory structures) into the Urban Coastal Greenway. This limitation must be clearly stated within the deed restrictions and applicable condominium documents for the development site.
- (e) **Project Illumination**: The area illuminated by exterior or outdoor project lighting shall not extend beyond the property boundary lines so as to diminish any negative and unnecessary visual impacts.

#### 150.2. Urban Coastal Greenway Zones

- (a) UCG standards are applicable to all activities that meet the thresholds described in UCG Section 140.
- (b) The Zone in which the development is contained, as described below and summarized in Figure 1, determines the required Urban Coastal Greenway widths.
- (c) Each Urban Coastal Greenway Zone allows at least two options for implementation of a vegetated area on a proposed development. In each Zone (with the exception of the Inner Harbor and River Zone), Option 1 requires the creation of a naturally vegetated buffer that is to be left undisturbed. Additional options within each Zone

allow for a more managed vegetated area (an “Urban Coastal Greenway”), in exchange for various public amenities or water quality enhancements.

- (d) Reductions in standard Urban Coastal Greenway widths shall only be acceptable if the applicant provides compensation, as described in UCG Section 230.

### 150.3. General Standards for Urban Coastal Greenways

- (a) The Urban Coastal Greenway shall begin at the **landward edge** of the coastal feature.
- (b) Applicants may utilize an averaging method, where compensatory UCG width is provided in some areas to allow encroachments within the standard UCG width in other areas (Figure 9).
- (c) The boundaries of the Urban Coastal Greenway easements shall be marked on all plans used for planning, permitting, and during construction.
- (d) The UCG shall have appropriate signage approved by the RICRMC and the municipality, and its inland limits on all sites shall be marked on-site by permanent markers.
- (e) In the interest of public safety, project designs shall facilitate the unobstructed observation of public spaces. These designs shall:
  1. Provide pedestrians with a sense of direction while giving them some visible indication as to where access is encouraged or restricted.
  2. Provide a minimum number of access routes while allowing users some flexibility in movement.
  3. Use shrubbery and low-level plantings (those which attain heights no greater than 3 feet) within 10 feet of footpaths, with the exception of appropriately spaced trees. Plants in **managed landscapes** should be graded such that taller plants are next to walls or other structures.
  4. Avoid creating unused or unusable spaces or isolated pockets, except in areas designated for wildlife habitat.
  5. Ensure that access opportunities enhance and complement shoreline observation opportunities.
  6. Provide for emergency access to public spaces and areas.
  7. Provide access for maintenance of stormwater treatment measures.

- (f) In order to ensure ease of access for emergency services, all projects shall provide fire lanes that ensure prompt access to adjacent buildings and properties. When hardened fire lanes are required, applicants are encouraged to use permeable paving materials (open grid pavers, etc.) that can be driven upon but also allow stormwater infiltration.
- (g) Encroachments into the Urban Coastal Greenway shall only be allowed by the RICRMC for:
  - 1. Public access;
  - 2. Physical access to the coastal feature for public recreation;
  - 3. Emergency vehicle access;
  - 4. Public utility corridors;
  - 5. Structural shoreline protection; and
  - 6. UCG or utility maintenance corridors.
- (h) The applicant shall consult with the RICRMC and the municipality of jurisdiction regarding the screening of parking lots and parking structures from view of northern Narragansett Bay, including the Woonasquatucket, Moshassuck, or Seekonk Rivers.

#### 150.4. Vegetation Standards for all Urban Coastal Greenways

- (a) Urban Coastal Greenways shall be vegetated with the exception of certain non-vegetated stormwater treatment facilities (as described in UCG Section 150.1(b)) and approved public access pathways (as described in UCG Section 150.5).
- (b) At least sixty per cent (60%) of the UCG shall be wholly vegetated with native plant communities and/or sustainable landscapes at all times, and all stormwater from any public access path shall be directed back onto the site for treatment. A variance to this standard may be granted by the RICRMC Executive Director for Small Lots as defined in UCG Section 190.3 (Option 4).
- (c) The vegetation within an Urban Coastal Greenway shall be properly managed in accordance with the standards contained in Section 240 of this document. In cases where **native** or **sustainable vegetation** does not exist within a UCG, or non-sustainable invasive vegetation currently occurs on the site, the Council may require restoration efforts that include, but are not limited to, replanting the UCG with non-invasive native or sustainable plant species. These species shall be chosen from the most current edition of *Sustainable Trees and Shrubs*, from the University of Rhode Island Cooperative Extension office, or another appropriate list approved by the RICRMC. All plant species utilized shall be primarily low maintenance species with maximum habitat value. Salt-tolerant species shall also be included where site conditions warrant. The criteria for selection of appropriate non-invasive native or sustainable species are:
  - 1. ability to perform the desired function(s);

2. anticipated survival and hardiness given site conditions, with minimal (if any) application of pesticides and fertilizer;
  3. high wildlife value; and
  4. aesthetic value.
- (d) Urban Coastal Greenways shall be designed as native plant communities and/or sustainable landscapes using noninvasive native and/or sustainable species of vegetation in order to promote the Council's goal of preserving, protecting, and restoring ecological systems. The Council may permit alterations to Urban Coastal Greenways that facilitate the continued enjoyment of Rhode Island's urban coastal resources. All alterations to Urban Coastal Greenways or alterations to the natural vegetation (i.e., areas not presently maintained in a landscaped condition) within the Council's jurisdiction shall be conducted in accordance with the standards contained in this section as well as all other applicable policies and standards of the Council. In order to ensure compliance with these requirements, the Council will require applicants to submit an **Urban Coastal Greenway Management Plan**. In cases where the preservation, protection or enhancement of wildlife habitat is the primary management goal (such as the Area of Particular Concern Zone and/or specific sites with high quality habitats), as determined by the RICRMC, native plant communities shall be preferred over sustainable landscapes.
- (e) Existing non-invasive vegetation (especially trees) shall be preserved in the Urban Coastal Greenway whenever possible. Removal of these species will be allowed only after the Council has reviewed and approved a UCG Management Plan prepared in accordance with standards and specifications found in the *Urban Coastal Greenway Design Manual* (in preparation).

#### 150.5. Public Access Standards for all Urban Coastal Greenways

Wherever public access is provided, the following public access standards shall be met.

- (a) The public access component shall be located within the UCG identified for the project. In certain cases, the RICRMC may allow the public access component to be located within the construction setback.
- (b) Acknowledgement of Existing Public Access.
  1. Some development sites may qualify for an Existing Public Access Exemption from the UCG requirements for their zone of jurisdiction. These sites must include existing public infrastructure (i.e. roads and/or sidewalks) between the coastal feature and the proposed development.

2. *Policy*: It is the policy of the RICRMC to allow reduced public access requirements within lots containing preexisting public access that satisfies the requirements of the Urban Coastal Greenways Policy, provided that there is no net loss of access.
3. *Standards*: The Urban Coastal Greenway standards specified within UCG Sections 150 through 260 apply, with the following exceptions:
- (i) Where existing public access pathways and **public roads** occur between the coastal feature and the development parcel(s), the primary (alongshore) public access and construction setback requirements may be waived.
  - (ii) Where public roads are immediately adjacent to the sides of the development perpendicular to the coastal feature, these public roads may count toward the Urban Coastal Greenway secondary public access requirements. The road(s) must be usable for pedestrian and/or emergency vehicle access, as appropriate.
- (c) The Council prefers that all new multi-residential, commercial, and mixed-use developments provide primary (alongshore) public access along the Urban Coastal Greenway. These **primary public access pathways** shall be a minimum of ten (10) feet in width to accommodate pedestrians, but the RICRMC may consider pathways of up to twenty (20) feet in width when emergency vehicle access is necessary. In the latter case, the pathways must be capable of supporting emergency and maintenance vehicles. All public access pathways shall be constructed of a pervious surface, or include stormwater treatments to minimize stormwater runoff, as described in the *Urban Coastal Greenway Design Manual* (in preparation). The access paths also shall be designed to have a relatively flat profile and cross section to prevent stormwater runoff from eroding the path surface or adjacent soils. When paths are located directly adjacent to the coastal feature, they should be angled slightly to cause stormwater to flow inland for treatment, rather than toward the coastal feature.
- (d) Each parcel with an alongshore public access pathway within its Urban Coastal Greenway shall include at least one secondary (arterial or perpendicular) access path leading to the linear public access path and beyond to the shoreline, unless adjoining parcels share a **secondary public access path** as described in UCG Section 150.5(f).
- 1. The access path must emanate from a public place. The secondary access path should be a minimum of ten (10) feet in width to accommodate pedestrian traffic, but the RICRMC may consider pathways of up to twenty (20) feet in width when emergency vehicle access is necessary. In the latter case, the pathways must be capable of supporting emergency and maintenance vehicles. All pathways should be constructed of a permeable surface.
  - 2. The secondary access path shall connect sidewalk traffic with the alongshore UCG path, and may be a meandering path, as long as erosion is minimized. All

public access pathways shall be recorded within the land evidence records and shall run with the land. The limited liability provision stated in RICRMP Section 335 shall apply to these public access pathways.

- (e) Each Urban Coastal Greenway must include adequate provisions for emergency vehicle access paths from the nearest street to the shoreline (approximately every 500 feet). These vehicular paths shall be constructed of a permeable surface capable of supporting emergency vehicles.
- (f) Adjoining parcels may share secondary pedestrian or vehicular access paths on their shared boundary, where applicable, as long as there is at least one secondary pathway per 500 feet of shoreline. Applicants must also ensure that the primary public access path on their development site connects with an existing Urban Coastal Greenway primary public access path on adjacent parcels.
- (g) Where the applicant has chosen to include public access, and in order to facilitate public access to the shoreline, each development shall include a minimum of two (2) public parking spaces adjacent to an access point or incorporated within a project, and an additional space per 100 feet of linear shoreline (where “linear” refers to the shortest distance between lot boundaries) within the parcel. The placement of the public parking spaces shall be decided in consultation with the RICRMC and the municipality of jurisdiction.

#### 150.6. Stormwater Standards for all Urban Coastal Greenways

- (a) The RICRMC encourages the use of low impact development (LID) techniques that distribute infiltration methods throughout the development site to the maximum extent practicable. These LID techniques may include, but are not limited to:
  - 1. Minimization measures including decreased clearing and grading or reducing the use of pipes, curbs, and gutters;
  - 2. Using alternative surfacing materials such as gravel, cobble, wood mulch, grass pavers, turf blocks, natural stone, and concrete pavers in cross walks, for example;
  - 3. Discharge of runoff into open drainage systems and vegetative swales to slow runoff, reduce discharges, and encourage more infiltration and evaporation;
  - 4. Integration of detention, retention, filtration, storage, and capture of runoff systems into the site;
  - 5. Planting large trees within designated UCGs to promote evapotranspiration, restore urban forests, and provide scenic relief and vegetative screening;
  - 6. The installation of green roofs to retain and naturally filter stormwater runoff;



7. The use of cisterns to temporarily store rainwater that can subsequently be used for irrigation of the property; and
  8. The incorporation of rain gardens or other vegetated systems.
- (b) Stormwater treatment should, where possible, be designed to constitute a landscape amenity. Applicants should meet this goal through vegetative means, in part by incorporating land shaping to create detention areas (i.e., vegetated swales or rain gardens) capable of treating runoff. When site topography (or land shaping) necessitates hard structures as part of the stormwater treatment design, the applicant should use a textured surface and incorporate plant materials that will drape over the edge to soften the appearance of the structure and provide additional on-site vegetation.
  - (c) Untreated stormwater shall not drain directly into coastal waters. Runoff shall be detained and slowly released through the use of best management practices (BMPs), as outlined in the *Urban Coastal Greenway Design Manual* (in preparation). Runoff volumes beyond or in excess of the water quality volume, however, may bypass the BMPs after the water quality volume is captured for treatment.
  - (d) All stormwater management techniques shall have a maintenance plan submitted as part of the RICRMC application package, in accordance with the most recent edition of the *RI Stormwater Design and Installation Standards Manual*. Maintenance provisions shall be tailored to the specific stormwater management techniques that are proposed for the site, and shall include maintenance practices and frequency.

#### 150.7. Structural Shoreline Protection Standards for all Urban Coastal Greenways

- (a) Riprap revetments shall be constructed with quarry stone and should include sustainable plantings between the stones. The revealed base of a revetment shall not be further seaward than the Mean High Water Line (MHWL).
- (b) Existing shoreline protection structures may be utilized where consistent with RICRMP Section 300.14. In some locations within the Metro Bay Region, there are existing bulkheads and seawalls constructed of aesthetically pleasing materials (i.e. granite). The historic value of structural shoreline protection shall be preserved or restored where possible.
- (c) Due to intense wave action, some shorelines may require seawalls instead of revetments. When the RICRMC finds such structural shoreline protection to be necessary, construction materials other than steel shall be used wherever possible. When steel is necessary, the seawall shall be faced with a visually appealing material.
- (d) When structural shoreline protection is deemed necessary, the applicant may receive credit toward the 15% vegetation requirement for sloping vegetated revetments

(Figure 6). No stormwater treatment or public access shall be included upon the revetment.

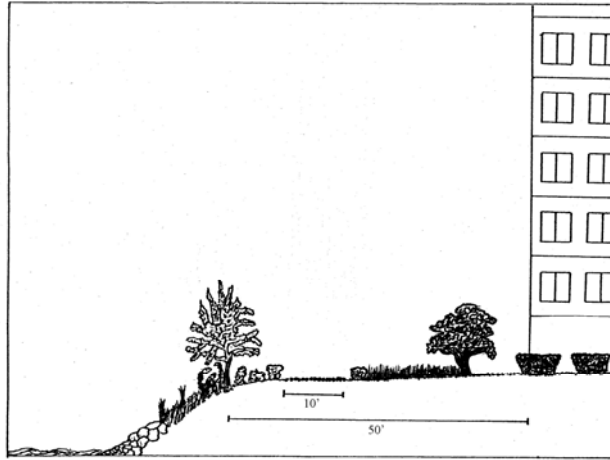


Figure 6. Hypothetical site plan showing a vegetated revetment on a site with parking on the ground level of the new structure. Drawing by Thomas VanHollebeke.

(e) At the discretion of the RICRMC, terracing may be allowed within the UCG and setback (Figure 7).

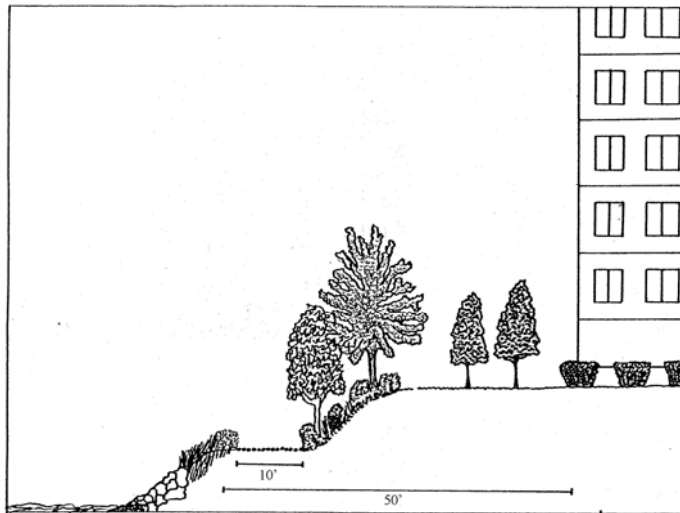


Figure 7. Hypothetical site plan showing a terraced UCG. Drawing by Thomas VanHollebeke.

### 150.8. Prohibitions

(a) Certain activities and uses shall be prohibited within Urban Coastal Greenways, specifically:

1. Petrochemical Storage;
  2. Storage of other hazardous materials;
  3. Overnight or long-term parking and/or automobile storage;
  4. Parking within the shoreward twenty-five (25) feet of the UCG;
  5. Application of chemicals (i.e., pesticides, fertilizers, etc.) that has not been approved by the RICRMC;
  6. Storage or stockpiling of mulch, compost, or other organic materials;
  7. Storage or stockpiling of construction materials;
  8. Fueling and servicing of equipment and other motorized vehicles; and
  9. Recycling of construction materials.
- (b) No structure, building, roof, or skywalk may be constructed over a tidal river channel or Narragansett Bay, or bypass the channel, with the exception of public infrastructure or public access, according to the requirements set forth in RICRMP Section 130.
- (c) Prohibitions may only be relieved through Special Exceptions, granted by the Council.

## 160. Residential Zone

### 160.1. Definition

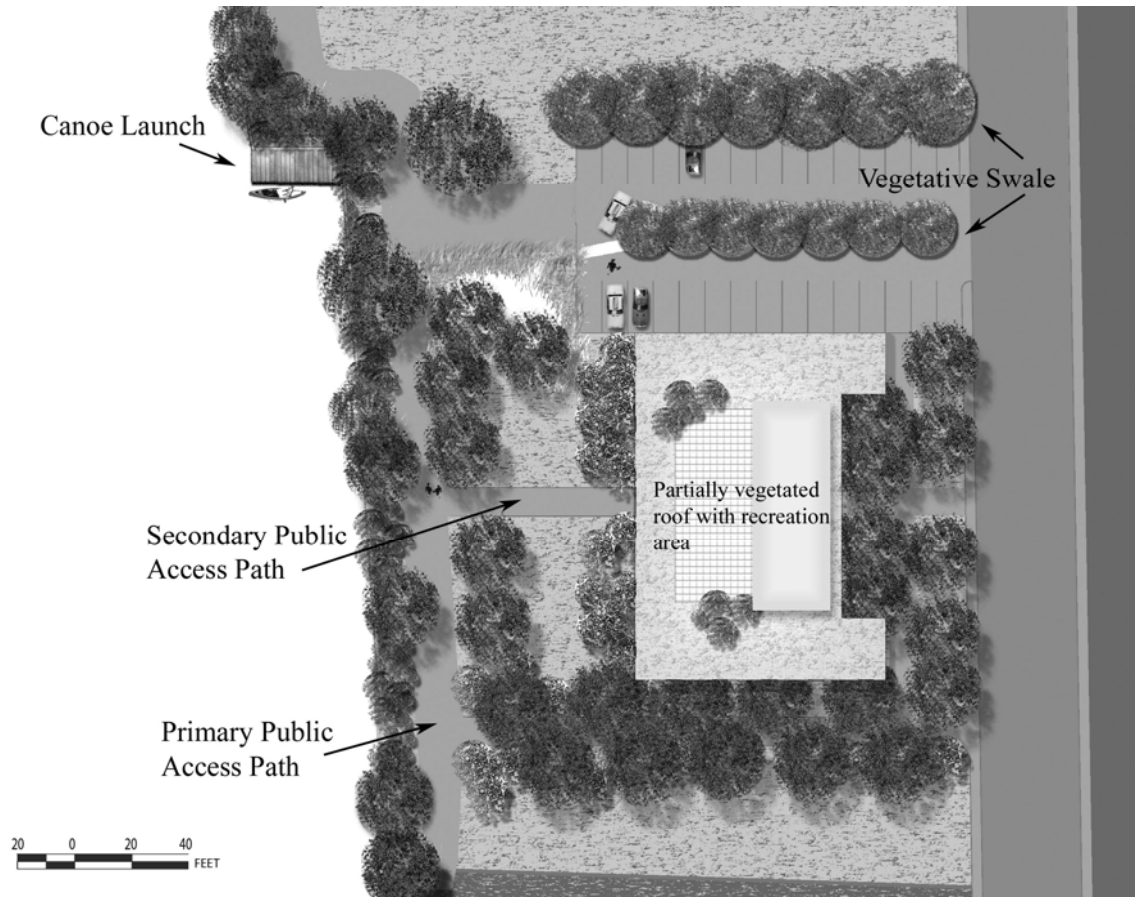
The Residential Zone primarily encompasses the area south from the Johnson and Wales University Campus in Cranston to the southern tip of Pawtuxet Neck, in addition to some areas of Providence and East Providence, as shown in the Urban Coastal Greenway Zone Map (Figure 2), and is predominantly composed of single and two-family residences.

### 160.2. Policy

- (a) The Urban Coastal Greenways requirements do not apply to single or two-family residences within the Residential Zones. When an applicant wishes to undertake new construction or alteration of an existing single or two-family structure within a Residential Zone, it is the policy of the RICRMC to apply the setback and buffer requirements in accordance with sections 140 and 150, respectively, of the RICRMP.
- (b) Applicants proposing to construct or alter any commercial development or multi-residential (equal to or greater than 3 units) project within a Residential Zone may choose either of the following options:

**Option 1:** The project must meet the setback and buffer requirements of RICRMP Section 140 and 150 (Appendix 1); or

**Option 2:** The project must meet the Development Zone standards within the Urban Coastal Greenway Policy (See UCG Section 190 and Figure 11).



**Figure 8. A multi-family redevelopment within a Residential Zone would be treated as a Development Zone site under the Urban Coastal Greenway policy. Note the inclusion of primary and secondary public access, as well as a canoe/kayak launch. Vegetative swales surrounding the parking lot feed into a detention pond. The building has a partially vegetated roof that includes an open area for tenant recreation. Graphic by Margaret Leighly and Jennifer Martel, RISD.**

## **170. Area of Particular Concern Zone**

### 170.1. Definition

The Area of Particular Concern (APC) Zone incorporates areas within the Metro Bay SAMP boundary that have been identified either as highly significant habitats (High Priority Conservation or Restoration Areas) or as areas of significant recreational value. The conservation, restoration, and recreation designations were identified using a ranking system that includes habitat quality, use of the site by wildlife, presence of rare species, geographic relationships (i.e., contiguous parcels with habitat value), and restoration potential. The APC Zone is delineated in the Urban Coastal Greenway Zone Map (Figure 2), and the ranking system is described in Appendix 3.

### 170.2. Policy

- (a) Within the APC Zone, it is the policy of the RICRMC to maintain and restore natural vegetated coastal buffers with maximum widths to protect the valuable habitats and/or contiguous vegetated corridors contained within the zone (Figure 9). The Council does not support projects that propose to alter existing natural areas having high environmental value for habitat, recreation, or scenic quality, as delineated on the Urban Coastal Greenway HPCA and HPRA Map (Appendix 4). Accordingly, projects that propose to alter these habitats are inconsistent with this policy, and are strongly discouraged.
- (b) Applicants have a choice of either **Option 1** (standard buffer width) or **Option 2** (variance request) as detailed below for projects located in the APC Zone.
- (c) Any public access plans should be consistent with Section 335 of the RICRMP.

### 170.3. Standards

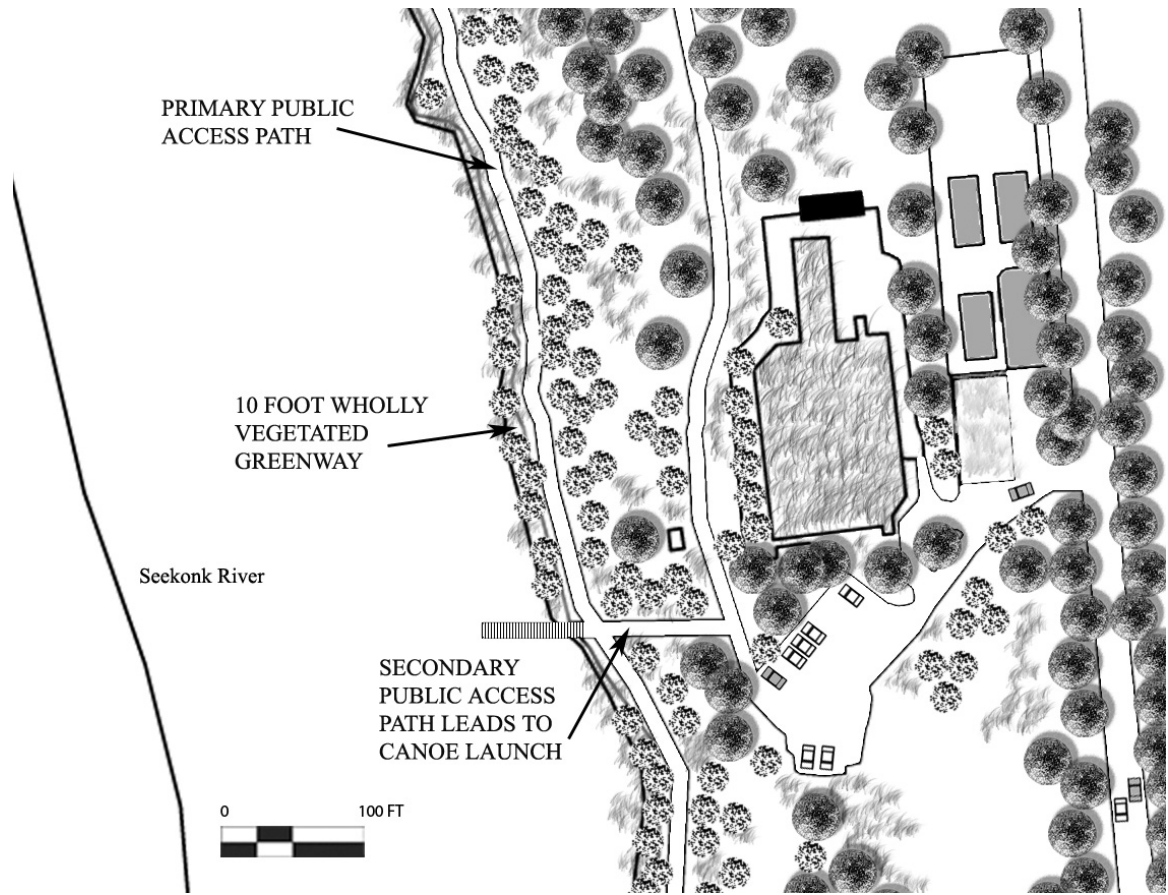
#### **Option 1: Standard buffer width.**

- (a) All development proposals within the APC Zone that completely meet the requirements under this option will be processed as Category A applications in accordance with the RICRMP.
- (b) Applicants choosing this option must adhere to the standard buffer width as determined in Appendix 2. In addition, all structures must be set back 25 feet from the inland edge of the buffer.
- (c) The buffer must be comprised of a mix of native plant species and must remain in a natural and undisturbed state.
- (d) The applicant must provide a public access plan in accordance with Section 335 of the RICRMP.

(e) Under Option 1, variances to the buffer width are not permissible.

**Option 2: Variance request.**

- (a) All development proposals within the APC Zone seeking a buffer variance shall be processed as Category B applications in accordance with the RICRMP.
- (b) An applicant may only reduce the standard APC Zone buffer width through the granting of a variance by the RICRMC in accordance with UCG Section 220. At no time shall any applicant provide a buffer less than 50% of the required buffer width, as determined in Appendix 2. Furthermore, the minimum buffer width within an APC Zone shall be twenty-five (25) feet.
- (c) Any proposals for a buffer less than 50% of the required APC Zone buffer width shall require a special exception in accordance with RICRMP Section 130.
- (d) All structures must be set back 25 feet from the inland edge of the buffer.
- (e) In the event that a variance to the required buffer width is approved, the applicant must compensate for any reduction in the buffer width, as described in UCG Section 230.



**Figure 9. Hypothetical design of standard Urban Coastal Greenway width within an Area of Particular Concern Zone, showing vegetation and public access requirements on a site with an existing building. Buffer averaging is utilized in this example to create a variable-width Urban Coastal Greenway of approximately 85 to 160 feet. Graphic by Margaret Leighly and Jennifer Martel, RISD. (NEED TO REDO THIS GRAPHIC)**



## **180. Inner Harbor and River Zone**

### 180.1. Definition

This zone incorporates extensively developed areas where, on the majority of parcels, public infrastructure (i.e., roads and/or sidewalks) already exists between the coastal feature and the proposed development at the time of promulgation of the Urban Coastal Greenway Regulations. The Inner Harbor and River Zone (IHRZ) specifically encompasses the area upriver and inland from the Providence hurricane barrier and along the Woonasquatucket and Moshassuck Rivers, including the **Capital Center District**, to the extent of the Metro Bay SAMP boundary as depicted in the Urban Coastal Greenway Zone Map (Figure 2).

### 180.2. Policy

It is the policy of the RICRMC to allow reduced UCG widths within this zone, due to the spatial constraints and existing hardscapes within these highly urbanized corridors, as well as the preexisting public access available there. Proposed developments within the Inner Harbor and River Zone that will incorporate existing hardscapes shall strive to achieve the maximum vegetation practicable within the Urban Coastal Greenway.

### 180.3. Standards

The majority of parcels located within the Inner Harbor and River Zone are separated from the coastal feature by an existing public roadway or sidewalk system. In some portions of the IHR Zone, there are no public roadways or sidewalks along the river (e.g., the area west of Hemlock Street and along the north side of the Woonasquatucket River). Accordingly, project options will be determined by the proximity and existence of public roadways and sidewalks, as described below.

#### **IHRZ-A: Public roadway and/or pathway exist between the project and coastal feature**

##### **Option A-1: Standard UCG Width (20 feet).**

- (a) All development proposals within the IHRZ that completely meet the requirements under this option will be processed as Category A applications in accordance with the RICRMP provided there are no substantive objections during the 15-day public notice period.
- (b) The standard Urban Coastal Greenway width within the Inner Harbor and River Zone shall be twenty (20) feet. If the distance between the landward edge of the coastal feature and the rear lot line is greater than twenty (20) feet, the applicant must only satisfy the 15% vegetation and 100% stormwater requirements described in UCG Section 150.1.

- (c) All structures must be set back appropriately from the landward edge of the UCG to meet the design criteria specified in UCG Section 150.1(d).
- (d) All of the standards specified within UCG Sections 150 and 200 to 260 shall apply, with the following exceptions:
  - 1. Public access requirements shall be met in accordance with UCG Section 150.1(c), and may be contained within the setback, as described in UCG Section 150.5(a).
  - 2. Where existing public access pathways and/or public roads occur between the coastal feature and the development parcel(s), the primary (alongshore) public access and construction setback requirements may be waived at the discretion of the CRMC.
  - 3. Where public roads and/or sidewalks are immediately adjacent to the sides of the development perpendicular to the coastal feature, these public roads and/or sidewalks may count toward the Urban Coastal Greenway secondary public access requirements at the discretion of the CRMC. Roads must be usable for pedestrian and/or emergency vehicle access, as appropriate.

**Option A-2: Variance Request.**

- (a) All development proposals within the IHRZ that seek a variance under this option will be processed as Category B applications in accordance with the RICRMP.
- (b) Under this option, the Urban Coastal Greenway width may be reduced up to 25%, for a total width of no less than 15 feet, provided that the applicant meets the variance criteria specified in UCG Section 210.
- (c) All structures must be set back appropriately from the landward edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).
- (d) In the event that a variance to the required UCG width is approved, the applicant must compensate for any reduction in UCG width, as described in UCG Section 230.
- (e) All of the standards specified within UCG Sections 150 and 200 to 260 shall apply, with the following exceptions:
  - 1. Public access requirements shall be met in accordance with UCG Section 150.1(c), and may be contained within the setback, as described in UCG Section 150.5(a).

4. Where existing public access pathways and/or public roads occur between the coastal feature and the development parcel(s), the primary (alongshore) public access and construction setback requirements may be waived at the discretion of the CRMC.
5. Where public roads and/or sidewalks are immediately adjacent to the sides of the development perpendicular to the coastal feature, these public roads and/or sidewalks may count toward the Urban Coastal Greenway secondary public access requirements at the discretion of the CRMC. Roads must be usable for pedestrian and/or emergency vehicle access, as appropriate.

**IHRZ-B: Public roadway or walkway does not exist between the project and coastal feature**

**Option B-1: Standard UCG Width (50 feet).**

- (a) All development proposals within the IHRZ that completely meet the requirements under this option will be processed as Category A applications in accordance with the RICRMP provided there are no substantive objections during the 15-day public notice period.
- (b) Where there is no existing public infrastructure (roads and/or sidewalks) between the coastal feature and the proposed development at the time of promulgation of the Urban Coastal Greenway Regulations, the standard Urban Coastal Greenway width shall be fifty (50) feet.
- (c) All structures must be set back appropriately from the landward edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).
- (d) All of the standards specified within UCG Sections 150 and 200 to 260 shall apply.

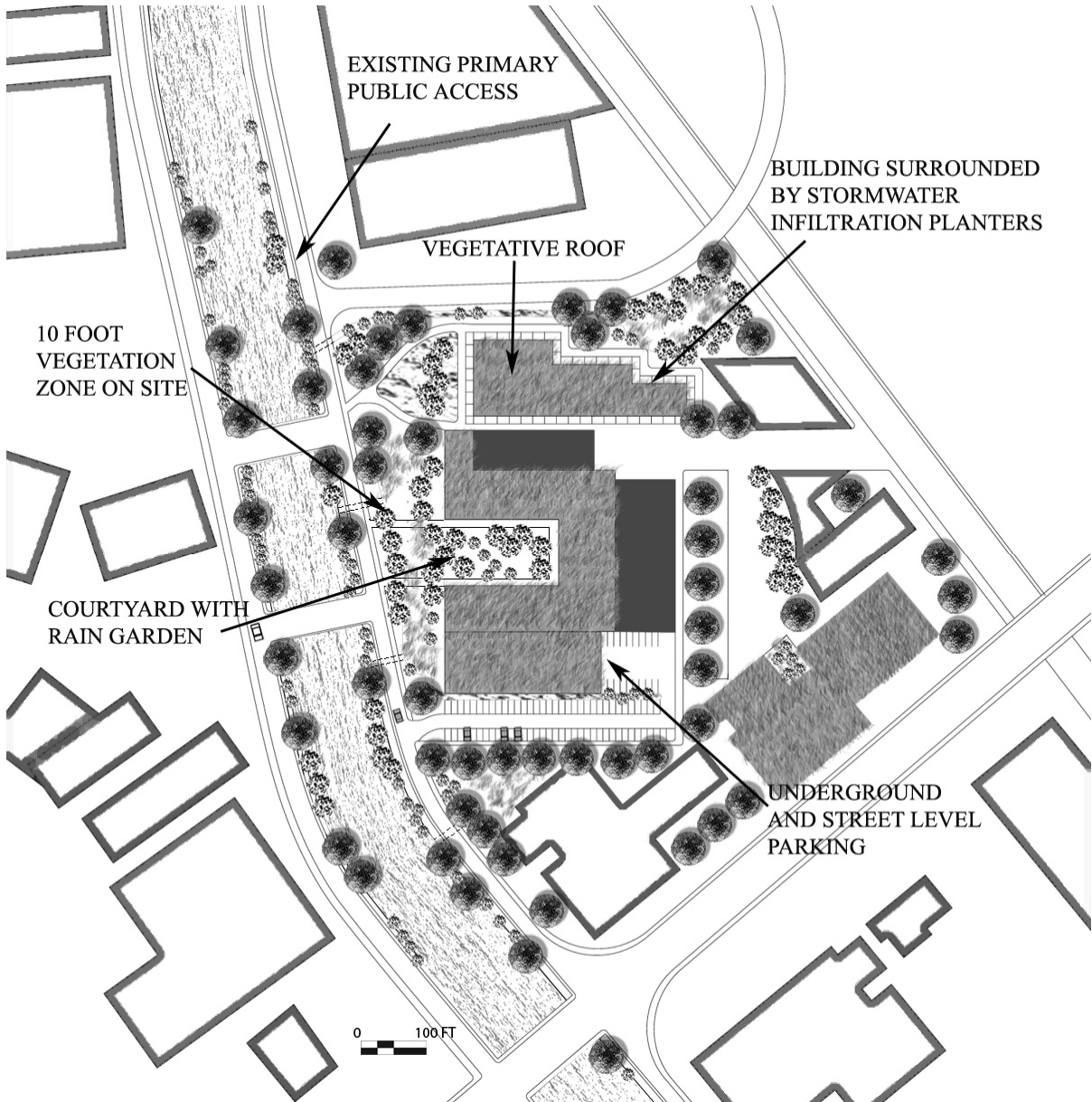
**Option B-2: Compact UCG Width (20 feet).**

- (a) All development proposals within the IHRZ that completely meet the requirements under this option will be processed as Category A applications in accordance with the RICRMP provided there are no substantive objections during the 15-day public notice period.
- (b) Under this option, the UCG width may be reduced to a minimum of twenty (20) feet.
- (c) All structures must be set back appropriately from the landward edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).

- (e) All of the standards specified within UCG Sections 150 and 200 to 260 shall apply. Furthermore, the applicant must also provide the following:
  - 1. Twice the public access specified in UCG Section 150.5. This access may be distributed around the development site or otherwise as approved by the RICRMC; and
  - 2. Vegetative cover on twenty (20) percent of the entire development site, rather than the fifteen (15) percent standard requirement specified in UCG Section 150.1.

**Option B-3: Variance Request.**

- (a) All development proposals within the IHRZ that seek a variance under this option will be processed as Category B applications in accordance with the RICRMP.
- (b) Under this option, the Urban Coastal Greenway width may be reduced to a total width of no less than fifteen (15) feet, provided the applicant meets the variance criteria specified in UCG Section 210 and the request is approved by the RICRMC.
- (c) All structures must be set back appropriately from the landward edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).
- (d) All of the other UCG requirements specified in UCG Sections 150 and 200 to 260 shall apply to the project and the applicant must also provide compensation as follows.
- (e) In the event that a variance is granted by the RICRMC, the applicant must provide:
  - 1. Twice the public access on site as specified in UCG Section 150.5; and
  - 2. Vegetative cover on twenty (20) percent of the entire development site; and
  - 3. Compensation in accordance with UCG Section 230. Compensation shall not be required for developments within the Capital Center District.



**Figure 10. Hypothetical site plan for the Inner Harbor and River Zone, demonstrating the integration of several Low Impact Development techniques to treat stormwater through vegetative means. Public access requirements are met by existing sidewalks and roadways. [Need to insert revised figure here]**

## **190. Development Zone**

### 190.1. Definition

The Development Zone is composed of areas that have been specifically designated for high-density development by the local municipality or the state. Many parcels within this zone are formerly filled tidelands. This zone also incorporates large parcels within the Metro Bay SAMP boundary that may have been primarily industrial in their former use(s) and are therefore constrained by the existence of utility corridors and their associated easements, and/or the need for brownfield remediation prior to development. The boundaries of this Zone are identified on the Urban Coastal Greenway Zone Map (Figure 2).

### 190.2. Policy

It is the policy of the RICRMC to establish a continuous UCG within the areas designated as Development Zones that will satisfy the overall goals of the Urban Coastal Greenway policy, as well as the specific development standards described in UCG Section 150.

### 190.3. Standards

All development proposals within the Development Zone that completely meet the requirements under one of the options below (Options 1-4) will be processed as Category A applications in accordance with the RICRMP provided there are no substantive objections during the 15-day public notice period.

#### **Option 1: Standard buffer width.**

- (a) Applicants choosing this option must adhere to the standard buffer width as determined in Appendix 2. In addition, all structures must be set back 25 feet from the inland edge of the buffer.
- (b) The buffer must be comprised of a mix of native plant species and remain in a natural and undisturbed state.
- (c) Variances to the buffer width are not permissible under this option.

#### **Option 2: Standard UCG Width (100 feet).**

- (a) The standard Urban Coastal Greenway width within a Development Zone shall be one hundred (100) feet. All structures must be setback appropriately from the inland edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).
- (b) All of the standards specified within UCG Sections 150 and 200 through 260 shall apply (Figure 11).

- (c) The project should provide public access in accordance with UCG Section 150.5.
- (d) If applicants choose not to install and maintain public access, then **mitigation** must be provided in accordance with UCG Section 200.

**Option 3: Compact UCG Width.**

- (a) Applicants may choose a reduced UCG width of fifty (50) feet. All structures must be setback appropriately from the inland edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).
- (b) All of the standards specified within UCG Sections 150 and 200 through 260 shall apply.
- (c) The project should provide public access in accordance with UCG Section 150.5.
- (d) The applicant must provide compensation for any reduction in UCG area on the development site, in accordance with UCG Section 230.
- (e) If applicants choose not to install and maintain public access, mitigation must be provided in accordance with UCG Section 200.

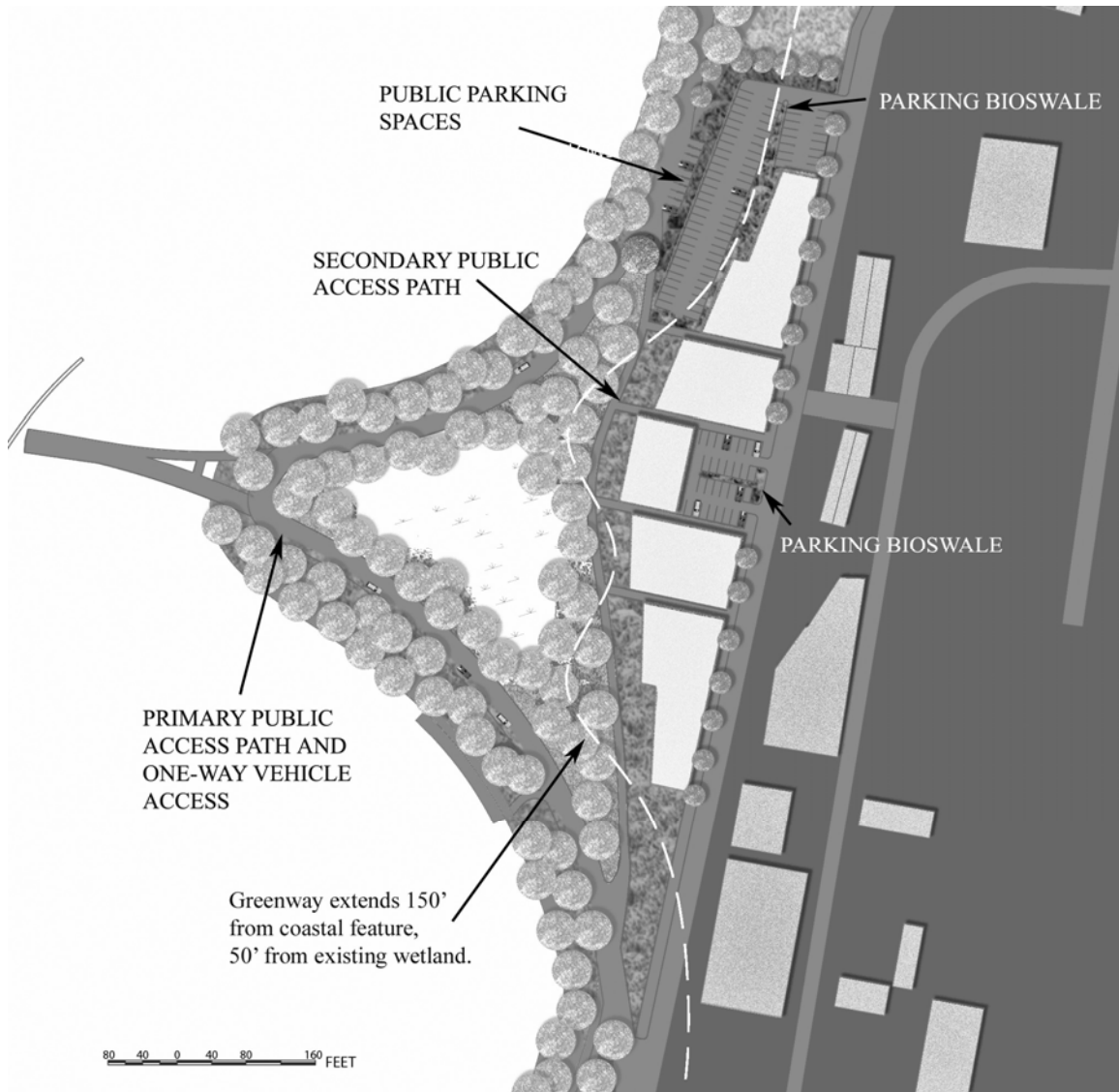
**Option 4: Small Lot Exemption.**

- (a) It is the policy of the RICRMC to allow reduced UCG widths within qualifying small Development Zone sites due to the spatial constraints to development inherent on very small lots. In order to meet the vegetation target and on-site stormwater management requirements for Urban Coastal Greenways, designs for small lots are encouraged to include innovative treatments, such as green roofs, bioretention areas, and stormwater recycling.
- (b) Development Zone sites may qualify for a Small Lot Exemption if they are lawfully established lots as of (the date of approval of policy) whose shallow depth constrains their ability to meet the UCG and setback standards from the inland boundary of a coastal feature, as set forth by the RICRMC.
- (c) Small Lots shall be defined as lots with a depth of less than 300 feet. Lot depth shall be measured as the shortest distance from the front lot line to the rear lot line. For lots where the front and rear lot lines are not parallel, the average lot depth shall be determined by measuring the distance between the midpoints of the front and rear lot lines.
  - 1. “Front lot line” shall be the lot line that demarcates the landward limit of the lot.

2. "Rear lot line" shall be the lot line along the shore.
- (d) The standard Urban Coastal Greenway width within Small Lots shall be twenty-five (25) feet. All structures must be setback appropriately from the inland edge of the UCG, to meet the design criteria specified in UCG Section 150.1(d).
  - (e) Where the additional construction setback cannot be met, the setback may be reduced or waived entirely. This shall be determined on a case-by-case basis in consultation with the RICRMC.
  - (f) The standard Small Lot Urban Coastal Greenway width may be reduced up to twenty per cent (20%), for a total UCG width of no less than 20 feet, provided the applicant meets the variance criteria specified in UCG Section 210 and the request is approved by the RICRMC.
  - (g) In the event that a variance is requested for a qualifying Small Lot in accordance with UCG Section 210 and approved by the RICRMC, any reduction in UCG width within the qualified Small Lot shall provide compensation as described in UCG Section 230.
  - (h) All of the standards specified within UCG Sections 150 and 200 through 260 shall apply, with the following exceptions:
    1. Public access may be satisfied within the UCG along the coastal feature, and may be contained within the setback.
    2. Where existing public access pathways and/or public roads occur between the coastal feature and the development parcel(s), the primary (alongshore) public access and construction setback requirements may be waived.
    3. On Small Lots where primary public access does not already exist, primary and secondary pedestrian public access pathways may be decreased to a minimum of six (6) feet in width, at the discretion of the RICRMC. This reduction of pathway width shall not apply to public access pathways that must serve the dual purpose of pedestrian and emergency vehicle access paths. Should emergency vehicle access be necessary, the applicant may have to implement an additional building setback in order to accommodate the requirement (UCG Section 150.4(b)) that sixty per cent (60%) of the UCG be fully vegetated.
    4. Where public roads are immediately adjacent to the sides of the development perpendicular to the coastal feature, these public roads may count toward the Urban Coastal Greenway secondary public access requirements. The road(s) must be usable for pedestrian and/or emergency vehicle access, as appropriate.



5. Small lots may be excluded from the requirement for additional public parking spaces per 100 feet of linear shoreline (UCG Section 150.5(g)).



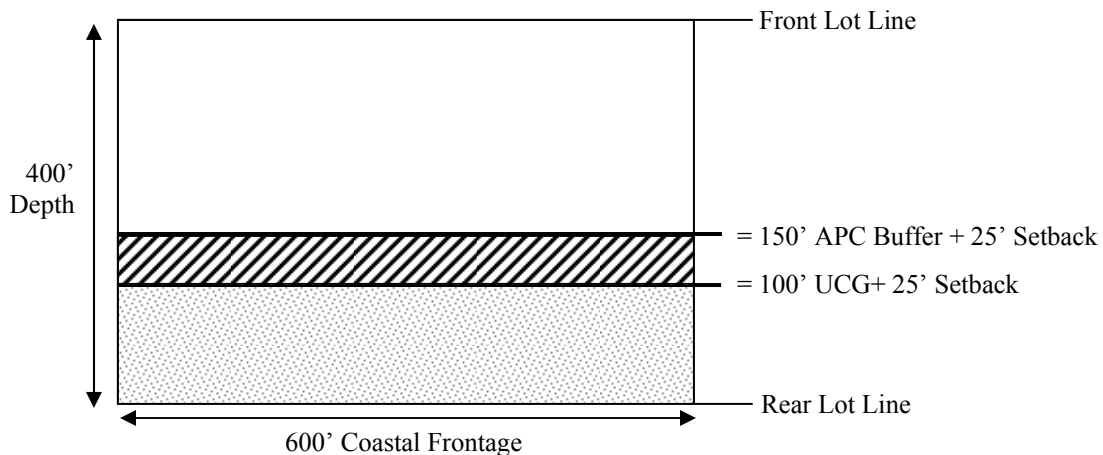
**Figure 11. Hypothetical design of an Urban Coastal Greenway in a Development Zone, showing public access and vegetation requirements. This design preserves the existing wetland, while adding a major public access amenity for the community through the incorporation of walking paths and a one-way road for vehicle traffic. Graphic by Margaret Leighly and Jennifer Martel, RISD.**

## 200. Mitigation Requirements in Lieu of Public Access

200.1. The applicant must mitigate for any lost public access on the development site. This mitigation shall consist of the purchase and establishment of a habitat conservation or habitat restoration project. The area to be conserved or restored must be an identified High Priority Conservation Area (HPCA) or High Priority Restoration Area (HPRA) within the Metro Bay SAMP boundary, preferably within the municipality in which the development project is located.

200.2. Mitigation shall occur on a 2:1 basis. Specifically, the area to be restored must be twice the difference between the buffer width required under Appendix 2 and the Urban Coastal Greenway width proposed for the site (Figure 12). The restoration must be established and its success secured for a minimum of one (1) growing cycle.

200.3. The completed mitigation and appropriate documentation, including legal documentation of a permanent conservation easement on the mitigation site, must be presented to the RICRMC before the proposed development may proceed.



**Figure 12. Example of a project in which the applicant follows Development Zone Option 2 and chooses not to provide public access. The applicant would therefore have to provide a total mitigation area of 60,000 square feet – twice the amount of lost green space on the development site (50 feet x 600 feet = 30,000 square feet), in accordance with UCG Section 200. In this particular example, the implementation of a 100 foot Urban Coastal Greenway would provide vegetative coverage of 25% of the entire development site.**

## **210. Variance Requests**

210.1. Applicants desiring a variance from a standard within these rules shall make such request in writing and address the six criteria listed below in writing. Variances may be requested under the following options:

- APC Zone Option 2
- IHRZ Option A-2
- IHRZ Option B-3
- Development Zone Option 4.

210.2. The application shall then be granted an Assent only if the Council finds that the following six criteria are met:

- (a) The proposed alteration conforms with applicable goals and policies in Parts Two and Three of the Coastal Resources Management Program.
- (b) The proposed alteration will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts.
- (c) Due to conditions at the site in question, the applicable standard cannot be met.
- (d) The modification requested by the applicant is the minimum variance to the applicable standard necessary to allow a reasonable alteration or use of the site.
- (e) The requested variance to the applicable standard is not due to any prior action of the applicant's predecessors in title.
- (f) Due to the conditions of the site in question, the standard will cause the applicant an undue hardship. In order to receive relief from an undue hardship an applicant must demonstrate *inter alia* the nature of the hardship and that the hardship is shown to be unique or particular to the site. Mere economic diminution, economic advantage, or inconvenience does not constitute a showing of undue hardship that will support the granting of a variance.

210.3. Relief from a standard does not remove the applicant's responsibility to comply with all other Program requirements.

210.4. Prior to requesting approval for a CRMC variance, in those instances where a variance would be obviated if a variance for a setback were acquired from the local municipality, the applicant must first exhaust his remedies before the local municipality.

## **220. Brownfield Redevelopment within the Metro Bay Region**

### 220.1. Urban Coastal Greenway Policies on Brownfields

- (a) RIDEM-designated brownfield sites shall receive additional consideration with regard to UCG requirements.
- (b) Brownfield sites pose unusual economic constraints, given the common need for remediation that may result in significant expense to the developer. The Council encourages thoughtful redevelopment of these contaminated sites, and believes that it is possible to proceed with such redevelopment in a manner that improves the natural environment while allowing for the fiscal realities of such an endeavor.
- (c) It is therefore the policy of the RICRMC to require the maximum UCG width practicable within brownfield sites while allowing for flexibility in the implementation of the UCG on these sites, based upon the applicant meeting the criteria defined above for vegetation targets, stormwater treatment and public access. See the *Urban Coastal Greenway Design Manual* (in preparation) for recommended approaches to stormwater treatment and habitat improvement in brownfield sites.

### 220.2. Urban Coastal Greenway Standards on Brownfields

- (a) Brownfield sites shall adhere to the Urban Coastal Greenway standards and policies regarding setbacks, view corridors, and public safety as stated in this document, to the maximum extent practicable. At no time shall the UCG width be less than the minimum width specified for the applicable zone.
- (b) All development proposals for brownfield sites within RICRMC's jurisdiction shall require a pre-application meeting including the applicant, his/her planning and design staff, and representatives of the RICRMC, the Rhode Island Department of Environmental Management (RIDEM) Offices of Waste Management and Water Resources, and the municipality of jurisdiction. This meeting shall take place after RIDEM has notified RICRMC that the review of the investigation is complete. It is intended that this pre-application meeting be the first step in the remedial design process after a brownfield development proposal has been submitted, and is further intended to streamline the multi-agency regulatory process for proposed developments on these sites. Agency (RICRMC and RIDEM) and municipal representatives at this pre-application meeting will consider the applicant's proposed designs to ensure that the proposal satisfies RICRMC's Urban Coastal Greenway requirements, the RIDEM's brownfield and stormwater requirements, and the municipality's zoning ordinances.

- (c) An applicant may request of RIDEM, that a proposal that satisfies the requirements of the Urban Coastal Greenway policy be used to offset some or all of the State's Natural Resource Damage Claims at the site (including claims for additional assessment).
  
- (d) Under circumstances at a brownfield site where it is desirable to limit infiltration, traditional stormwater infiltration techniques shall not be used in the Urban Coastal Greenway. The goal of total on-site stormwater treatment will still apply on brownfield sites, although the constraints of each site will be taken into consideration during the application process. Applicants are therefore encouraged to utilize vegetative stormwater management techniques such as green roofs and rain gardens with shallow-rooting plants, as well as alternative landscaping/land shaping (i.e. raised planting beds) to allow for the maximum possible on-site treatment of stormwater. Refer to the *Urban Coastal Greenway Design Manual* (in preparation) for descriptions of recommended alternatives and reference sources for additional technical information regarding the implementation of those alternatives. These alternative stormwater abatement techniques shall protect the integrity of the containment cap/structure and be approved by the RICRMC and the RIDEM.

## 230. Compensation Options for Urban Coastal Greenway Requirements

Compensation is required whenever an applicant reduces an Urban Coastal Greenway from the **standard UCG width** for the applicable zone, or requests a variance under the UCG Regulations. In addition, the applicant must still meet the general UCG requirements regarding shoreline features, vegetation targets, public access, and minimum width (as listed in UCG Sections 150.3 to 150.8). Similarly, the 15% vegetation requirement and the 100% on-site stormwater management requirements for the development sites must be met (UCG Section 150.1), regardless of whether or not compensation options are utilized.

The compensation requirements are intended to accommodate a continuous Urban Coastal Greenway around the urban coastline of Narragansett Bay, as articulated in UCG Section 270. Compensation options for a reduced UCG width may include:

### 230.1. Metro Bay Regional Habitat Fund

- (a) In no case shall the Urban Coastal Greenway width be less than the minimum width defined within the applicable zone. When compensation is required, the applicant shall pay a fee into the Metro Bay Regional Habitat Fund via the Rhode Island Coastal and Estuarine Habitat Restoration Trust Fund. In order to calculate this fee, the RICRMC shall establish the representative waterfront value per acre for each Metro Bay Region municipality based upon professional appraisals of representative coastal parcels within each municipality. These values will be reassessed by the RICRMC every two years. The representative waterfront value will be multiplied by 20% to obtain the final dollar amount that shall be levied per square foot of UCG lost in a given municipality.

For example: An applicant seeks a permit to construct a multi-use development on a site with 200 feet of coastal frontage. The site is within a Development Zone, and therefore the standard 100 foot Urban Coastal Greenway is applied in this case. Due to spatial constraints within the property, the applicant chooses the Compact UCG width of 50 feet. Assume that the representative waterfront value within the municipality of jurisdiction is \$1,000,000 per acre. The fee would therefore be calculated as follows:

<b>Representative Waterfront Value</b>	=	<b>\$1,000,000/acre</b>
<b>Proposed Decrease in UCG Area</b>	=	<b>(200 feet * 50 feet)</b>
	=	<b>10,000 square feet</b>
<b>Step 1: (\$1,000,000/acre)*20%</b>	=	<b>\$200,000/acre of UCG value.</b>
	=	<b>\$4.59/square foot UCG lost.</b>
<b>Step 2: (\$4.59/sq. ft.)*(10,000 sq. ft.)</b>	=	<b>\$45,900.</b>

Thus, the applicant would have to pay \$45,900 into the Metro Bay Regional Habitat Fund by choosing the Compact UCG width (50 ft.) on the proposed development.

(b) Compensation fees paid to the Rhode Island Coastal and Estuarine Habitat Restoration Trust Fund must specify that the funds shall only be used for coastal habitat conservation and/or habitat restoration of a designated HPCA or HPRA (see Appendix 4) within the Metro Bay Region, and as close to the development site as possible. The CRMC shall prioritize the use of these funds for conservation or restoration based upon four factors:

1. Habitat quality ranking (where a ranking of “C4” or “R3” denotes highest conservation or restoration priority and “C1” or “R1” denotes lowest priority, as described in UCG Appendix 3);
2. Location within the same municipality and proximity to the development site;
3. High Priority Conservation Areas (HPCAs) within Area of Particular Concern Zones shall have priority over HPCAs within other Urban Coastal Greenway Zones; and
4. Presence of a suitable HPCA. Restoration activities for High Priority Restoration Areas shall only be funded through this program if the CRMC determines that a suitable HPCA is not available. In the case where no suitable HPCA is available, habitat restoration of HPRA shall be prioritized in the same manner described above for HPCAs.

#### 230.2. Possible Compensation Measures

At the discretion of RICRMC, an applicant may use one or a combination of the following measures to compensate for a reduction in the required UCG width. The compensation measures shall be equal in value to the fee that would otherwise be contributed to the Metro Bay Regional Habitat Fund.

- (a) Creation of **non-stormwater management wetlands**, e.g. salt marsh. The mitigation via non-stormwater management wetlands shall be on-site or adjacent to the development wherever possible, or in other areas within the Metro Bay SAMP boundary, as deemed appropriate in consultation with the RICRMC. The RICRMC will endeavor to pre-identify areas for these non-stormwater management wetlands projects.
- (b) Restoration of an existing degraded wetland. The mitigation via restoration of degraded wetlands shall be on-site or adjacent to the development wherever possible, or in other areas within the Metro Bay SAMP boundary, as deemed appropriate in consultation with the RICRMC. The RICRMC will endeavor to pre-identify areas for these wetland restoration projects.

- (c) Increase opportunities for public recreational use of coastal waters on the development site. This could be accomplished through the construction of a public canoe or kayak rack along the shoreline, accessible from the secondary public access pathway on the site. This option does not include construction of marinas.
- (d) Increase amenities for public access pathways within the UCG. This might include enhancement of the pathway through the placement of benches, lookout points, bicycle paths, fishing piers or platforms, fish cleaning facilities, or interpretive signage.
- (e) Purchase of land to establish UCG connections within the Metro Bay SAMP boundary. This may be accomplished through direct purchase of land or through conservation easements, with the intent of establishing continuous public access throughout the Metro Bay Region.
- (f) Extension of UCG width (beyond requirements) within Area Particular Concern Zone parcels.

### 230.3 Coastal Greenway Credits

- (a) Parcels in an Area of Particular Concern (APC), as described in UCG Section 170 and depicted in Figure 2, will be eligible to obtain **Coastal Greenway Credits** (CGCs). Applicants must meet the standard buffer width and construction setback requirements, described in UCG Section 170.3, to obtain a CGC. The RICRMC shall allocate CGCs once an Urban Coastal Greenway easement has been recorded in the land evidence records of the appropriate municipality, and also with the Homeowner's Association, where appropriate. The number of CGCs to be allotted will be determined by the parcel's Habitat Quality Ranking, as described in Appendix 3 and graphically depicted in Appendix 4. The allocation rate is:
  1. Habitat Quality Ranking 4 (C4) = 4 Credits.
  2. Habitat Quality Ranking 3 (C3) = 3 Credits.
  3. Habitat Quality Ranking 2 (C2) = 2 Credits.
  4. Habitat Quality Ranking 1 (C1) = 1 Credit.
- (b) Once the RICRMC has issued a CGC(s) to an applicant in an APC, that applicant may then sell his/her CGC(s) to a project applicant in a UCG Development Zone on a priority basis. Development Zones are depicted in the Urban Coastal Greenway Zone Map (Figure 2). An applicant within a Development Zone may only purchase one (1) CGC per parcel as acceptable compensation, where the parcel cannot satisfy the required buffer width. Parcels in Development Zones will have priority to purchase Coastal Greenway Credits as follows:



1. Parcels that abut the shoreline have first priority.
  2. Priority will decrease the further inland a parcel is from the shoreline.
- (c) CGCs will not be valued independently. The value of CGCs will depend on current market demands. The purchase price of a CGC (as agreed to by the **CGC seller** and the **CGC buyer**) shall be applied to the cost of compensation on a development site, as determined in UCG Section 230.1.
- (d) Any applicant who chooses the CGC option must comply with UCG Sections 150, 190, 200, 210, 220, 240, 250, and 260 on the development site.
- (e) Public access shall be provided within the APC site that has sold Coastal Greenway Credits.
- (f) The CGC program does not apply to coastal wetlands.

## **240. Urban Coastal Greenway Management and Maintenance Requirements**

240.1. The Owner of Record of a property with an existing or planned Urban Coastal Greenway is responsible for maintaining the UCG in accordance with the operative RICRMC Assent, unless the UCG is transferred to another agent (i.e., the municipality, a land trust, etc.) with that agent's agreement to provide maintenance. The Council shall be the beneficiary of any Urban Coastal Greenway easements, and all easements shall be placed in the land evidence records of the municipality of jurisdiction.

240.2. All alterations within established Urban Coastal Greenways or alterations to natural vegetation (i.e. areas not presently maintained in a landscaped condition as of the effective date of this policy) within the Council's jurisdiction may be required to submit an Urban Coastal Greenway Management Plan for the Council's approval that is in compliance with the requirements of this section and the Council's most recent edition of the *Urban Coastal Greenway Design Manual* (in preparation). Urban Coastal Greenway Management Plans shall include a description of all proposed alterations and methods of avoiding problem areas such as the proper placement and maintenance of pathways. Applicants should consult the Council's most recent edition of *Urban Coastal Greenway Design Manual* (in preparation) when preparing an Urban Coastal Greenway Management Plan.

240.3. No encroachments shall be allowed within the UCG at any time.

240.4. Penalties. Failure to adhere to these policies will result in enforcement action including fines, liens, restoration, and/or voiding of the Council Assent.

## **250. Education**

250.1. It is the policy of the RICRMC to encourage the education of landscape design and maintenance professionals as well as engineers, architects and the general public regarding the appropriate design, implementation, and maintenance of Urban Coastal Greenways.

250.2. This education may proceed through the use of demonstration projects to show the varied approaches toward Urban Coastal Greenway design, including ground shaping, Low Impact Development, the use of native plant communities and sustainable landscapes to create attractive habitat, and innovative pollution abatement technologies.

250.3. This education should also incorporate training for citizens, landscape design and maintenance professionals, engineers, and architects regarding the maintenance of Urban Coastal Greenways, as well as the proper use of fertilizers, pesticides, plant types, and surfacing materials.

250.4. The education program should include training programs that provide landowners, developers, local officials and contractors with the fundamentals and principles of how structural shoreline support can be designed and constructed to enhance the aesthetic and habitat values of a development, while providing the necessary protection from storm surge and/or flooding. Any such training program should also specify the proper methods for monitoring and maintaining structural shoreline support.

## **260. Maintenance and Monitoring of Innovative Technologies**

260.1. Prior to installation of any experimental stormwater treatment practice, a CRMC-approved monitoring plan is required that details methods, timing, attributes to be assessed, and acceptable values of monitored attributes.

260.2. The RICRMC encourages the use of effective, innovative techniques to achieve runoff reduction, pollutant abatement, and hazard mitigation. Accordingly, experimental technologies to achieve these goals may be implemented within the Urban Coastal Greenway, at the discretion of the Council.

260.3. If the required monitoring demonstrates that acceptable values of the monitored attributes are not achieved, retrofit or repair must commence immediately. Provisions shall be made on the development site and discussed within the approved monitoring plan to insure that a proven treatment practice can be accommodated and inserted on-site if an innovative technology fails.

260.4. It will be the responsibility of the property owner (or the appropriate surrogate, such as a homeowners' association) to monitor the effectiveness of these experimental technologies on a regular basis, as approved by the RICRMC. The property owner, or their agent, is required to report to the Council on the success or failure of any experimental efforts in an annual report to be delivered by December 31<sup>st</sup> of each year after the technology was installed for a period of five years for non-structural measures/technologies and for ten years for structural measures or technologies and more often following weather related events that would test the design limits of such measures/technologies (such as those events classified as hurricanes, and 50 and 100 year storm events).

## 270. Findings of Fact Regarding Urban Coastal Greenways and Coastal Vegetative Buffers.

1. The establishment of Urban Coastal Greenways is based upon the RICRMC's legislative mandate under state and federal legislation to preserve, protect, develop, and, where possible, restore ecological systems.

2. **Vegetative buffer zones** have been applied as best management practices since the 1950s, to counteract erosion and nutrient inputs (due to agriculture and forestry) from adjacent land areas (Desbonnet et al., 1993). More recently, vegetated buffer zones have become common best management practices for the control and abatement of nonpoint source pollutants (contaminated runoff) (Desbonnet et al., 1993; NAS, 2002).

3. Urban parks have been used since the mid- 19<sup>th</sup> century to incorporate the ecological and aesthetic benefits of natural vegetation within urban space limitations, although the term "greenway" did not become popular until the 1970s (New England Greenway). In fact, the nation's first state greenway map was created in Rhode Island, in 1996 (RI Greenways Council, 2000).

4. Vegetative buffer zones and urban greenways provide multiple uses and multiple benefits to those areas where they are applied (Desbonnet et al., 1993; RI Greenspace & Greenways Plan, 1994). These vegetated zones provide more biologically important functions than uplands, in proportion to their area within a watershed (NAS, 2002). In the context of the Metro Bay Region, Urban Coastal Greenways can serve as vegetated buffer zones for an urbanized landscape. The multiple uses and benefits of these Urban Coastal Greenways include:

(a) *Protection of Water Quality:* Urban Coastal Greenways along the perimeter of coastal water bodies can be effective in trapping sediments and pollutants, and absorbing nutrients (particularly nitrogen) from surface water runoff and groundwater flow. The effectiveness of Greenways as a best management practice for the control of nonpoint source runoff is dependent upon their ability to reduce the velocity of runoff flow to allow for the deposition of sediment, and the filtration and biological removal of nutrients within the vegetated area. Vegetated buffer zones often intercept groundwater and provide a carbon-rich environment that allows for microbial removal and transformation of soluble nutrients contained in groundwater. The increased travel time of groundwater through the Greenway also provides a mechanism for the filtering and mortality of bacteria and pathogens before they reach the receiving waters. In general, the effectiveness of any Greenway is related to its width, slope, soil type, and species of vegetation, as well as upland land use intensity. Effective vegetative buffer zones for nonpoint source pollution control, which trap sediment and remove nutrients entering them, range from 15 feet to 600 feet in width (Desbonnet et al., 1994).

Urban areas tend to input large quantities of nonpoint source pollution into coastal aquatic ecosystems. This is due in large part to the increase in impervious surfaces,

and the resultant increase in surface (overland) water flow. This overland flow travels at much greater speeds than surface flow across unpaved natural surfaces in a coastal ecosystem, leading to problems such as increased erosion and decreased control of nonpoint source pollutants. The establishment and protection of UCGs within these coastal urban areas will create a vegetated buffer between the sources that generate pollution and the coastal waterway.

- (b) *Protection of Urban Coastal Habitat:* Urban Coastal Greenways can provide crucial habitat for native plants and animals. Vegetation within a UCG provides cover from predation and weather, and habitat for nesting and feeding by resident and migratory species. Narragansett Bay comprises part of the Atlantic flyway for migratory songbirds (Olsen et al., 1980), as it contains coastal habitats critical to these species during their migrations (Parrish, 2000). Expanded Urban Greenways in the Metro Bay Region could significantly improve habitat quality for these species. In addition, some animals that use coastal vegetative buffer zones are now relatively uncommon, while others may be considered rare, threatened, or endangered. The relative paucity of vegetated corridors in coastal urban areas is a direct threat to the conservation of these species, and these native plants and animals are essential to the preservation of Rhode Island's valuable coastal ecosystems.

The ability of Greenways to function as wildlife habitat is dependent upon Greenway width and vegetation type. In general, a wider Greenway composed of a diverse native plant community will have greater value as wildlife habitat. Larger widths ( $\geq 300$  feet) are typically needed for species that are more sensitive to disturbances. A diverse community of sustainable plant species and types (e.g. grasses, shrubs, and trees) can lead to improved habitat quality within the Greenway, and benefit native wildlife species throughout the region. The effectiveness of Greenways may be inhibited by the planting or encroachment of invasive and non-sustainable species (NAS, 2002). Greenways composed of sustainable vegetation allow for the natural functioning of the ecosystem and provide valuable habitat for resident and migrant species of wildlife.

- (c) *Protection of Scenic and Aesthetic Quality:* One of the primary goals of the Council, in accordance with RICRMP Section 330, is to protect and restore the scenic value of the coastal region in order to retain the visual diversity and unique visual character of the Rhode Island coast as seen by hundreds of thousands of residents and tourists each year (RICRMP Section 330). Urban Coastal Greenways enhance and protect Rhode Island's scenic and visual aesthetic resources along our urban coastlines. Urban Coastal Greenways also preserve the natural character of the urban shoreline, while mitigating the visual impacts of coastal development. Visual diversity provides both contrast and relief between the coastal and inland regions, leading to greater aesthetic value of the landscape. Finally, Greenways provide an aesthetically pleasing view from the rivers and Narragansett Bay, as well as from the shorelines across from the Greenway.

- (d) *Erosion Control:* Urban Coastal Greenways can provide a natural transition zone between open water, shoreline features, and upland development. Natural vegetation within a Greenway helps to stabilize the soil, reduces the velocity of surface water runoff, reduces erosion of the soil by spreading runoff water over a wider area, and promotes absorption and infiltration.
- (e) *Flood Control:* Urban Coastal Greenways often occupy the flood plain and thus add to coastal flood protection in urban areas. Cities in the Metro Bay Region have experienced street and basement flooding during large storms, partially due to the loss of **coastal wetlands** that resulted from past filling of tidelands. Accordingly, the municipalities have recognized in their Hazard Mitigation Plans that (1) the flooding from these storms can cause the flow of contaminated runoff into Narragansett Bay and its tributaries and (2) better flood protection can be achieved through the management of open space in the floodplain.
- (f) *Protection of Historic and Archaeological Resources:* Many sites of archaeological importance are contained within the 200-foot jurisdiction of the RICRMC. Urban Coastal Greenways protect areas of cultural and historic importance (such as archaeological sites) by helping prevent intrusion and/or alteration while protecting the sites' natural surroundings. Much of this region was the hub of a thriving port during the period of the 18<sup>th</sup>, 19<sup>th</sup>, and early 20<sup>th</sup> centuries. Extensive shoreline areas and coastal resources have been heavily altered, former tidal lands have been filled, and river courses have been relocated. The once natural shoreline along most of this area has now been changed to revetments and bulkheads, although some high quality habitat areas remain.
- (g) *Public Access:* Urban Coastal Greenways are a means of maximizing usable open space to provide opportunities for passive recreation and community gathering, and can be designed to ensure the accessibility of the shoreline for all Rhode Islanders. An open connection to the coast is especially important in the Metro Bay Region due to the limited recreational opportunities along the shoreline in this highly urbanized area. Furthermore, public access provides one of relatively few opportunities for residents of these heavily developed areas to experience and enjoy the outdoors in their natural state. The recreational opportunities in Urban Coastal Greenways include walking trails and bike paths (RI Greenspace & Greenways Plan, 1994). Greenways also address equitability concerns in urban areas, as many residents in the Metro Bay Region are often unable to travel outside of the city to the shorelines of southern Rhode Island.
- (h) *Economic Value:* Greenways provide many economic benefits (NPS, 1995), including increased tourism opportunities. Programs such as the East Coast Greenway, whose goal is to connect the entire Atlantic coast of the United States by a greenway that includes trails for biking and walking (East Coast Greenways, 2005), benefit the tourism industry in an accessible, environmentally friendly manner. Furthermore, the economic value of developed properties abutting forests and vegetative buffers is

increased due to the improved water quality and aesthetics of these green spaces (Palone & Todd, 1998; Schueler, 1995).

5. The goals of the CRMC with respect to the establishment of Urban Coastal Greenways are in accordance with numerous Rhode Island state agreements and municipal visions (e.g., Pawtucket Hazard Mitigation Plan, East Providence Special Waterfront Development District Plan, Rhode Island Greenspace and Greenways Plan, and John H. Chafee Blackstone River Valley National Heritage Corridor). The Metro Bay Region municipalities have also acknowledged the benefits of open space with regard to flood protection, minimization of development in floodprone areas, habitat, and public recreation (East Providence Hazard Mitigation Plan, 2002; Pawtucket Hazard Mitigation Plan, 1998; Providence Hazard Mitigation Plan, 2000). The successful implementation and management of a continuous Urban Coastal Greenway along the urban coast of Narragansett Bay will preserve Rhode Island's natural, historic, recreational, and cultural values, and will continue Rhode Island's role as an innovator in coastal management.

#### 6. Need for an Alternative Urban Buffer Policy

Sections 140 and 150 of the RICRMP establish setbacks and coastal buffers that apply to all Rhode Island shorelines. However, as described in UCG Section 120 and these findings, the RICRMC recognized the need for a more flexible approach in its coastal vegetative buffer requirements for urban development. These new urban buffer regulations mitigate for factors that result from the large-scale redevelopment that is anticipated along the Metro Bay Region shoreline, but also allow for economic development. These factors include, but are not limited to: the degradation of Narragansett Bay and its tributaries by stormwater runoff; the potential loss of unique coastal habitats, and the absence of public access along and to the Metro Bay Region shoreline.



## **280. Definitions**

280.1. The “Capital Center District” area, as established in the City of Providence Code of Ordinances, encompasses the area generally bounded by the Woonasquatucket and Moshassuck Rivers.

280.2. A “Shoreline or Coastal Feature” is a natural or artificially constructed physical feature of the shoreline, as defined in Section 210 of the Rhode Island Coastal Resources Management Program (RICRMP).

280.3. A “Coastal Buffer Zone” is a regulatory feature that requires a naturally vegetated area that must be retained in a natural, undisturbed condition, or properly managed in accordance with the standards contained in Section 150 of the RICRMP. In cases where native vegetation does not exist within a buffer zone, the Council may require restoration efforts which include, but are not limited to, replanting the Coastal Buffer Zone with native plant species.

280.4. A “Coastal Greenway Credit” may be purchased as a form of compensation to reduce the width of an Urban Coastal Greenway on a development site in the Metro Bay Special Area Management Plan boundary. The value of Coastal Greenway Credits (CGCs) shall be determined by negotiations between the CGC Seller and the CGC Buyer.

280.5. A “Coastal Greenway Credit Buyer” seeks to compensate for a reduction in Urban Coastal Greenway width by purchasing a Coastal Greenway Credit (CGC) from a CGC Seller.

280.6. A “Coastal Greenway Credit Seller” is the owner of a designated High Priority Conservation Area within an Area of Particular Concern Zone. The CGC Seller may obtain Coastal Greenway Credits for his/her property. The Seller may then sell these credits to a CGC Buyer at market value.

280.7. “Coastal Wetlands” include salt marshes and freshwater or brackish wetlands contiguous to salt marshes or physiographical features. Areas of open water within coastal wetlands are considered a part of the wetland. In addition, coastal wetlands also include freshwater and/or brackish wetlands that are directly associated with non-tidal coastal ponds and freshwater or brackish wetlands that occur on a barrier beach or are separated from tidal waters by a barrier beach.

280.8. “Compensation” is required when an applicant wishes to reduce the width of an Urban Coastal Greenway below the standard width for the applicable UCG Zone. Any reduction in UCG width below that standard requires compensation for the lost Urban Coastal Greenway area, as described in UCG Section 230.

280.9. A “Construction Setback” establishes a minimum distance between a shoreline feature, buffer zone, or Urban Coastal Greenway and construction activities.

280.10. The “Council” and “RICRMC” both refer to the Rhode Island Coastal Resources Management Council.

280.11. For the purposes of the Urban Coastal Greenway requirements, “development” refers to the construction of new commercial, industrial, or residential structures as defined in RICRMP Section 300.3. This also includes structures accommodating a mix of uses within a single development, building, or tract, as allowed by a municipality. Other activities subject to RICRMC jurisdiction may be contained within the RICRMP definition of “development.”

280.12. “High Priority Conservation Areas” (HPCAs) are those areas identified by the RICRMC as parcels or areas within the Metro Bay Region that should be preserved for their habitat value.

280.13. “High Priority Restoration Areas” (HPRAs) are those areas identified by the RICRMC as parcels within the Metro Bay Region that should be restored for their habitat value.

280.14. “Mitigation”, as described in UCG Section 200, is required whenever an applicant chooses not to include public access within a development or redevelopment project that triggers the Urban Coastal Greenway Regulations. Mitigation is not equivalent to “compensation”, and therefore it is possible that both mitigation and compensation could be required within a single project.

280.15. The “Landward Edge” is that boundary of a coastal feature, Urban Coastal Greenway zone, or development site that faces toward the upland area.

280.16. “Low Impact Development” (LID) refers to planning and engineering techniques for stormwater management that emphasize conservation and the use of vegetative features to meet water quality goals (see UCG Section 150.6(a) for specific LID techniques).

280.17. For the purposes of the Urban Coastal Greenways policy, a “Managed Landscape” shall be considered a vegetated area within a buffer zone or Urban Coastal Greenway where limited landscaping practices are allowed. These practices may include the removal of non-native invasive plants, restorative plantings of native and sustainable plant species and the pruning, trimming, and selective cutting of vegetation designed to manage habitat, maintain scenic view-sheds, and preserve shoreline access. Managed landscapes should also provide for infiltration of stormwater and the minimization of erosion. Activities *not allowed* in managed landscapes include:

- (a) clear-cutting of vegetation (except as part of an RICRMC-approved habitat restoration or public access plan),

- (b) the establishment of lawns (except in areas designated for public access and recreation),
- (c) the application of fertilizers, herbicides and pesticides (except as specifically allowed by an RICRMC-approved managed landscape plan),
- (d) and any other activities which the RICRMC determines are incompatible with the functions and values of buffer zones and established Urban Coastal Greenways.

280.18. The “Metro Narragansett Bay Region”, or “Metro Bay Region”, is the northern region of Narragansett Bay, encompassed within the boundaries of the Metro Bay Special Area Management Plan (SAMP). The SAMP boundary stretches north from the southern tip of Pawtuxet Neck in Cranston to Main Street in Pawtucket, then around the bay to the East Providence Water Pollution Control Facility at Crest Avenue. The boundary also includes the Woonasquatucket River tidal portion to Atwells Avenue and the Moshassuck River to Orms Street. The municipalities contained within the Metro Bay Region are Pawtucket, East Providence, Providence, and Cranston.

280.19. “Multi-Residential Development” refers to any residential development intended to house three or more families.

280.20. “Native, Non-Invasive Vegetation” refers to those species that grew naturally (outside of cultivation) in this region prior to European colonization (URI Cooperative Extension, 1999) and do not grow so rapidly that they become difficult to maintain. Native species are well acclimated for local climatic and soil conditions, and often require less frequent replacement and maintenance than non-native species. Native vegetation also provides habitat for wildlife species that depend upon native plant communities for all or part of their life cycle. An assemblage of native non-invasive plants is referred to as a “Native Plant Community”.

280.21. “Non-stormwater management wetlands” are those wetlands that provide the recognized functions and values of natural wetlands systems, rather than wetlands designed specifically for a stormwater treatment function. These natural wetlands functions and values include:

- (a) wildlife and food web support;
- (b) wildlife habitat;
- (c) water quality enhancement;
- (d) recreation;
- (e) aesthetics; and
- (f) shoreline anchoring.

280.22. A “Primary Public Access Path” provides linear public access along the length of the shoreline, as part of an Urban Coastal Greenway.

280.23. “Public Roads” must be existing, usable public thoroughways. This does not include streets that have been planned, but not yet constructed.

280.24. “Redevelopment” refers to any alteration or reconstruction of existing commercial, industrial, or residential structure.

280.25. “RICRMP” refers to the Rhode Island Coastal Resources Management Program (or “Redbook”), as amended.

280.26. A “Secondary Public Access Path” provides arterial, or perpendicular, public access to a coastal feature, as part of an Urban Coastal Greenway.

280.27. The “Shoreward Edge” is that boundary of a coastal feature, Coastal Buffer Zone, Urban Coastal Greenway Zone, or development site that faces away from the upland area.

280.28. The “Standard Urban Coastal Greenway Width” is the maximum Urban Coastal Greenway width required for a project. The standard width varies by UCG Zone.

280.29. “Structural Lot Coverage” is that portion of the lot that is or may be covered by buildings and/or accessory buildings.

280.30. “Sustainable Vegetation” refers to non-invasive native plants, as described above, as well as other (non-native) non-invasive plants that require low inputs of pesticides, fertilizers, water, and maintenance. Refer to the *Urban Coastal Greenway Design Manual* for a list of appropriate plantings. An assemblage of sustainable plants is referred to as a “Sustainable Landscape”.

280.31. An “Urban Coastal Greenway” is a land area within the Metro Bay Region that is adjacent to the coastal feature on a development site, and is established and managed to protect aquatic, wetland, shoreline, and terrestrial environments from human-induced disturbances and coastal flood hazards, while allowing for coastal economic development.

280.32. The “Urban Coastal Greenway Design Manual” is a reference guide that provides information regarding Urban Coastal Greenway design options and resources for additional information.

280.33. An “Urban Coastal Greenway Management Plan” is a CRMC-approved document that specifies the property owner’s required best management practices for Urban Coastal Greenway maintenance and management.

280.34. A “Vegetated Buffer Zone” is a land area that provides a vegetated transition zone composed of native plant communities and/or sustainable landscapes between a waterway and developed land. Native plant communities are often preferred in areas identified for wildlife habitat while sustainable landscapes often support recreation and water quality treatment in areas where wildlife habitat is not a priority. Site development strategies shall be discussed with the CRMC prior to site plan development.

280.35. “Water Quality Volume” refers to the quantity of water that must be captured for water quality treatment by a stormwater management system. The specific requirements for water quality volume are stated in the Rhode Island Stormwater Quality Manual.

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### 300. Appendices

#### Appendix 1. RICRMP Section 150 Table 2a. Coastal Buffer Zone Designations for the Residential Development Zone.

Lot Size (square feet)	Required buffer width (feet) for Development in Water Types 3, 4, 5, and 6.	Required Construction Setback (feet)
<10,000	15	25
10,000 – 20,000	25	25
20,001 – 40,000	50	25
40,001 – 60,000	75	25
60,001 – 80,000	100	25
80,001 – 200,000	125	25
Greater than 200,000	150	25

#### Appendix 2. Standard Coastal Buffer Width Requirements for Development Within the Metro Bay SAMP Boundary.

Lot Size (square feet)	Required buffer width (feet)
≤20,000	25
20,001 – 40,000	50
40,001 – 60,000	75
60,001 – 80,000	100
Greater than 80,000	150

#### Appendix 3. Habitat Quality Ranking Criteria for High Priority Conservation and Restoration Areas.

One of the phases of the Metro Bay SAMP development process was to evaluate and classify open land within the SAMP boundary that might be considered for future development or redevelopment. Assessments were made without regard to property boundaries; instead Dr. Mitchell looked at continuous blocks of habitat which may have contained more than one type of habitat. For example, one block might include a forest, a freshwater shrub swamp, and fringing salt marsh. The value of land as a biological community was the first consideration. Though many criteria could have been used to rank parcels of land, this analysis focused on the maturity and composition of the plant community as an index to habitat quality.



The following flowchart illustrates the ranking process for habitat quality. Please note that least valuable habitat has a rank of “1”, and more valuable habitats are indicated by successively higher numbers.

HABITAT VALUE	POOR $\longrightarrow$ GOOD						
VEGETATION CHARACTERISTICS	BARREN	<	ALL EXOTIC VEGETATION	<	MIXTURE OF EXOTIC AND NATIVE VEGETATION	<	MATURE NATIVE VEGETATION
RANKING	1	<	2	<	3	<	4

Supplementary information was also considered: 1) the habitat’s use by wildlife as observed during site visits or as previously noted by other biologists or naturalists, 2) the use by state or federally listed species (resident or migratory), and 3) the geographic relationship (linkage) of the parcels to other habitat, or recognized conservation and recreational lands as identified in the State Conservation and Recreational Openspace GIS data layer (Scorp90.shp). If the existing habitat quality on a parcel of land was poor, its potential to be restored and its importance if it were restored were considered. Good candidate restoration sites would include barren lots in the center of an otherwise high quality habitat corridor, sites that buffer important habitat, or sites that could eventually serve to lengthen a habitat corridor. Most restoration sites, however, contained the lowest quality habitat and were therefore the least important to conserve. In some cases isolated parcels were identified that were vegetated with exotic species or isolated from other sites. These sites, while ranking low in habitat quality, were important to residential communities for scenic or recreational purposes. A separate ranking category was created for these sites.

Habitat was evaluated and ranked at 237sites. Detailed field data were collected for 53 sites regarding species composition, dominant vegetation in the upper and understory, and estimated basal diameter of largest trees and/or dominant trees. An additional 63 sites were classified through “windshield surveys” that assessed species composition and maturity. Using 1997 and 2002 aerial orthophotos obtained from RIGIS, we classified habitat in the remaining 121sites by photo-interpretation based on the visual signatures established during site visits. Based on our findings we developed the following ranking system for undeveloped lands in the Metro Bay SAMP area:

**Conservation Zone**

- Sites with good habitat quality earmarked for conservation
- In most cases native species are dominant

Rank:

1. Vegetated with shrubby or small trees.
2. Maturing woods or woody fringe with most trees  $\leq 1$  ft diameter.
3. Mature system: woods with many trees  $> 1$  ft diameter, or emergent wetlands (salt marsh or fresh).
4. Exceptional example of mature ecosystem

### **Restoration Zones**

- Potential site for restoration
- In most vegetated areas exotic species are dominant

Rank:

1. Paved or barren – no vegetation
2. Partially vegetated with grass or shrubs
3. Completely, or almost completely, vegetated with grass, shrubs, or trees

### **Scenic or Recreation Zone**

- Significant unprotected lands
- Native or exotic vegetation

Rank:

1. Mowed grass, may have shrubs, beside highway – no safe access
2. Vegetated (green) patch in city neighborhood
3. Vital scenic or recreational value – contributes to character or identity of neighborhood

### **Linkage**

- Habitat and greenway linkage – examining connectivity of wildlife habitat corridors or scenic/recreation areas

Rank:

0. Isolated land
  1. Land within 100 ft of other identified links or the waterfront
  2. Land that meets at least one of the following criteria:
    - a. A “central link:” identified links separated by no more than 100 ft from two other links, or one link and the waterfront, or a link that has a perimeter more than  $\frac{1}{2}$  way surrounded by land identified as a link
    - b. A link within 100 ft of recognized conservation or recreational land (SCORP lands, private preserves, land trust holdings), a link within 100 ft.

of adjacent links that connect it to recognized conservation or recreational land

3. A central link (defined in 2a) that forms part of a habitat corridor or potential greenway containing recognized conservation or recreational lands

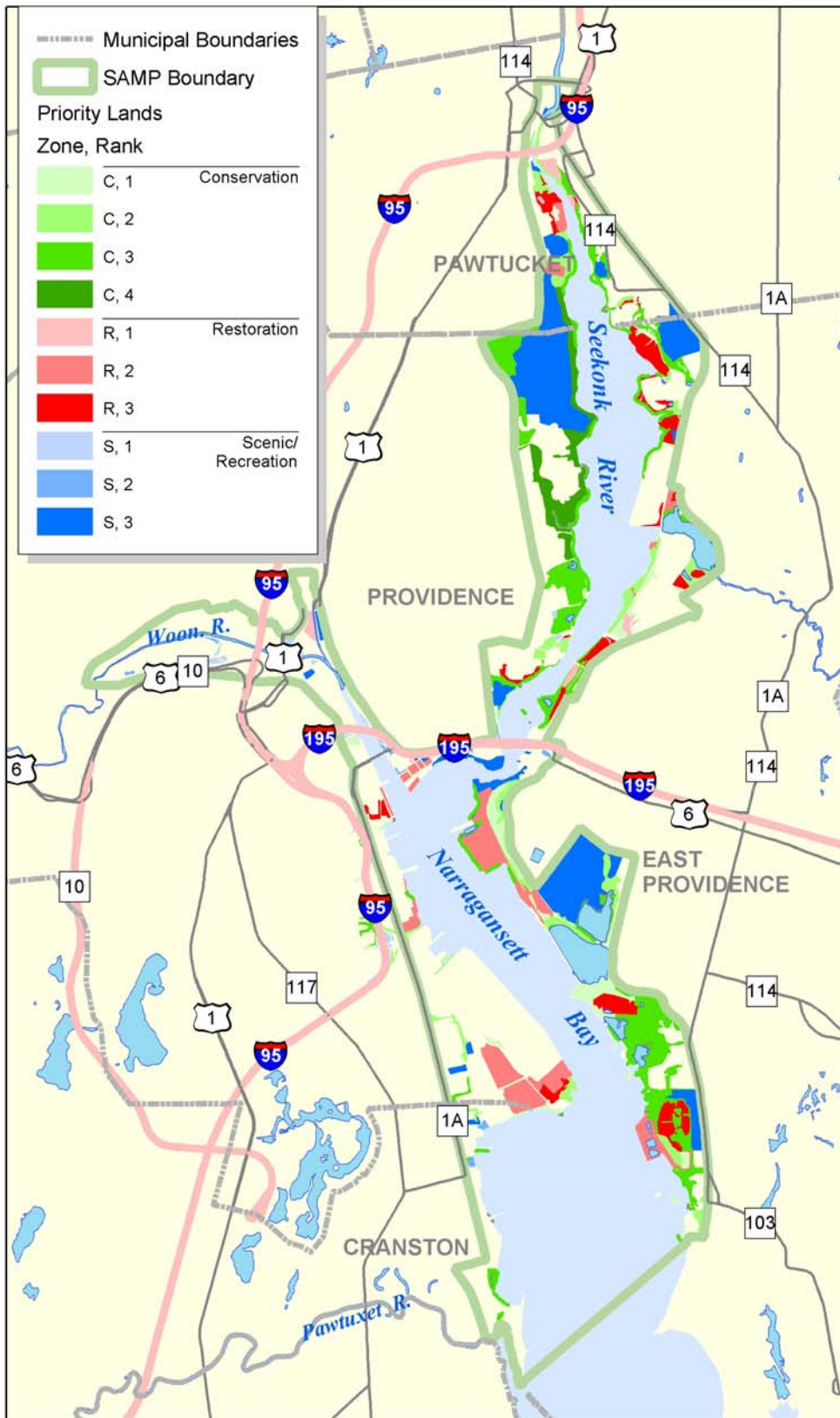
**Evaluation**

- Type of analysis at each site

Rank:

1. Photointerpretation (2003 and 1997 RIGIS orthophotos)
2. “Windshield survey” looking from outside in (1 and 2)
3. Site visit (1, 2, and 3)

**Appendix 4. Map of High Priority Conservation Areas (HPCAs) and High Priority Restoration Areas (HPRAs) in the Metro Bay Region.**



Priority Habitat Lands  
Zones prepared by  
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Map prepared by The  
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Additional layers provided  
by the Rhode Island  
Geographic Information  
System (RIGIS) and the  
Narragansett Bay Estuary  
Program.