

Land Use 2025

State Guide Plan Element 121
Report Number 109

Rhode Island State Land Use Policies and Plan

Rhode Island
Department of Administration
Division of Planning
Statewide Planning Program

April 2006



The Statewide Planning Program, Rhode Island Department of Administration, Division of Planning, is established by Chapter 42-11 of the *General Laws* as the central planning agency for state government. The work of the Program is guided by the State Planning Council, comprised of state, local, and public representatives and federal and other advisors.

The objectives of the Program are:

1. to prepare strategic and systems plans for the state;
2. to coordinate activities of the public and private sectors within this framework of policies and programs;
3. to assist local governments in management, finance, and planning; and
4. to advise the Governor and others concerned on physical, social, and economic topics.

Activities of the Program are supported by state appropriations and federal grants. The contents of this report reflect the views of the Statewide Planning Program, which is responsible for the accuracy of the facts and data presented herein. The contents do not necessarily reflect the official views or policies of other sponsoring agencies. This publication is based upon publicly supported research and may not be copyrighted. It may be reprinted, in part or full, with the customary crediting of the source.

This report, and its appendices, is available at www.planning.ri.gov. For more information contact the Division of Planning, One Capitol Hill, Providence, R.I. (401) 222-7901.

ABSTRACT

- Title:** Land Use 2025: Rhode Island State Land Use Policies and Plan
- Subject:** State plan, policies, objectives, and strategies for land use, conservation, and development
- Date:** April 13, 2006
- Agency:** Rhode Island Statewide Planning Program
- Source of Copies:** Rhode Island Department of Administration
Division of Planning
Statewide Planning Program
One Capitol Hill
Providence, Rhode Island 02908-5870
www.planning.ri.gov
- Series No.:** Report Number 109; State Guide Plan Element 121
- Number of Pages:** 154
- Abstract:** This document is the third Rhode Island State Land Use Policies and Plan and supersedes all previous versions. It sets forth a statewide plan, with goals, policies, objectives, and strategies, for land use, conservation, and development.
- The purpose of the plan is to guide future land use and development and to present State Guide Plan policies under which State and local land development activities will be reviewed for consistency.

ACKNOWLEDGEMENTS

State Planning Council

Kevin M. Flynn, *Rhode Island Department of Administration (Chair)*
Timothy M. Costa, *Governor's Office (Vice Chair)*
John P. O'Brien, *Chief, Statewide Planning (Secretary)*
Susan Baxter, *Housing Resources Commission*
Daniel Beardsley, *Rhode Island League of Cities and Towns*
Jeanne Boyle, *Rhode Island League of Cities and Towns*
James Capaldi, *Rhode Island Department of Transportation*
Stephen Cardi, *Public Member*
Thomas Deller, *City of Providence*
Joseph Newsome, *South Providence Development Corporation*
Anna Prager, *Public Member*
Janet White Raymond, *Public Member*
Peder Schafer, *Rhode Island Department of Administration*
William Sequino, *Public Member*
Michael Rauh, *Environmental Advocate*
Jared Rhodes, *City of Cranston*
John Trevor, *Environmental Advocate*
Lucy Garliauskas, *Federal Highway Administration (non-voting)*

Technical Committee

Kristine Stuart, *Public Member (Chair)*
Raymond Allen, *Rhode Island Public Utilities Commission*
Diane Feather, *Rhode Island American Planning Association*
William Haase, *Town of Westerly*
Janet Keller, *Rhode Island Department of Environmental Management*
Dennis Langley, *Urban League of Rhode Island*
Mark Adelman, *Governor's Office*
Patrick Malone, Ph.D., *Brown University*
Eugenia Marks, *Audubon Society of Rhode Island*
Howard Cohen, *Rhode Island Economic Development Corporation*
M. Paul Sams, *Public Member*
Diane Williamson, *Town of Bristol*
Walter Combs, Ph.D., *Rhode Island Department of Health*
Stephen Devine, *Rhode Island Department of Transportation*

Advisors to the Technical Committee

Susan Bodington, *Rhode Island Housing*
Roger Warren, *Rhode Island Builders Association*
Scott Wolf, *Grow Smart Rhode Island*

Division of Planning Staff

This plan is the product of several years of efforts by many individuals, organizations, and agencies. It is based upon a series of special projects, technical analyses, and plans concerning aspects of land use in Rhode Island. The Technical Committee of the State Planning Council served as the advisory committee to the staff during the last two years of the plan's preparation. The entire staff of Statewide Planning, over the past ten years, has contributed to aspects of this complex project. Support to the Technical Committee in preparation of the final land use plan was provided by:

Kevin M. Flynn, *Associate Director, Division of Planning*
John P. O'Brien, *Chief, Statewide Planning Program*
George W. Johnson, *Assistant Chief*
Blanche Higgins, *Supervising Planner*
Katherine Trapani, *Supervising Planner*
Bruce Vild, *Supervising Planner*
Nancy Hess, *Principal Environmental Planner*
Kevin J. Nelson, *Principal Planner*
Benny Bergantino, *Senior Planner*
Christina Delage Baza, *GIS Technician II*
Kim A. Gelfuso, *Information Services Technician II*

Photographs provided by:

Block Island aerial photo courtesy iStock photography. Providence sewage tunnel photo by Gilbane/Jacobs and courtesy The Narragansett Bay Commission. Other photos by Housing Network of Rhode Island, Puffin Enterprises, the RI Department of Environmental Management, the RI Department of Transportation, the RI Division of Planning/Statewide Planning Program, Rhode Island Sea Grant, Rhode Island Tourism Division, Sakonnet Vineyards, the planning departments of East Providence, Narragansett, Newport, Providence, Warwick, and Woonsocket.

State of Rhode Island and Providence Plantations

State House

Providence, Rhode Island 02903-1196

401-222-2080

Donald L. Carcieri
Governor

My Fellow Rhode Islanders:

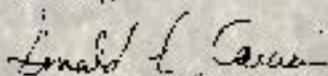
As a lifelong Rhode Islander, I have a deep appreciation for our state's natural heritage. From our beautiful beaches to our scenic parks, from our many historic sites to our farms and green open spaces, Rhode Island has a quality of life that is truly second to none. It is imperative that we work together to preserve our state's natural resources for future generations to enjoy.

That's why the State's Planning Council has adopted a comprehensive plan to better address statewide land-use planning throughout Rhode Island. Land Use 2025 is an important new State Guide Plan for conservation and development in Rhode Island for the next 20 years.

Managing land use is a complex issue that involves federal, state, and municipal regulations. It is crucial for elected officials and for all Rhode Islanders to take the necessary measures to ensure that the pattern of growth in our state does not diminish our quality of life. Land Use 2025 will serve as a blueprint for proper land development and enable us to meet the challenges before us.

I hope that you will find this plan to be a useful resource as we continue our ongoing efforts to grow smart.

Sincerely,



Donald L. Carcieri
Governor

PREFACE

Purpose

Land Use 2025: State Land Use Policies and Plan is the State of Rhode Island's plan for conservation and development in the 21st century. This plan challenges Rhode Islanders to work collectively to design, build, and conserve the State's communities and landscapes over the next twenty years and to ensure that they are of a caliber Rhode Island deserves.

Land Use 2025, as an official document, is the major connective State Guide Plan element in Rhode Island's planning and development system. The Plan articulates the State's over-arching goals, objectives, and strategies to guide and coordinate the land use plans and regulations of municipalities and State agencies and to direct good, strategic projects at both the State and municipal level.

This Plan's New Approach

Rhode Island's interconnected State and municipal planning system, in effect for more than a decade, provides the framework and process for this plan. The early 1990s were devoted to the creation and adoption of Community Comprehensive Plans in all 39 municipalities, followed by new zoning regulations and new ordinances for subdivisions and land development. In the past 18 months, 29 communities have adopted new affordable housing plans as part of this State-municipal system.

While many of Rhode Island's past plans have promoted shared concepts for statewide land conservation and community development – including the two previous State land use plans, dated 1975 and 1989 – much of the effort has revolved around process and policy consistency. With this Plan, the State Planning Council asserts a more prominent role in orchestrating statewide land use planning and promoting public investments in areas that can best accommodate growth.

The central premise of this Plan is that our current rate of land consumption is a major departure from our historic pattern of dense urban centers, *and is not sustainable in the long and short term*. It reflects the growing realization of the urgency for Rhode Island to plan, develop, and conserve more intelligently as our very small State adjusts to the pace of the dynamic Northeast urbanized corridor and its strategic position between the regional hubs of New York City and Boston. The Plan is intended to connect the planning visions and goals “to the ground” in Rhode Island communities, to upgrade the planning capacity of public officials and citizen planners, and to share land use information publicly through the best available technology.

Recognizing the complexity of the work and the naturally competing interests and jurisdictions, the Statewide Planning Program firmly believes the Plan's implementation must be through a cooperative effort. Cooperation and compromise in pursuit of shared

objectives is the only way we can protect Rhode Island's finite and precious physical resources. In doing so, we must direct growth to areas that are equipped to handle it, based on location and infrastructure.

This Plan hopes to inspire a new generation of Rhode Islanders to become strong stewards of the State's physical resources, both natural and built.

Major Concepts

Sustaining the Urban-Rural Distinction

The distinction between Rhode Island's historic urban centers and neighborhoods and their rural natural surrounding areas is still strong. It remains the most important feature of the State's land use pattern. *Land Use 2025* identifies an Urban Services Boundary, based upon a detailed land capability and suitability analysis that demonstrates the capacity of this area to accommodate future growth. The Plan directs the State and communities to concentrate growth inside the Urban Services Boundary and within locally designated centers in rural areas, and to pursue significantly different land use and development approaches for urban and rural areas. Achieving a sound policy for appropriate growth in urban areas will allow us to preserve more of our rural landscape. Growth and preservation thus become a single issue.

Statewide Systems of Greenspace, Community Design and Infrastructure

The plan promotes a regional approach through stronger, interconnected, statewide systems of greenspace and natural resources, public highways, and utility infrastructure. It advocates for a network of well-designed communities composed of centers of various sizes and types, neighborhoods, and special places.

Areas of Special Concern

Three categories of areas under high development pressure are identified as deserving of special scrutiny and priority assistance in land use planning and regulations. These focal areas – underutilized urban neighborhoods, highway interchanges, and the waterfront – are arguably the most valuable land use assets in Rhode Island and they are certain to be targets of increasing development pressures.

Land Capability and Suitability Analysis

A major research project supporting this Plan was a computer-based land capability analysis focused on the 37 percent of the State identified as undeveloped and unprotected in a 1995 Land Cover Analysis. The project studied areas for suitability for conservation and development, based on the location of key natural resources and public infrastructure. Results identified areas with future use potential, under three categories of development intensity and two categories of conservation. These data need to be continuously

reviewed so that the analysis and policies in this Plan remain relevant as conditions change.

Key Recommendations

Land Use 2025 establishes 25 objectives and over 90 strategies, under goals for Sustainability, Greenspace, Community Design, Infrastructure, and Implementation. Among the priority objectives:

- Sustain Rhode Island’s unique character through use of the Urban Services Boundary, rural centers, and holistic approaches to planning.
- Permanent Greenspace throughout the rural, urban, and waterfront areas.
- Development concentrated in well-designed centers, neighborhoods, and special places.
- A diverse and affordable housing stock.
- Public infrastructure maximized and coordinated with development.
- Reform of the property tax system in a manner that supports this plan.
- Excellent land use information and technology systems.

Plan Organization

The Plan document contains five major sections:

Where are we, and where are we going? Reports on existing land use conditions and trends, and provides an analysis of future land use needs.

Where do we want to be in twenty years? Contains the Plan’s vision statement, report on public outreach, goals, objectives, policies, and a future land use map.

What issues do we need to be concerned about in getting there? Summarizes major issues by topics, matching State Guide Plan elements with significant land use issues and required Comprehensive Community Plan elements – land use, housing, economic development, natural and cultural resources, facilities and services, open space and recreation, and transportation.

How do we get there? Identifies and summarizes land use needs for all major use categories. Presents findings of mapped land capability and suitability analysis, with priorities for development and conservation.

What must be done to achieve our vision? Describes use of the State Guide Plan and Community Comprehensive Plans. Contains plan implementation section, with objectives, strategies, interagency teams, and time frames.

In addition, there are four technical appendices: Public Input on Land Use Issues, Residential Land Needs, Land Needed for Economic Activities, and Geographic Analysis for Land Available and Suitable for Development. The appendices are not part of this publication but are available at www.planning.ri.gov.

TABLE OF CONTENTS

Abstract.....	i
Acknowledgements.....	ii
Preface.....	v
Table of Contents.....	ix
Part One: WHERE ARE WE, AND WHERE ARE WE GOING?	1-1
1-1 Where Are We?.....	1-1
Land Use Trends 1979-1995.....	1-2
Land Use Trends Since 1995	1-5
1-2 Where Are We Going?	1-7
Current Trend Scenario Map and Analysis	1-8
How the Trend Accommodates Future Needs	1-9
Part Two: WHERE DO WE WANT TO BE IN TWENTY YEARS?	2-1
2-1 The Vision.....	2-1
Gauging Public Perception of Land Use Objectives.....	2-2
Deriving a Land Use Vision for Rhode Island.....	2-2
An “Urban/Rural” Systems Approach.....	2-3
A Constellation of Centers.....	2-5
What Sets This Plan Apart From Earlier Versions?	2-5
2-2 Goals and Objectives	2-6
A Sustainable Rhode Island.....	2-6
The Greenspace System.....	2-6
Community Design	2-7
Infrastructure.....	2-7
Implementation	2-8
2-3 Land Use 2025 Policies	2-8
2-4 Future Land Use Patterns, Categories, and Intended Uses	2-13
Future Land Use 2025 Map	2-13
Growth Areas.....	2-16
Conservancy Areas	2-18
Committed Use Areas	2-19
Summary	2-20

Part Three: WHAT ISSUES DO WE NEED TO BE CONCERNED ABOUT IN GETTING THERE?	3-1
3-1 Land Use	3-1
Two Land Use Approaches Needed: Urban and Rural.....	3-2
Matching Development to Capacity of Resources.....	3-4
3-2 Housing	3-6
Local Regulations Discourage Higher Development Densities.....	3-8
A New Legislative Framework for Affordable Housing Production.....	3-11
How This Land Use Plan Supports State Housing Plans.....	3-13
3-3 Economic Development	3-13
Rehabilitating and Reusing Underutilized Buildings	3-15
The Shoreline Region	3-16
Transportation and Economic Development	3-16
Sensible Land Use Policies Support Economic Development	3-18
3-4 Natural and Cultural Resources	3-18
Agricultural Lands	3-18
Natural Habitats and Forests.....	3-19
Coastal Resources and Narragansett Bay	3-20
Wetlands	3-21
Surface Water and Groundwater.....	3-21
Cultural Resources	3-22
3-5 Services and Facilities	3-24
Water Infrastructure/Supply.....	3-25
Wastewater Infrastructure	3-26
3-6 Open Space and Recreation	3-27
The Desire and Need.....	3-28
Issues of Concern.....	3-28
3-7 Transportation	3-29
Mitigating Congestion	3-31
The Problem of Over-Development.....	3-31
Addressing Bicycle and Pedestrian Safety	3-32
Corridor Planning.....	3-33
Access Management	3-34
Context-Sensitive Solutions.....	3-34
Part Four: HOW DO WE GET THERE?	4-1
4-1 Introduction	4-1
4-2 Residential Land Needs	4-1
4-3 Land Needed for Economic Activities	4-3
4-4 Land Needed for Other Major Activities and Specialized Land Uses	4-4
Greenspace.....	4-5
Transportation	4-6

Institutional	4-6
4-5 Summary of Future Land Use Needs	4-6
4-6 What Are the Choices?	4-6
Data Sources Used in the Analysis	4-7
Land Availability Assessment	4-8
Land Suitability Analysis.....	4-9
Land Intensity Potential Classification	4-10
Summary Findings: Land Intensity Potential	4-12
4-7 Development/Conservation Prioritization	4-13
Development Priority Factors.....	4-13
4-8 Scenario Analysis: Assessing Alternative Patterns for Future Land Use	4-15
Scenario Planning	4-15
Scenario Analysis Performed for Land Use 2025.....	4-15
Description of Scenarios Evaluated.....	4-15
4-9 Evaluation of Scenarios	4-18
Analysis Results: Effective Accommodation of Future Needs.....	4-19
4-10 Scenario Selection	4-29
4-11 Comparing the Composite Scenario to Municipal Plans	4-29
 Part Five: WHAT MUST BE DONE TO ACHIEVE OUR VISION?	 5-1
5-1 The State Guide Plan	5-1
5-2 State Investments	5-2
5-2 Local Comprehensive Plans	5-2
5-4 Planning Capacity	5-5
5-5 Implementation	5-5

REFERENCES

References.....	R-1
-----------------	-----

APPENDICIES

The following Appendices can be found and downloaded as pdf file's on the Statewide Planning Program website at www.planning.ri.gov/landuse/polices.htm

Technical Appendix A: Public Input on Land Use Issues

Technical Appendix B: Residential Land Needs

Technical Appendix C: Land Needed for Economic Activities

Technical Appendix D: Geographic Analysis for Land Available and Suitable for Development for Land Use 2025

LIST OF FIGURES

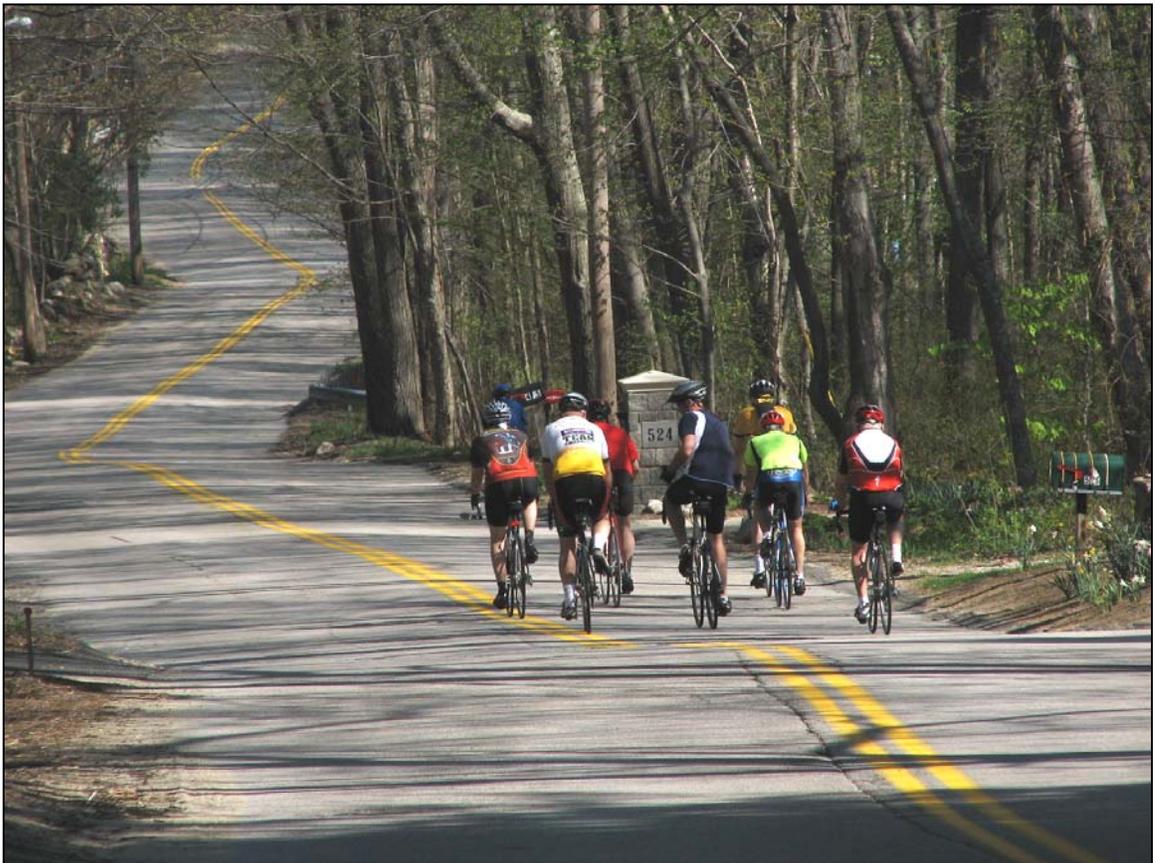
Figure 121-01(a) Developed Square Feet Per Person, 1970-1995.....	1-4
Figure 121-01(1) Developed and Protected Lands.....	1-10
Figure 121-01(2) Current Trend.....	1-11
Figure 121-02(1) Future Land Use 2025.....	2-15
Figure 121-03(1) Examples of Higher Density Residential Development in Rhode Island	3-10
Figure 121-03(2) Examples of Traditional Suburban and Rural Centers in Rhode Island	3-12
Figure 121-04(1) Scenario 1: Trend.....	4-20
Figure 121-04(2) Scenario 2: Centers and Corridors	4-21
Figure 121-04(3) Scenario 3: Infill	4-22
Figure 121-04(4) Scenario 4: Composite	4-23
Figure 121-04(5) Composite of Municipal Future Land Use Maps.....	4-30

LIST OF TABLES

Table 121-03(1)	Percent Change in Rhode Island Housing Prices through Second Quarter, 2005.....	3-6
Table 121-04(1)	Residential Densities: Existing (1995) and Planned.....	4-2
Table 121-04(2)	Composite of Future Land Use Maps Summary of Findings	4-5
Table 121-04(3)	Rhode Island Land Availability, 1995	4-8
Table 121-04(4)	Land Suitability Analysis: Concentration of Resource Factors/Constraints	4-10
Table 121-04(5)	Land Intensity Potential Classifications.....	4-11
Table 121-04(6)	Land Intensity Classification Acreages, 1995	4-12
Table 121-04(7)	Land Intensity and Priorities Summary	4-14
Table 121-04(8)	Assumed Density Distribution of New Residential Development through 2025 Under Four Scenarios.....	4-17
Table 121-04(9)	Projected Land Needs through 2025 Under Four Scenarios.....	4-18
Table 121-04(10)	Quantitative Comparison of Future Land Use Scenarios	4-25
Table 121-04(11)	Evaluation of Scenarios on Policy Considerations	4-28
Table 121-04(12)	Comparison of Composite Scenario Land Intensity Potential Classifications Against Municipal Future Land Use	4-31
Table 121-05(1)	Goals, Objectives, and Strategies for Rhode Island's Future Land Use	5-6

PART ONE

WHERE ARE WE... AND WHERE ARE WE GOING?



PART ONE: WHERE ARE WE AND WHERE ARE WE GOING?

1-1 Where Are We?

This plan is about how we use land – a matter to which Rhode Island, as the geographically smallest State, needs to be keenly attuned. Even as you read this, Rhode Island’s future landscape is being shaped. Hundreds of land use decisions are made every day.



Consider these examples:

- A couple with a growing family places a down payment on a new and bigger house in a suburban town.
- A global corporation selects a Rhode Island downtown office suite to house its North American sales support operation.
- A chef newly arrived from New York opens a restaurant in an abandoned urban storefront that formerly housed a bakery.
- A farm family reluctantly concludes that it no longer can continue its farm operation, and accepts a purchase offer from a real estate developer.
- An elderly widow looking to downsize moves to an assisted-living community.

All these decisions affect land use by impacting the demand side of the market. This market will deliver different configurations of land uses designed to meet the demand. This may prompt construction in greenfields (previously undeveloped areas), demolition of older buildings to provide “pad-ready” sites for commercial or industrial development, or renovation and reconfiguration of what already exists for residential or other purposes.

The market is also affected by planning, regulatory and public investment actions that provide the legal framework and enable the various ways we employ land:



- When a zoning board of a rural community grants a variance to permit the development of forestland adjoining a highway exit for commercial use.
- The City Council of a major city endorses a sweeping redevelopment plan for the city's waterfront.
- A State development agency provides a grant for a town to extend water lines to a new industrial park on the edge of town.
- The planning board of a suburban community adopts a comprehensive plan amendment encouraging multi-family housing within certain commercial districts.



These decisions also respond to demand – actual, perceived or anticipated, in such diverse fields as housing, transportation, economic development and environmental protection. They will produce results in the near term, of course, but also will affect generations to come.

Land use, basically, is about how we arrange our communities to meet our needs. Land use policies will dictate much about how we and our children will live. It is incumbent upon us to be very deliberate in deciding how best to use our land, a limited and precious resource in Rhode Island.

Land Use Trends 1970-1995

Rhode Island's landscape has been continuously shaped and reshaped by land use decisions since its settlement as a colony. Successive waves of change, demographic and economic, have left their marks on our State's land, creating the tapestry of built and natural environments we enjoy today. Blends of glacial landforms, rock outcroppings, wetlands, and coastal features for generations have constrained builders but inspired creative designs. The result is a large measure of what makes Rhode Island's built environment so distinctive: the compactness and intimacy of its traditional settlements. The fact that city, town, village, and farm and forest patterns remain identifiable as distinct elements of Rhode Island's landscape makes it endearing as a whole. The Rhode Island Economic Policy Council has called this a State full of "authentic places." Locales feel "real" and welcoming, and places have kept their unique identity when so much of the nation has succumbed to increasing uniformity and sameness.

Perhaps because we have so little of it, the use of land in Rhode Island has historically been more efficient and prudent than in many other parts of the country. A striking characteristic of Rhode Island's overall land use pattern is that it retains a strong

distinction between historic urban centers and more rural surrounding areas. Despite a decline in manufacturing, disinvestment in urban areas, and the suburban growth characterizing the last 50 years, settlement around the waterfront and the traditional manufacturing centers remains the dominant feature of the State's landscape.

Rhode Island's population and housing densities – 1,003 persons and 420 housing units, respectively, per square mile – are among the highest in the country, yet our State also ranks very highly among all States in percentage of land that is forested, at nearly 60 percent. The explanation for this apparent inconsistency is that most of the population resides in the center of the State in a highly populated, relatively narrow, urban/suburban corridor flanking the shores of Narragansett Bay and filling the valleys of the Blackstone and Pawtuxet Rivers. This corridor, about 20 miles wide and 40 miles long, contains over 75 percent of the population and nearly all of the public infrastructure, major transportation routes, and institutional and cultural centers. Beyond this dense core, on both sides, patterns of development have been retained at decidedly lower intensities.

But looking ahead, will this traditional land use pattern continue? Much of the heavily developed core of the State described above was in place prior to the 1970s. Recent decades have brought some dramatic changes in how we use land compared to prior practices. Consider some of the findings from the Statewide Planning Program's most recent statistical profile of statewide land use, *Land Use Trends 1970-1995*:

- *Rhode Island developed its land at a rate much higher than historic trends.*

The portion of Rhode Island's land area in developed uses increased in this 25-year period from approximately 143,000 to 205,200 acres – by more than 62,000 acres, or by 43 percent. While precise data on the State's earliest development are lacking, the recent rate of land conversion has been extraordinary: it took 334



years to develop the first 20 percent of the State’s land, and then *within a mere 25 years*, we added nearly half again as much land – another nine percent of the State – in developed use.

- *Development increased nearly nine times faster than the population grew.*

While developed land increased by 43 percent, State population increased by only five percent in this 25-year period. Developed land increased from roughly 6,500 square feet per Rhode Islander in 1970 to over 9,000 square feet in 1995.

Figure 121-01(a)

Developed Square Feet Per Person, 1970 - 1995



- *Land in residential use increased 55 percent, as the State added four units of housing for every new person in the population.*

Despite a modest population growth of 10.4 percent, Rhode Island experienced a dramatic 40 percent increase in the number of households. Households have become smaller than ever before, the 2000 Census recording an average of 2.47 persons per household. Households becoming more numerous increased the demand for residential land. This demand was also largely for single-family houses on larger house lots, meaning more land consumed per new house.

- *Population continued to migrate toward the rural parts of the State.*

Migration from the State’s older central cities that first began in the 1940s continued, with population shifts fueling the suburbanization of formerly rural areas. As city residents dispersed to suburbs and new residents moved into the State, the patterns of housing changed. Historically, housing had been densest in the communities of Central Falls, Pawtucket, Providence, and Woonsocket. Proportionally fewer multifamily housing units were constructed in the suburbs, and the relatively inexpensive price of land enabled single-family homes to be

constructed on larger lots than in the central cities. Population movement toward the more rural areas became a dominant land use characteristic in the latter half of the 20th century.

- *Employment centers expanded away from central cities.*

Growth in employment was greatest in the State's suburban communities, which gained 56,000 jobs while the State's cities lost 10,000 jobs during the same period.

- *Commercial land use virtually doubled.*

During the 1970s and 1980s the amount of land used for commercial purposes increased dramatically, from 7,000 acres to 13,200 acres. This growth occurred particularly in the inner and outer ring suburbs, although into less developed parts of the State, critical densities were reached that provided opportunities for businesses to serve this population and to draw upon them as a labor force. Unlike residential property, commercial land use was concentrated along the most heavily traveled roadways, resulting in a pattern of strip development most readily identified as "sprawl."

- *Industrial land use increased dramatically and moved farther into the suburbs as well.*

Industrial land use increased by approximately 72 percent, from 5,300 acres to 8,600 acres – in spite of fewer people working in manufacturing, the State's traditional industrial base. Industry tended to relocate from riverfront sites in the old manufacturing centers to the surrounding countryside. The very nature of what is "industrial" changed with technology and shifting economic forces.

- *The amount of land dedicated to transportation increased.*

Construction of the three Interstate highways I-95, I-195, and I-295 was completed by 1975. However, much of the increase in road mileage was attributable to newly opened residential neighborhood streets. The out-migration from the cities, largely enabled by the automobile, resulted in significant growth in many individual communities. Roads that were originally designed for light amounts of local traffic soon exceeded their capacity. Commercial enterprises followed the populations moving to suburban and rural communities. Roads became commercial strips for retail businesses. Successful suburban businesses became new trip-generators, adding to the pressure for new and/or improved roads. Large commercial and industrial enterprises sought easy access to highways, especially Interstates, increasing pressure for upgraded State roads or new Interstate access ramps.

Land Use Trends Since 1995

The trends described above, are drawn from State land use inventories taken between 1970 and 1995. While this data is ten years old, other data sources such as building

permits and recent aerial photography confirm that Rhode Island's use of land in the past decade continues to follow land use patterns described by planners as sprawl. On average, about 30 percent of the land identified as undeveloped in 1995 has been built upon over the last ten years. In some of the State's more rapidly developing communities, this recent building activity has consumed as much as 75 percent of the developable land that was identified as vacant in 1995.

These most recent trends appear to indicate that the era of disinvestment in Rhode Island, and particularly its urban areas, has ended.

On a more optimistic note, this same analysis identified some positive trends. Development of vacant land in the State's urban and urban fringe communities appears to be reversing decades of disinvestment. West Warwick, Warwick, Providence, and Bristol all have developed 60 to 70 percent of their vacant land during the last ten years. Moreover, investment in rehabilitation and reuse projects that optimize the potential of developed land and its supporting infrastructure appears to have taken hold over the past ten years. Residential building permits in the City of Providence alone, between 2002 and 2005, exceeded 3,000 units, and 2,700 of those units were in multi-unit developments, many in previously commercial and industrial properties. Based upon tracking of recent major capital investments by the Economic Development Corporation, we have every reason to believe that these trends are continuing.

Decades of Rhode Island's pioneering historic preservation efforts are coming to fruition in traditional centers and neighborhoods throughout the State. Rhode Island's aggressive historic tax credit program has been behind much of the investment in historic commercial and industrial buildings such as the development of residential lofts in DOWNCITY Providence and conversions such as Rising Sun Mills in Olneyville. Other



major public investments, such as relocation of rail lines in Providence, have given rise to projects such as the successful Capital Center, which continues to draw new development opportunities.

While the last decade has witnessed a resurgence in development throughout the State it has also been accompanied by major investments in land conservation. Between 1992 and 2003, four major State open space bonds and numerous local bonds provided over \$73 million in land and new facilities for Rhode Island's open space system. Nearly 7,000 acres have been added to the State system, approximately 2,000 acres of threatened farmland preserved, and 3,500 acres of local open space has been protected.



1-2 Where Are We Going?

The trends described above, although tempered by some more recent activity in our urban centers, confirm that Rhode Island's use of land in the past few decades has set a new trajectory that cannot be sustained – one that is more characterized by the diffuse, low density land use pattern described by planners as *sprawl*. This relatively contemporary development pattern, while not unique to Rhode Island, appears to be continuing in spite of major changes to the State's planning enabling legislation that calls for detailed local comprehensive plans and land management regulations that implement those plans. The product of those plans is a State characterized by future of predominantly low density, scattered site development (see Figure 121-04(5)).

Why do Rhode Island's public planning efforts seem to be missing their often-stated goal of concentrating development and controlling sprawl? In spite of an extensive State-municipal comprehensive planning system and centralized State environmental permitting, much of Rhode Island's development over the past 30 years has not followed the official State planning visions as set forth in the previous State land use plans.

The first Rhode Island State Land Use Plan, in 1975, met the challenge of land management in the smallest State with very good inventory and analysis and an excellent, far-sighted plan designed to accommodate population growth and economic development through the 21st century. The plan's basic assumptions were that half of the State would remain as open space and development would be allowed to take place on the remaining land. This newly urbanized land would be built on at a density of about two-thirds of the 1960 density (ratio of population to developed area). The vision was bold, as it proposed new planned communities, however, the implementation was idealistic and threatening, as it promoted major property tax reform and State management of zoning.

The 1989 Land Use Plan re-created the 1975 plan map and the same vision of concentrated development around existing centers. This plan, however, proposed that implementation be accomplished through, first, Community Comprehensive Plans to be approved by State agencies and, second, by the municipal use of a wide range of newly enabled zoning mechanisms.

Development has not followed either the 1975 or the 1989 plan, both of which promoted considerable density mixtures in new development and building near public infrastructure. Research for this plan indicates that low rise and scattered development has squandered many of the areas best suited for high density with low intensity uses and whole districts of buildings that are disconnected both in terms of design and land uses. While not ignoring the significant planning foundation that the 1975 and 1989 plans established, they failed to adequately deal with the fiscal aspects of land use, notably, property rights and taxation as well as the potential development impacts of State investments.

"The essential land use question for Rhode Island has become whether to stay on the current course, one that embraces practices that consume land at unparalleled rates, or to return to a more efficient mode of land use inspired by traditional models of development that have served it so well for over 300 years."

Current Trend Scenario Map and Analysis

To illustrate the State's land use choices and to gain a better appreciation for where recent land use trends are taking us, Statewide Planning prepared a geographic analysis of what Rhode Island's overall land use pattern could look like in 2025. The analysis was based upon projections of population, household, and employment growth through 2025



and also included a continuation of the development patterns of recent decades. This so-called “Current Trend Scenario” was one of four alternative land use futures developed in the course of preparing this plan and is described in detail in Part Four.

The Current Trend Scenario assumes the continuation of current land use practices and management strategies, along with existing infrastructure facilities. It assumes that current State laws and local ordinances would continue to regulate land use, and it assumes continued strong market demand for land and housing in Rhode Island.

Most significantly, the Current Trend Scenario assumes that future development will follow the Future Land Use Maps of the State’s 39 municipalities. These maps, a required component of municipal comprehensive plans adopted by all cities and towns, are, under State law, the basis for local zoning. In short, it is a picture of what 20 more years of “building to current plans” could hold in store for the State’s landscape.

Between 1961 and 1995, Rhode Island developed far more land for residential, commercial and industrial purposes than in the previous 325 years of the State's existence.

Figure 121-01(1) shows the current development status of Rhode Island based upon the latest available (1995) statewide land use survey data. Developed land – constituting 29 percent of the State’s area – is shown in pink.

Figure 121-01(2) illustrates the State’s likely land use pattern in 2025 under the Current Trend Scenario. Areas that are presently developed are assumed to continue in developed use through 2025. These appear in pink on the map, as they do in Figure 121-01(1). Additional areas likely to be developed to accommodate the State’s projected growth needs through 2025 are shown in red on the map. Comprising over 108,000 acres, they represent another 16 percent of the State’s total area.

Continuing on the current trend, by 2025, 45 percent of Rhode Island would be developed. While 55 percent of the State would still be undeveloped (when non-buildable water and wetland areas are deducted), only 26 percent of the State’s area would remain available for future needs beyond 2025.

How the Trend Accommodates Future Needs

The Current Trend Scenario is characterized by relatively low densities, expanding local road networks and unfocused public investments. Nearly 70 percent of new residential development would occur at densities requiring one acre or more of land per housing unit – much lower than the densities currently found in the State’s older suburbs and core cities. Overall, densities would be significantly lower than current statewide averages. Development would be unfocused, occurring randomly throughout communities and around the State. Cities could continue to lose economic vitality and perhaps population, as new employment options and housing continued to migrate to formerly rural locales.

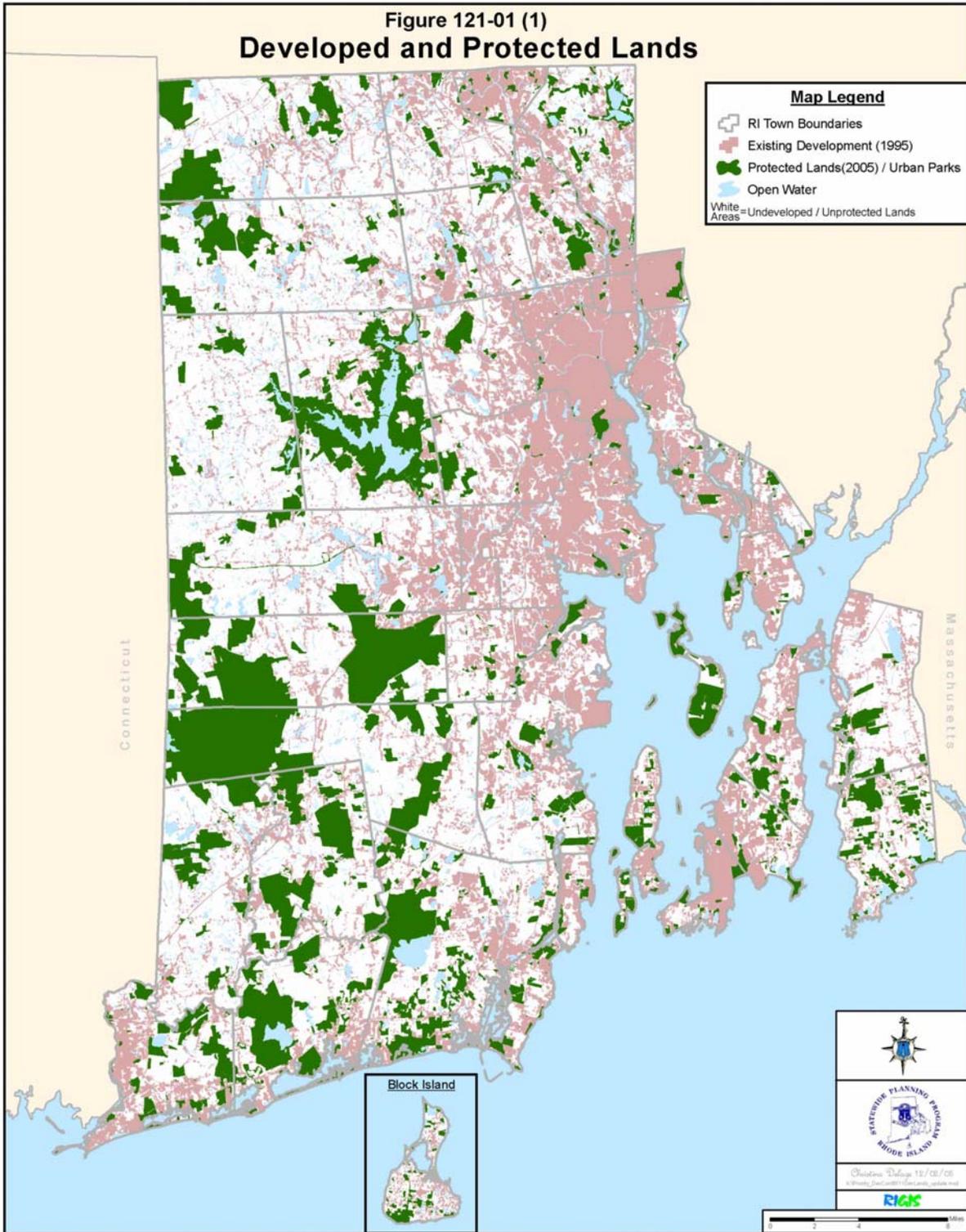
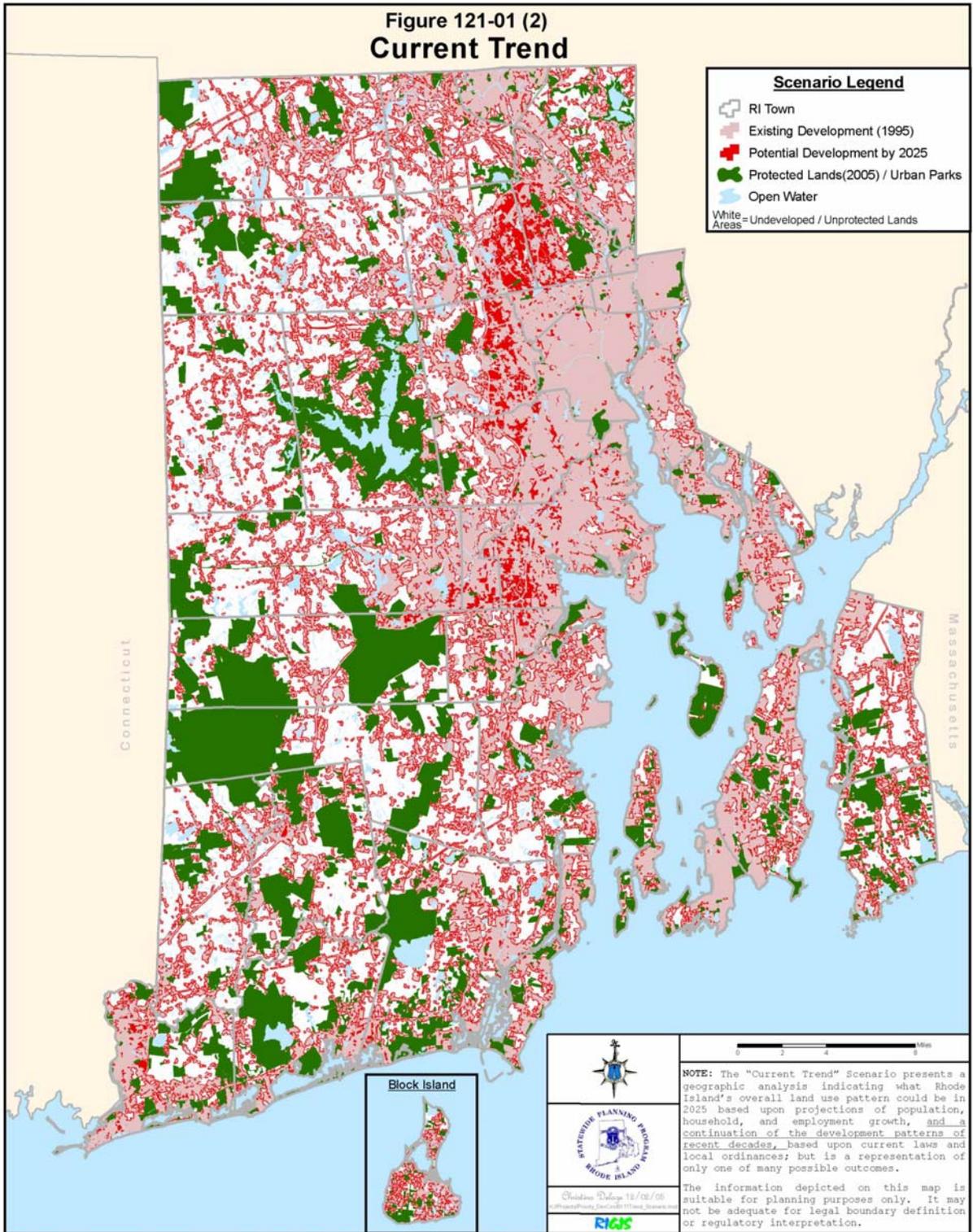


Figure 121-01 (2)
Current Trend



Geographically, the Current Trend Scenario would produce a highly diffuse or sprawling urbanized region having a relatively small residual of unfragmented open areas. Important resources including farmland, critical natural areas, existing protected lands, and large forest tracts would be highly susceptible to development impacts, given the wide dispersion of future development activities. The proliferation of developed uses across watersheds would constitute increased risk for contamination of wetlands and water bodies, including potable supply sources.

"While the analysis considered only needs through 2025, extrapolating the Current Trend Scenario beyond 2025 leaves open the possibility that the state could exhaust its entire developable land base by 2050-2060."

Low densities and scattering of development would make public provision and management of supporting infrastructure and services more expensive, perhaps bordering on the prohibitive in many areas. The emphasis on low density residential development would limit housing choice and make development of affordable units in adequate numbers problematic. Separation of uses and low densities would also make public transit prohibitive and enforce the high reliance on automobiles for transportation needs. Absent expansion of highway capacities, high levels of congestion could result from increased traffic. All of these outcomes constitute policy conflicts with the objectives of this Plan and with goals and policies of other elements of the State Guide Plan.

The Current Trend Scenario must be seen as a potential threat for Rhode Island's future. It represents a likely outcome of continuing on the path we currently are following, the product of 20 more years of building to current plans and ordinances. On the other hand, *it is not destiny*. The dramatic impacts it portends do not have to be realized. There is an opportunity to change direction.



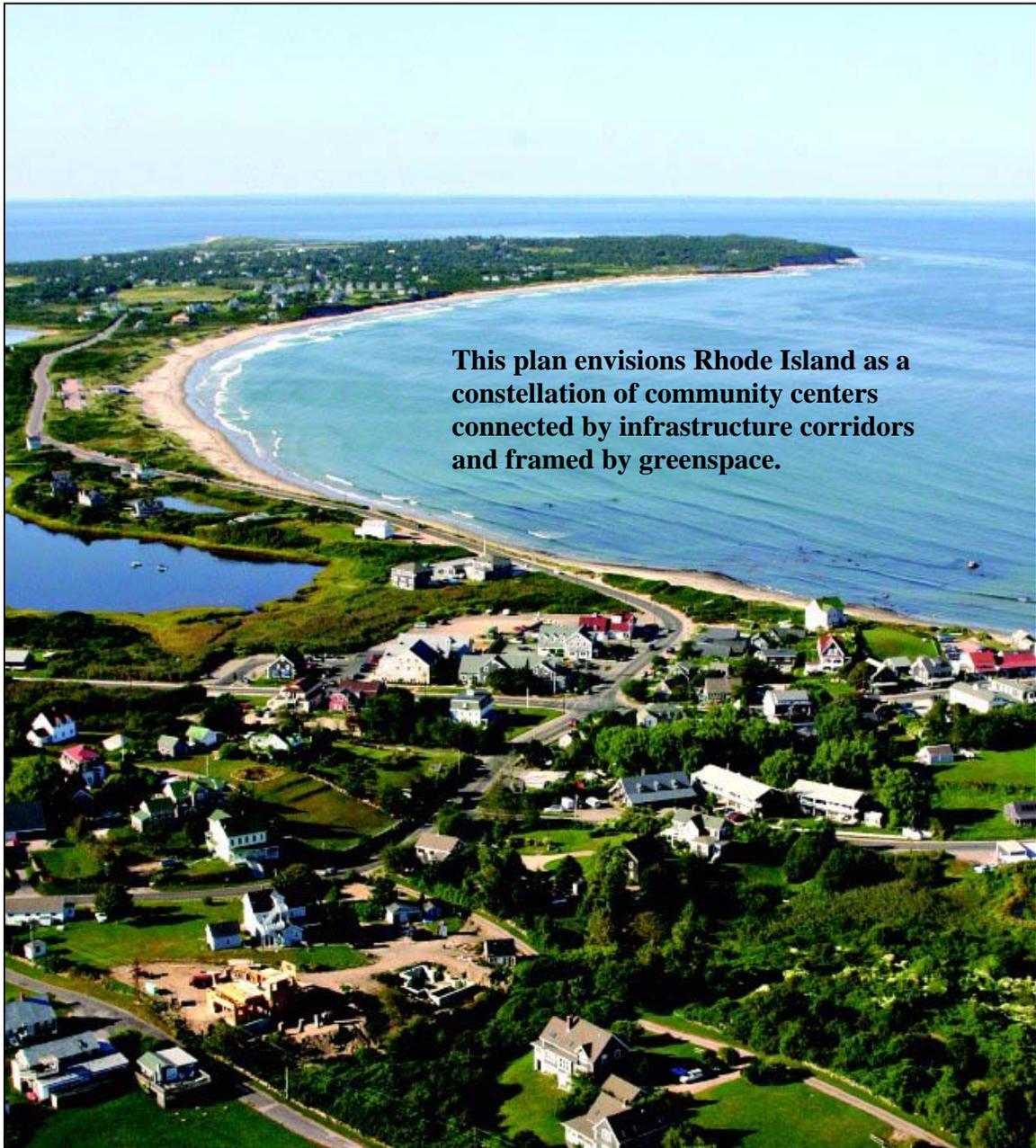


The Current Trend Scenario should remind us that Rhode Island has been following its current development path *only* for the last 30 to 40 years. The *current* trend is a decided departure from the *long-term* trend. The traditional development pattern that Rhode Island followed for over three centuries is one of a more compact pattern of cities and town and village centers, surrounded by open countryside.

The power, and the responsibility, to shape our State's future landscape – the places where our children and grandchildren will live – lies with us.

PART TWO

WHERE DO WE WANT TO BE IN 20 YEARS?



This plan envisions Rhode Island as a constellation of community centers connected by infrastructure corridors and framed by greenspace.

PART TWO: WHERE DO WE WANT TO BE IN TWENTY YEARS?

2-1 The Vision

Rhode Island of 2025 will be a unique and special place, influenced by its proximity to the Boston metropolitan area, but separate from it. The State's landscape will retain its distinctive character. Its history, tradition, and compelling natural beauty will prevail as its hallmarks. Land use patterns and development design will distinguish its diverse communities and celebrate the authenticity of its special places.

Having contained sprawl, the State's urban form will be a pattern of concentrations. People and their endeavors will continue to be largely concentrated in traditional locations. Dense centers of varying scales, both traditional and new, will be the focal points of housing, commerce, and social interaction.

Greater Providence – at the head of the Bay – will be the region's premier center, a vital and self-renewing core for people and culture. Other cities, town centers, and villages will be centers for the State's major sub-regions or individual communities. Networks of efficient transport and services will connect and support the major centers. New, planned centers will emulate the character of traditional communities at locations newly advantaged by regional transport hubs. All centers will exemplify quality design, and embody vibrancy, livability, and sustainability.

Rhode Island in 2025 will also be green and blue. A thinly settled, predominantly forested band in the western third of the State will conserve essential resources and support resource based economies. These Borderlands, with adjoining conserved areas in eastern Connecticut provide a distinctive 'break' in the otherwise developed Boston to Washington northeast corridor. Conserved farmland and forests will surround centers, with the built environment infused by greenways and greenspace. The State's centerpiece, the Bay, will be healthy and productive. Where land meets water, the waterfront edge will remain the State's trademark, carefully managed to provide utility and activity, while preserving the beauty of its natural features.

In 2025, Rhode Island will be a place that strikes the proper balance between the needs of its people and the protection of its unique environmental resources. It will be a place where present and future generations may enjoy the benefits of the State's natural beauty, engage the world through a productive economy, and retain a connection to their past while embracing a prosperous future.

Gauging Public Perceptions of Land Use Objectives

Much of *Land Use 2025* flows from the opinions of the general public, State leadership, and planning professionals on land use trends, community values, and growth priorities. Beginning in 2000, gathering this information included several major efforts: a public opinion survey, a televised “Town Meeting,” and a series of regional meetings with local



planning officials. In 2003, interviews were conducted with several dozen Rhode Island planning practitioners who were then brought together for a daylong brainstorming session that produced the organizing framework for this plan: greenways, community design, and infrastructure. Findings from each of these efforts can be found in the Technical Appendices to this plan (available at www.planning.ri.gov).

Deriving a Land Use Vision for Rhode Island

This plan begins with the premise that certain commonly held beliefs underlie public policy in land use. We assume that, while they may differ in how they express them, Rhode Islanders, to a great degree, share the following opinions:

- Rhode Island’s land and water are finite resources that must be efficiently employed to support strong communities built upon the State’s social, economic, and environmental diversity.
- We must maintain and enhance our high quality of life, and sustain a successful economy that provides opportunities for all.

- No single purpose, sector, or entity can shape a successful land use future alone. It must be created by an alliance of governments, business, and the public working in concert toward shared goals.

Beyond these basic concepts, land use professionals have developed detailed technical and strategic policies that are also fundamental to *Land Use 2025*. These would shape future land use in Rhode Island to achieve vibrant community centers and neighborhoods, a pervasive greenspace network, revitalized urban centers, the containment of sprawl, quality design in development, and effective stewardship of all resources.

Several State documents have articulated visions for land use in Rhode Island, extolled the values of certain resources, or offered descriptions of what we would like the State to be. For example, State Guide Plan Element 155, *A Greener Path: Greenspace and Greenways for Rhode Island's Future* established a greenspace vision in 1994. This system of greenspace was also described in State Guide Plan 152, *Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan* in 2003:

A statewide system of connecting greenspaces and greenways, a network made up of critical natural and cultural resources, outdoor recreation facilities, public space, community and urban forests, public and private open spaces. The greenspace system is to be Rhode Island's permanent green framework within which the State's communities will design and build in the 21st century.

Concentrating land uses in well-designed community centers is a tenet of good planning and a basic recommendation of both the 1975 and 1989 State Land Use Plans. More recently, beginning in 2000, the Governor's Growth Planning Council launched an initiative to promote *growth centers* by recommending the adoption of a State investment strategy that would act as an incentive. This investment strategy would prioritize State discretionary investments (to include State managed federal funds) as well as technical assistance and expedited regulatory review to locally designated and State approved centers. Growth centers are defined as having "a core of commercial and community services, residential development, and natural and built landmarks and boundaries that provide a sense of place," making them dynamic and efficient centers for development.

The importance of "the power of place" – the relationship between quality of place and quality of life – and the importance of successful land use strategies to preserve them are increasingly recognized as strategic tools for economic well-being. The Rhode Island Economic Policy Council and others have extolled the potential of the State's "rich mix of authentic places" to attract or retain the young and the talented, people who can contribute much to the economy if they settle here.

An "Urban/Rural" Systems Approach

When examined on the broadest scale, for example from a map of the State, a striking characteristic of Rhode Island's land use pattern is that it retains a strong distinction

between the historic urban centers and more rural surrounding areas. Today, in 2006, one can leave downtown Providence and be “in the country” in twenty minutes. This is a tremendous asset that is increasingly rare in thriving metropolitan areas. Settlement around waterfront and manufacturing centers remains the dominant feature of the State’s landscape, despite the decline in manufacturing and the disinvestments in urban areas. Nevertheless, as demonstrated in Part One, this urban/rural distinction will be in jeopardy if we continue to develop in accord with current trends.

It has been suggested that these two distinctly different development patterns call for the State to pursue two significantly different but compatible land use strategies. This may be thought of as an “urban/rural” approach, and can be summed up as follows:

“Urban” approach

In the urban residential corridor, we need a strategy that recognizes and supports a more intensive land use. Land use policies should focus on initiatives for preserving or enhancing neighborhoods, traditional villages and communities, and promoting mass transit, pedestrian environments, affordable housing, compact development, public infrastructure, and urban design.



“Rural” approach

In the more rural areas of the State, and along the forested corridors, south shore beaches, salt ponds, and the Bay islands, we need a strategy that acknowledges and accommodates a level of residential and recreational land use consistent with preserving the natural resources and retaining the open space character of these areas. We should avoid sprawl and advocate clustering development, natural resource protection, fragile area overlays, on-site septic systems and wells, and greenway connections.



Rhode Island land use patterns are complex and diverse even within these two general urban/rural density patterns. We want to preserve and encourage this complexity within Rhode Island’s landscape because they form what the Economic Policy

Council calls our “authentic places.” We also want to preserve and encourage the distinction between the mostly urban and mostly rural parts of Rhode Island.

We can use a land use systems approach to improve the overall land use pattern:

- The network of *greenspace* can be used to shape the built centers.
- The *built centers* can maximize the good building sites by having well designed, compact, dense construction.
- The *infrastructure* systems provide the basic skeleton – the support and connections, the roads and the public utilities that make the concentrated community centers possible.

A Constellation of Centers

Rhode Island is often described as a city-State, with Providence and the surrounding communities at the head of the Bay as its large, central core. This notion poses Greater Providence as the major center for the State, the core of a “Rhode Island region” that also encompasses parts of southeastern Massachusetts, and to a lesser extent, eastern Connecticut.

It may be more useful to imagine Rhode Island as a constellation of community centers. This construct would recognize the dominance of Greater Providence as a traditional center, embrace smaller regional centers, and allow for the emergence of new centers.

The constellation image thus captures the statewide network of centers of various sizes – State, regional, city, town, and village. The centers are connected by infrastructure corridors framed by an extensive greenspace network, including all municipalities at one level and the small and large centers at another. The constellation approach accounts for greenspace, special places, growth centers, and transportation corridors, all essential elements in land use planning and the future land use vision.

What Sets This Plan Apart From Earlier Versions?

Earlier versions of the State Land Use Policies and Plan, in 1975 and 1989, arrived at similar recommendations in terms of overall patterns of land use. While not supported by the levels of data and computerized geographic analysis available for this update, they both recommended a compact development pattern for the State that would concentrate development on lands within and adjoining existing urbanized areas where public services were available or were planned. The 1975 plan took a more traditional approach, assigning land to one of twelve specific use categories, including high, medium, and low density residential, three types of commercial, industrial, three categories of open space, and governmental/institutional and airports. In 1989, the approach used was to assign land to four generalized intensity potential categories, and to describe the State’s intentions regarding the possible land uses and intensities to which these should be put. This later approach, which recognizes that the purpose of this plan is

to provide guidance for the (vast majority of) land use decisions made on a local basis, is followed to a lesser degree in this current version as it relies more on the “urban/rural” systems approach.

2-2 Goals and Objectives

There are several overarching goals to meet in order to realize the Land Use 2025 vision. The first describes the mission, the reason we plan; the next cover the three components of land use - greenspace, community design, and the infrastructure; and the last addresses implementation and maintenance. These goals and related objectives are:

A Sustainable Rhode Island

Goal

LUG 1: A sustainable Rhode Island that is beautiful, diverse, connected and compact with a distinct quality of place in our urban and rural centers, and abundance of natural resources, and a vibrant sustainable economy.

Objectives

LUO 1A: Focus growth within the urban services boundary and in centers of different sizes and types; support traditional centers instead of new development.

LUO 1B: Support regional and watershed-wide planning to coordinate policy development and promote cooperative implementation of plans, programs, and projects affecting more than one community.

LUO 1C: Promote holistic systems planning approaches at the watershed level.

The Greenspace System

Goal

LUG 2: A statewide network of greenspaces and greenways that protects and preserves the environment, wildlife habitats, natural resources, scenic landscapes, provides recreation, and shapes urban growth.

Objectives

LUO2A: Permanently protect critical natural resources.

LUO 2B: Upgrade and maintain urban and community Greenspace.

LUO 2C: Provide a diverse, well-balanced system of public outdoor recreation facilities.

LUO 2D: Use Greenspace to shape urban development patterns.

LUO 2E: Ensure that shoreline areas compose a significant portion of the Greenspace system.

Community Design

Goal

LUG 3: Excellence in community design: communities that are of high quality, energy efficient, safe and healthful, distinct, diverse and aesthetically pleasing; communities that are rich in natural, historical, cultural, and recreational resources; communities that provide abundant economic opportunities.

Objectives

LUO 3A: Give a majority of the State's residents the opportunity to live in traditional neighborhoods, near growth centers.

LUO 3B: Preserve and enhance special districts and special places, supporting particular uses and resources.

LUO 3C: Maintain and protect the rural character of various parts of Rhode Island.

LUO 3D: Provide a diverse, affordable housing stock.

LUO 3E: Focus development of major employment centers.

LUO 3F: Promote well-designed public facilities and properties.

LOU 3G: Increase energy efficiency through building design and location.

Infrastructure

Goal

LUG 4: First class supporting infrastructure that protects the public's health, safety and welfare, fosters economic well-being, preserves and enhances environmental quality, and reinforces the distinction between urban and rural areas.

Objectives

LUO 4A: Maintain fully functional water and sewer systems; focus development to maximize the investment and capacity of these community assets.

LUO 4B: Protect drinking water supply resources.

- LUO 4C: Utilize infrastructure to avoid or mitigate significant negative environmental impacts from development.
- LUO 4D: Locate new infrastructure in appropriate areas.
- LUO 4E: Promote intermodal centers and greater reliance on transit.
- LUO 4F: Provide pedestrian connections through all centers and urban districts.
- LUO 4G: Maintain the functional integrity of existing and planned roadways.

Implementation

Goal

- LUO 5: Implement and maintain the vision. Continue to support public stewardship for land use through strategic public investments in growth centers, land conservation, development, and enhanced planning capacity at the local and regional levels.

Objectives

- LUO 5A: Reform Rhode Island property tax system in a manner that supports the goals and objectives of this plan.
- LUO 5B: Encourage municipalities to maintain clear and current land use plans, and coordinated regulations to attain land use goals on a statewide, regional and community level.
- LUO 5C: Develop and maintain excellent land use information and technology systems.
- LUO 5D: Ensure that State and municipal planning officials are well-trained and properly supported.
- LUO 5E: Revise current statutes to ensure that Rhode Island's planning enabling legislation will be the contemporary and responsive foundation for State and municipal land management decisions.
- LUO 5F: Achieve greater integration of State and municipal planning systems and support regional efforts.

2-3 Land Use 2025 Policies

The policies outlined here are intended to guide activities toward fulfillment of their plan goals. As in other elements of the State Guide Plan, these policies provide a foundation

for action that encompasses related social, physical, and environmental factors to be considered in making land use decisions.

Policies

- LUP 1: Link land use planning with water use planning to encourage new growth in appropriate locations that preserves a clean and adequate water supply.
- LUP 2: Control sprawl and the urban exodus of business and industry.
- LUP 3: Use open space to control and shape urban growth.
- LUP 4: Achieve a livable, coherent, and visually pleasing environment.
- LUP 5: Relate the use of land to its natural characteristics, varying suitability and capacity for development.
- LUP 6: Relate the use of land to the level of public facilities and services available, or planned to be available.
- LUP 7: Promote the establishment of higher residential densities and smaller lot frontages in urban and suburban areas, and town centers, where public water and sewer service is present or planned. In areas that lack supporting infrastructure, promote conservation development and identification of appropriate sites for village centers that will provide compact mixed-use areas for locating services, commercial space, housing, and public transportation hubs.
- LUP 8: Promote low overall densities where public services are unavailable and are not planned. Promote conservation development in areas that lack supporting infrastructure.
- LUP 9: Recognize Narragansett Bay and watersheds as assets that contribute significantly to the State's beauty and connectivity. Promote holistic systems planning approaches at the watershed level.
- LUP 10: Guide development in a manner that will prevent encroachment on floodways, dunes, barrier beaches, coastal and freshwater wetlands, and other natural features that provide protection from storms, flooding, and sea-level rise.
- LUP 11: Facilitate public stewardship of healthy and vibrant watersheds that sustain life and support current and future uses.

- LUP 12: Encourage development patterns that protect water for drinking, ecosystems, and other critical purposes, as well as other natural resources.
- LUP 13: Factor into decisions regarding development the importance of recreation, open space, historic resources, and public access to the shore to the State's economy, in tourism, and in maintaining our quality of life.
- LUP 14: Design open space systems and corridors to protect complete ecologic units and provide structure and character to the built environment. Maintain the openness of our western borderlands and recognize the significance of this system within the Northeast Corridor.
- LUP 15: Protect and enhance those values of the coastal region, including scenic values, which contribute to the State's quality of life. Examine proposals for changes in the coastal region in terms of their importance to the State as a whole.
- LUP 16: Create an interconnecting network of bike paths, trails, and walkways to expand pedestrian and bicycle travel options.
- LUP 17: Preserve and enhance wildlife, fish, and plant species diversity and stability through habitat protection, restoration, enhancement, and prevention or mitigation of adverse impacts due to human activities.
- LUP 18: Protect rare and unique geologic or other natural features.
- LUP 19: Preserve the best farmland and active farms in the State for active agricultural use.
- LUP 20: Develop residential, commercial, and mixed-use areas that are compactly grouped, attractive, and compatible with the ability of land and water resources and level of public facilities and services available to support development.
- LUP 21: Develop and promote innovative and sustainable land development techniques and apply available technology to make decent housing affordable for low- and moderate-income households.
- LUP 22: Provide a variety of housing options in proximity to major employment generators to meet the needs of the labor force.
- LUP 23: Preserve and enhance the distinctiveness of urban, suburban, village, and rural communities and landscapes.
- LUP 24: Preserve historic buildings, districts, and archeological sites.

- LUP 25: Relate the location of residential developments and neighborhoods to employment and commercial centers, community facilities and services, and mass transit corridors.
- LUP 26: Relate industrial and commercial development to overall land use by promoting the use of development controls and performance standards that mitigate conflicts with other land uses and activities.
- LUP 27: Stimulate the expansion of economic development activities, including cultural, educational, and research centers, in the central business districts of Rhode Island's municipalities.
- LUP 28: Protect and provide utility services that are adequate to meet the needs of present and future populations.
- LUP 29: Conserve and enhance desirable existing industrial areas, regional shopping areas, office complexes, and concentrations of service activities to maximize the investment and utilization of existing infrastructure.
- LUP 30: Locate public water and sewer facilities so as to shape development in accordance with State land use policies, rather than simply to accommodate growth.
- LUP 31: Plan new or expanded public sewer and water services, highway improvements, and mass transit service, for industrial and commercial development where such development is appropriate in terms of natural constraints of the land, air, and water, and where the area is being developed at an intensity that is consistent with State land use policy and will not promote wasteful use of resources.
- LUP 32: Locate development with other than domestic waste discharges in areas served or planned for service by public sewer systems, or where appropriate waste treatment and disposal can be provided and maintained in an effective, environmentally sound manner.
- LUP 33: Encourage development that applies best management practices for water and stormwater management.
- LUP 34: Promote State and local development programs and activities that encourage new growth in locations and at densities that will achieve appropriate utilization of existing water supply sources.
- LUP 35: Develop and maintain a balanced, integrated, safe, secure, and cost-efficient transportation system, locating residential, industrial,

commercial, and institutional development within transportation corridors. Relate the design and location of transportation facilities positively to the natural and cultural landscape.

- LUP 36: Provide a high aesthetic quality in the transportation system.
- LUP 37: Link transportation and land use planning and apply appropriate land use controls and design standards in transportation corridors and interchange areas in order to maintain the functional integrity of existing and planned roadways, alleviate congestion, promote safety, and reduce the need for new highways.
- LUP 38: Promote concentrations of high-density housing and employment near existing and planned commuter rail stations and other mass transit routes and terminals.
- LUP 39: Require the integration of appropriate transit, pedestrian, bicycle and other modal choices in new development to lessen dependence on the automobile where feasible.
- LUP 40: Develop land in the immediate vicinity of airports in a manner that will be compatible with airport operations. Seek to minimize adverse impacts, if any, to pre-existing land uses.
- LUP 41: Encourage development patterns that promote energy efficiency and help attain State air quality objectives.
- LUP 42: Promote land use development that contributes to energy conservation and increased reliance on renewable energy resources, while assuring dependable sources of fuel supplies to meet long-term energy needs.
- LUP 43: Recognize the varying demands for energy associated with different land use patterns, and encourage patterns that tend to reduce the need for energy.
- LUP 44: Promote the designation of growth centers at appropriate locations and of appropriate design to achieve a concentrated development pattern in accordance with the vision of *Land Use 2025*. Implement a State investment strategy that recognizes growth centers as a priority.
- LUP 45: Support property tax reform efforts that will reduce the negative influences of the current system on land use decision-making.
- LUP 46: Continue implementation and enhancement of the State Guide Plan / Community Comprehensive Plan system as a coordinated and consistent

framework for attaining State and local goals for land use and development.

LUP 47: Maintain and enhance the capacities of State, regional, and local land use planning and management functions in support of the land use vision and goals of *Land Use 2025*.

LUP 48: Facilitate multi-community regional and watershed-wide planning to coordinate policy development and promote cooperative implementation of plans, programs, and projects affecting more than one community.

LUP 49: Ensure that State-of-the art tools and practices are available to the State's planning professionals, and that planning and management systems are adequately resourced relative to their mandated missions.

LUP 50: Strengthen the planning database through continued support for development, maintenance and utilization of a statewide, coordinated geographic information system.

LUP 51: Develop effective and efficient training programs on an ongoing basis for those involved in local land use planning and decision-making.

2-4 Future Land Use Patterns, Categories, and Intended Uses

This part of the Plan describes the recommended 2025 future land use pattern for the State of Rhode Island by way of a future land use map (Figure 121-02(1)) that depicts a preferred pattern of land use consistent with the vision, goals, and policies of this plan.

This plan is marked by some major distinctions from the prior plans. This plan attempts to define land categories that are more intuitive than the somewhat cryptic legend codes used in 1989. More importantly, this plan recognizes that while the policy and guidance of previous efforts were sound, the efficacy of those plans was challenged by the lack of any incentives to implement the policies. The delineation of an “urban services boundary” and “centers” along with a recommendation that State investment policy direct growth towards those areas is intended to address those shortcomings.

Future Land Use 2025 Map

The Future Land Use 2025 map which follows, has several purposes and applications. It is intended as a policy guide for directing growth to areas most capable of efficiently supporting current and future developed uses (and conversely, away from areas less suited for development). In this regard, it is intended to inform State and local capital investment decisions so that investments may target and support growth in appropriate areas and discourage growth in inappropriate or inefficient locations. Secondly, the map is a guide to assist the State and communities in aligning land use policies as local governments make the more specific land use assignments required in local

comprehensive plans and supporting land management ordinances. It is important to note the map is a graphic portrayal of State land use policy. It is not a “statewide zoning map” – zoning matters and individual land use decisions are to remain the prerogative of local governments.

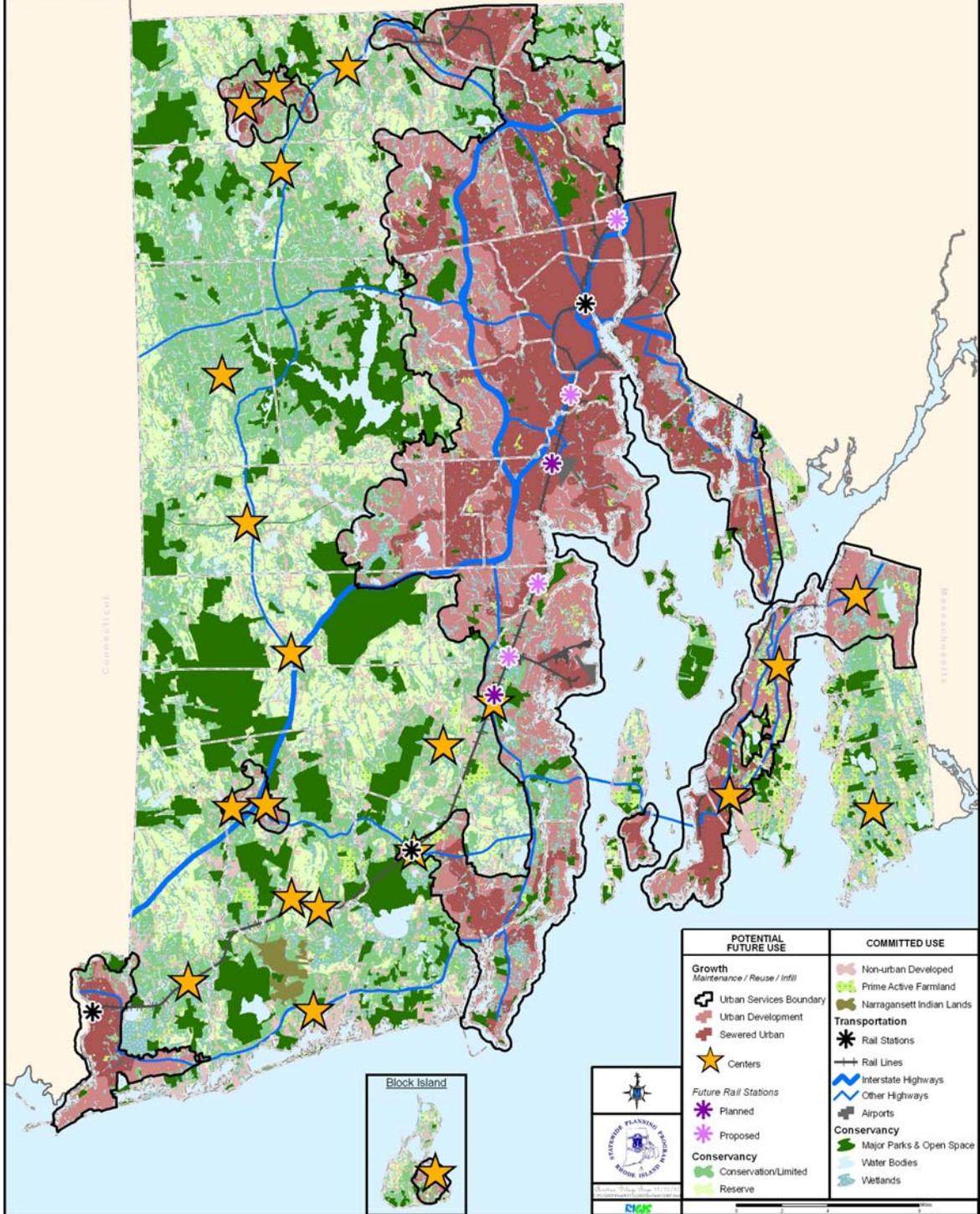
The pattern of land use in Rhode Island in 2025 cannot be known with certainty from the vantage point of 2006, the year when this plan was prepared. However, as described and documented in other parts of this document, it is possible to assess where we are and where we are going, and devise alternative paths which, if pursued, could produce differing outcomes. In this regard, the Future Land Use 2025 map is the culmination of not only the geographic analysis, but also a graphic representation of our vision, goals, and policies. Or, as the previous (1989) edition of the State Land Use Policies and Plan so elegantly put it, “comparing what we expect and what we would like with what we have, in terms of our land and water resources, is the base from which this State land use plan emerges.”

What follows is a description of land use concepts and categories incorporated into the Future Land Use 2025 map. Guidance is provided on the intentions of the plan as to the general intensities of use for various areas, and examples given of the types of land use and landscape features that should be embraced in the future. The map depicts areas of both committed (existing) land uses and areas of potential future uses.

The patterns shown on Figure 121-02(1) are broad-scale and should not be interpreted with reference to individual sites or parcels. Site-specific considerations of resource constraints, infrastructure availability and capacity, adjacent usage, and design parameters are determinants of the acceptable land use and intensity for uncommitted land, and these factors can only be evaluated on a local basis using highly specific data. As a result, capacities for individual parcels can range widely within the general categories and broad areas shown on the Future Land Use Map 2025. Therefore:

- This map is not adequate for legal boundary or regulatory interpretation.
- This map is not suitable for specific development purposes.
- The area identified as “Urban Development” is intended to include varying levels of development and will also include areas of protected greenspace that may not appear on the map.
- The “Centers” depicted are for illustrative purposes and are not intended to designate specific geographic boundaries.

Figure 121-02(1)
Future Land Use 2025



Urban Services Boundary

As noted previously, a major new concept of this edition of the *State Land Use Policies and Plan* is delineation of an Urban Services Boundary on the Future Land Use Plan Map. The intent of showing an urban services boundary is to denote a significant demarcation in urban pattern – the future boundary of areas that should be more urban in character versus those that should retain a more rural character. In other words, the “urban/rural” systems approach. It provides an indication for planning purposes of areas where a higher level of public services exists or is anticipated to be available to accommodate more intensive development. Conversely, public services in areas outside the Urban Services Boundary are anticipated to be more limited, and planned development intensities should accordingly be lower. Furthermore, land outside the Urban Services Boundary may be best suited for reservation as conservation areas and productive rural resource lands.

The Urban Services Boundary may be considered a general bound of the areas within which public services supporting urban development presently exist, or are likely to be provided, through 2025. Within this urban services area, most land is served by public water service and many areas have (or will have) public sewer service available as well. Public transit service is generally available, with high-density corridors providing frequent headways. These fully serviced areas should be regarded as a scarce resource, that absent significant constraints, should be developed (or redeveloped) at higher intensities and densities so as to optimize the significant public infrastructure investment.

Note: Several watersheds and other sensitive resource areas that presently have public water service have been excluded from the Urban Services Boundary, indicating that protection of the resources involved must be a principle concern limiting future development intensity potential.

Growth Areas

Growth Areas are areas intended to accommodate the State’s anticipated growth needs through 2025. They include both (currently) developed areas that are suited for maintenance, infill, and reuse, as well as (currently) undeveloped areas that are suited for new development. Growth Areas fall into two categories: 1) areas within the urban services boundary, shown as two map categories – Urban Development and Sewered Urban Development; and 2) centers, *shown illustratively on the map*, both inside and outside the urban services boundary.

Urban Development and Sewered Urban Development

Areas within the Urban Services Boundary found to have potential to accommodate development are designated as these two categories. The categories include land on which development is already in place and may include underutilized lands (such as abandoned or derelict commercial and industrial sites). Such developed land presents opportunities for meeting the State’s growth needs through maintenance, infill, and reuse.

The categories also include undeveloped land whose location and characteristics make it suitable for development.

The Sewered Urban Development category is depicted on the map to show the limited areas within the Urban Services Boundary that have public sewer service available. These fully serviced areas should be regarded as a scarce resource, that absent significant constraints, should be developed [or redeveloped] at higher intensities and densities so as to optimize the significant public infrastructure investment.

Priorities for developed lands in the urban categories are maintenance and enhancement of productive uses and re-use of underutilized areas to accommodate growth at intensities that efficiently utilize available services.

Typical uses in these categories include residential of varying types and generally of medium (1-2 dwelling units per acre) to high (5+ dwelling units per acre) densities (with many areas at substantially higher densities exceeding 20 units per acre, see Figure 121-03(1) for examples), along with substantial commercial, industrial, mixed, and institutional uses, and supporting infrastructure (transportation, utilities, parks, and recreation areas).

Uncommitted land within the Urban Development and Sewered Urban Development categories is generally capable of accommodating various intensities of urban-type development. Some undeveloped areas have few resource constraints and have, or are likely to be provided with, urban-level services including public water, transit, and in some locations sewer service, by 2025. In these high capability/serviced areas, the priority is development with intensities and residential densities that mirror existing urban developed lands and enable efficient provision and utilization of public services including transit.

Other areas of uncommitted land may have some resource constraints, but have, or are likely to be provided with, some urban-level services, especially public water service, by 2025. These areas are generally capable of accommodating a medium level of urban development. They would generally include residential uses at average densities of 1 to 5 dwelling units per acre (with some areas of higher density), including single-family dwellings (attached and detached), garden apartments and similar multi-family complexes. They may include areas of mixed residential, commercial, and low-impact industrial uses, as well as office/industrial areas and supporting institutional uses and infrastructure. Areas with just public water service and few development constraints are capable of moderate intensity development with residential densities of between 1 and 5 dwelling units per acre.

Other undeveloped areas within the Urban Development category have site and/or resource constraints, or limited services. Such areas are more appropriate for lesser development intensity. Residential uses in such areas will tend to be at the lower end of the density range – an average density of under one dwelling unit per acre, and significant areas would be expected to be reserved as open land (farmland, forests, wetlands).

Conservation/open space-style development and similar techniques should be relied upon to limit development intensities and impacts and to conserve land within portions of the urban services area having development constraints and/or limited services. Small commercial or mixed-use areas to service local needs, and isolated, low-impact industrial uses and supporting infrastructure would also be encompassed.

Although undeveloped land within the Urban Services Boundary was generally found to be suited for various intensities of development, it is important to also note that some areas have significant resource values or are locally important sites such as greenway corridors or scenic viewsheds. Such areas are appropriate for conservation via public or private land protection efforts.

Centers

Centers are compact developed areas containing a defined central core that accommodate community and regional needs for residential and economic functions. Centers are intended to provide optimum utilization of land and services, and offer a higher density diverse housing stock, commercial, industrial, office, cultural, and governmental uses. Density will vary greatly between centers, however, they will share the common characteristic of compact development (see Figure 121-03(2)) for some local examples). Centers characteristically are developed with a human scale of blocks, streets, and open spaces, offering easy walking and access to transit where available. In suburban areas, centers should be distinguished from surrounding development by a more cohesive development form and closer proximity between residential and non-residential uses. In rural areas, centers should be surrounded by natural areas, farmland, or open space, and may have a commercial area in the core for neighborhood-scale goods and services. Note: Centers depicted on the Future Land Use 2025 map are illustrative of *potential* new centers that may be established. Existing centers are generally not shown and other new centers may be proposed through local initiative.

Future Rail Stations

New rail stations can and should provide an impetus for new centers or other transit-oriented development. Several new passenger rail stations have been conceptually proposed or planned for through 2025 however, it is important to note that not all may be realized.

Conservancy Areas

Conservancy Areas include lands that are most suitable for conservation uses, and lands outside the Urban Service Boundary that are not needed to accommodate the State's growth needs. In these categories, it is recommended that growth and development not be encouraged or supported.

Conservation / Limited Development

This category includes uncommitted land that possesses significant resource values requiring protection. These areas are best suited for resource protection, sustainable resource production, and associated low intensity/low-impact uses compatible with protection of resource values. Transfer of development rights, conservation-design subdivisions, and similar land management techniques should be relied upon to limit intensities of use, emphasize compact development, minimize resource impacts, and to conserve open land within these areas. Residential densities should average no more than 0.25 dwelling units per acre, with substantial areas of protected land and/or working lands (agriculture/silviculture) included. Development within these areas must adhere to stringent standards for water management and best impact avoidance practices.

Reserve

This category includes uncommitted open land that would be not required to accommodate the State's development needs through 2025. While these areas are generally capable of supporting varying types and intensities of development, public development assistance must be carefully balanced with the objectives of retaining the State's rural working landscapes (agriculture/silviculture), protecting resource values, and providing a reserve of land for future use, beyond 2025. Transfer of development rights, conservation-design subdivisions, and similar land management techniques should be relied upon to limit intensities of use, emphasize compact development, minimize resource impacts, and to conserve open land within these areas.

Committed Use Areas

The future map also shows areas that are presently committed to a particular land use or intensity level. In most cases, these uses are recommended to continue in their present status.

Non-Urban Developed

This category includes developed land that is outside of the Urban Services Boundary. These areas generally lack public water or sewer service, and are not anticipated to have such services by 2025. Uses include residential, generally at medium to low (<1 dwelling unit per acre) densities, as well as some areas of commercial, industrial, mixed use, and associated supporting land uses (institutional, utilities, park facilities, etc.) Maintenance of these uses in productive use via enhancement and limited expansion is anticipated.

Prime Farmland

This category includes active prime (identified as Prime Farmland Soils by the U.S. Department of Agriculture's Natural Resources Conservation Service) farmland as a committed use. Active prime farmland should be maintained in agricultural production or as a strategic food supply reserve for the future.

Narragansett Indian Tribal Lands

This category is comprised of land subject to the 1979 Land Claim Settlement Agreement between the Narragansett Indian Tribe and the State of Rhode Island. This category is shown for illustrative purposes and a future use potential is not described for these lands by this Land Use Plan. However, pursuant to the Settlement Agreement and subsequent State legislation, use of these lands is to be subject to a Land Use Plan for the Land Claim Settlement Area accepted by the Tribe and the Town of Charlestown, and no less than 75 percent of the lands subject to the Agreement are to be retained in conservation uses.

Transportation Infrastructure

The map also indicates major existing transportation infrastructure, including State airports, major highways, and active rail lines and existing stations, which are expected to be maintained and enhanced.

Major Parks & Open Space

This category includes lands held by federal, State, and local governments, and private non-profit conservation organizations for public recreation or conservation uses. Land in this category may or may not be permanently protected. Note: not all park and open space lands are shown due to scale and data limitations.

Summary

The area within the Urban Services Boundary, along with potential Centers outside of the Boundary, are identified as the optimum areas for accommodating the bulk of the State's development needs through 2025. They are areas where growth, be it new development or reuse, infill, and re-development of existing committed urban land at more intensive levels, should generally be encouraged by State and local policies and investment programs. They are areas where the most change is anticipated in the future. Other areas also include lands that were shown through the geographic analysis as being more suited for conservation uses, and lands outside the Urban Service Boundary that are not needed over the next twenty years to accommodate the State's growth needs. In these categories, it is recommended that growth and development not be encouraged or supported.

While the plan's analysis is based on 1995 land use data, examination of 2003 – 2004 aerial photography confirms that there remains sufficient undeveloped land within the urban services boundary to accommodate the State's land use needs within the time horizon of this plan. Moreover, this approach is validated by analysis of recent large-scale commercial, industrial, and residential investment activity within the State that has located almost exclusively within the proposed boundary.

PART THREE

**WHAT ISSUES DO WE NEED TO BE
CONCERNED ABOUT IN GETTING THERE?**



PART THREE: WHAT ISSUES DO WE NEED TO BE CONCERNED ABOUT IN GETTING THERE?

In the Part Two, we set forth a vision – where we would like to be in 2025 – with goals and objectives to measure our progress along the way, policies to guide us, and a Future Land Use Map. To achieve this vision, we must anticipate issues that will challenge us and develop strategies to meet them. This requires understanding how elements of the planning process are interrelated and how land use policy is fundamental to it. What follows is a discussion of those issues in a format that replicates the established, interrelated, intergovernmental planning process in Rhode Island – the local comprehensive plan.

3-1 Land Use

This Plan favors concentrating future development and most land use activities in the already developed and serviced, mostly urban areas, and conserving the natural resources and rural character of non-urban areas. However, existing conditions present profound challenges to that goal:

- Rhode Island has approximately 480,000 privately owned parcels, and property owners have the right to develop those parcels for uses permitted by existing zoning.
- Nearly two-thirds of Rhode Island has no public water and sewer service and, decades ago, public health authorities established a two-acre minimum lot size for single-family houses dependent on private wells and individual septic disposal systems (ISDS). This is the primary public policy rationale for the large-lot zoning that currently applies to approximately 60 percent of the State's land.
- Rhode Island's property tax situation, particularly the municipalities' dependence on property tax to fund local education, presents a number of problems: it has motivated the flight of the middle class from the core cities, and puts great pressure on rural towns to develop a larger commercial and industrial tax base. Moreover, it leads to community resistance to increasing the amount of affordable family housing.
- Current State and municipal regulations may not allow the degree of density of development this Plan recommends. Building heights, and provisions for water and wastewater, appear to be particular constraints.
- The vast majority of urban areas already contain considerable development, and some of the structures and districts have deteriorated over the years and need considerable renovation. There are some good infill possibilities, however, calling for a general policy of preservation, restoration, infill, redevelopment, contextual design, and incorporating more greenspace and public amenities.

To achieve this vision we must anticipate issues that will challenge us and develop strategies to meet them.

- Rhode Island’s land management enabling laws allow municipalities to employ modern techniques such as conservation development and development rights transfer programs, but these have not been extensively relied upon to direct growth. Limited local capacity and a need for technical assistance on these complicated tools may be causative or contributing factors.

The successful development of urban areas and conservation of non-urban areas are intertwined, as Grow Smart Rhode Island has documented in their report, *The Costs of Suburban Sprawl and Urban Decay in Rhode Island*. According to Grow Smart, “Rhode Island can solve its suburban sprawl problem only if it solves its urban decay problem.”

The suburban sprawl pattern of development of low-density, large-lot and scattered building consumes an unnecessarily large amount of natural resources and requires redundant capital investments in public facilities and infrastructure. The fragmented nature of sprawl makes organization into well-functioning centers, neighborhoods and districts extremely difficult. In as small a State as Rhode Island, it is wasteful in the extreme, but this is where we are headed if we continue to develop in a way consistent with current practice (see Figure 121-01(2)).

The cost of sprawl is borne by all Rhode Islanders. In 1999, Grow Smart estimated that staying on this course over the next 20 years “will cost taxpayers almost \$1.5 billion, a figure close to the total annual State budget.” Sprawl greatly increases public costs of all kinds, including new roads and utilities (public water and sewer, gas, telephone, etc.) to new developments, and introduces inefficiencies in serving a widely scattered public with such basic services as school bus transportation, public transit, police, fire, and ambulance services, and home health care.

There are societal costs as well. Both segregation and isolation of Rhode Islanders are aggravated by sprawl because it often leads to communities of uniform land uses – mostly single-family houses of the same type and for the same income bracket. Sprawl requires that households have mobility in order to access community facilities and shopping. Sprawl isolates those who are not mobile, particularly the elderly and children, from community institutions and everything from after-school programs to senior centers. Recent studies have linked sprawl with health problems related to inactivity.

Two Land Use Approaches Are Needed: Urban and Rural

Mindful of Grow Smart’s conclusion that sprawl and urban decay must be addressed together, this Plan calls for Rhode Island to pursue two significantly different but compatible land use strategies, an urban and a rural approach. Directing land development in the urban areas is the more complicated of the two but offers exciting possibilities for guiding and controlling future land use. The intention is to revive urban centers as attractive, well-functioning places to live and work, inasmuch as they are intended to contain perhaps 90 percent of the State’s residences and most of the intensive land uses. This strategy will not be cost-free--concentrating development within urban areas will require investments in upgraded infrastructure (much of which is old and in

need of replacement), expanded facilities (such as parks and open space), and enhanced services (such as improved urban school systems). But, an urban concentration strategy is more efficient than continuing to support exurban migration by providing new facilities and services in rural communities while allowing the investment in urban facilities to be underutilized or decay.

The implementation strategies (Part Five) of this Plan follow the urban/rural approach. Scenarios are reviewed that call for changes to public sector land management activities and fiscal policy, mindful that the status quo presents considerable constraints and challenges. They can be summarized as follows:

Urban Areas

Disincentives for redevelopment are considerable. Among the constraints are:

- Redevelopment being generally more expensive and complicated than greenfield development, with assembly of parcels from different owners and remediation of conditions such as industrial contamination, and deteriorating structures and utilities a likely necessity.
- Decayed urban neighborhoods seen as unattractive and unsafe; initial reinvestment difficult to market, though there exist large areas of underutilized commercial and industrial properties that present important opportunities.
- Aging building stock is expensive to bring up to current standards and building codes.
- Perceptions of troubled urban school systems, which discourage investment in urban areas by middle class families.
- Poor and needy populations that are economically isolated, and stores and workplaces in their neighborhoods that have been abandoned as well.
- Gentrification adding pressures to the poor and needy as neighborhoods improve.
- Lack of focused redevelopment planning for most of the underutilized commercial and industrial districts as well as for commercial highway strips in urban areas.
- Lack of suitable sites for some new and desirable uses, such as high-density residential and multi-story commercial and industrial buildings.
- Minimal investment in public greenspace and minimal attention to urban rivers resulting in degradation of water quality.



- Lack of required landscaping and buffer requirements for streetscapes and for screening parking and unsightly areas, and between different types of uses.
- Height restrictions prohibiting uses taller than 35 feet in much of the urban area.
- Deteriorating public infrastructure and the lack of public sewer service in approximately half the urban areas.

Rural Areas

Some Rhode Island communities lack practical plans for alternatives to sprawl development. Among the constraints are:

- Difficulty in coordinating town-wide and regional open space preservation efforts given the many State, regional, local, and nonprofit entities involved.
- Pressures on land use decision-makers to increase the property tax base and to fund local services, in particular, education.
- Lack of infrastructure to support density/intensity in centers and neighborhoods.
- Lack of diversity (in typology and mixture) in existing and planned building stock.
- Need for permanent protection for priority natural areas.
- Danger of loss of agricultural lands as well as loss of overall rural, open space character and unfragmented forest reserves.
- Segregation, homogeneity, and isolation of land uses and population.



Matching Development to Capacity of Resources

In order to properly match land development with the capacity of land and water resources and to protect ground and surface water quality and quantity and aquatic habitat, decisions concerning future development should always take into account several important issues:

- limiting the amount of impervious surface area
- adequacy of stormwater management and conservation practices
- adequacy of wetland and riparian buffers

- wastewater system design and capacity
- water system design and capacity
- adequacy of water supply sources

These issues are equally important for development within the urban services boundary and outside the urban services boundary. For communities within the urban services boundary, addressing these issues will promote groundwater recharge and water quality improvement. For communities outside the urban services boundary, consideration of these issues should guide towns in their evaluation of land and water capacity as they determine appropriate levels and intensity of development for different areas.

The consideration of these factors, combined with good site characteristics and a community's desire to promote village development, provides the potential for a mix of uses and housing densities that could be considerably greater than what typical rural, low density zoning would otherwise achieve. If coupled with open space preservation, we can attain a model for rural development that fulfills the vision of compact centers surrounded by agriculture, open space, and very low density development.

The Future Land Use 2025 map (Figure 121-02(1)), recommends limited development in large areas of the State lacking infrastructure, or having resource constraints; and a concentration of development and higher densities in areas having adequate facilities and services. To achieve this vision while safeguarding the legitimate property interests of private landowners, it may be timely for Rhode Island communities to explore and embrace several authorized land development techniques that have not traditionally been extensively relied upon in Rhode Island.

Transfer of development rights (TDR) programs for example, offer a means for communities to concentrate development in the best suited areas that they have planned for growth and higher densities, while limiting development of sensitive areas. TDR programs, as the name implies, provide a legal means for making the right to develop at a certain density that is embodied in enacted zoning, portable, allowing it to be transferred geographically, thereby directing growth and development to areas suitable and designated for higher densities (receiving zones), and away from areas where development is not desired (sending zones). Properly crafted, such systems can offer a market-based solution that allows landowners' economic expectations to be realized while protecting important resource areas, and allowing a concentration of density in areas where that is both desirable and productive (e.g., to support walkable village centers).

There are, of course, obstacles to be surmounted if TDR and similar programs are to become more widespread and accepted. The programs are complicated and require a degree of sophistication in administration. State technical assistance will likely be required. Regional programs that would look beyond a single community (which might be desirable in some parts of the State) may require additional enabling legislation, and might also require a complementary means for addressing related issues such as

compensation for services needed by residents who occupy new development transferred from other communities. All of these issues will require study and discussions; but the technique bears investigation as a potentially valuable tool in keeping the urban-rural distinction that this plan recommends for Rhode Island’s future landscape.

3-2 Housing

Shelter is a basic human need, and it is a public responsibility to encourage and guide development of a housing supply that meets this need for the entire population. In today’s market, many poor, working class, and even middle class Rhode Islanders are faced with paying more for housing than they are reasonably able to afford. We must strive to address the quantity, quality, variety, accessibility, and affordability of our housing stock. This is called for in the *Rhode Island Five Year Strategic Housing Plan 2006-2010*, and land use policies have significant implications in this regard.

Rhode Island’s supply of housing is out of balance with housing demand. The Office of Federal Housing Enterprise Oversight has reported the change in home prices in Rhode Island continues to be one of the highest in the nation. While this trend has been most pronounced within the last five years, the figures remain staggering when viewed over the long term.

Table 121-03(1)

**PERCENT CHANGE IN RHODE ISLAND HOUSING PRICES
THROUGH SECOND QUARTER, 2005**

Period	% Change	U.S. Rank
1 year	16.72	10
5 years	100.70	3
25 years	469.61	2

Source: Office of Federal Housing Enterprise Oversight (2005)

While these figures may seem like good news for homeowners, the opposite is true for those entering the market. Since 1984, per capita income in Rhode Island has increased by 260 per cent compared to housing price increases of almost 470 percent. The gap between housing prices and incomes may account for the fact that Rhode Island ranks 47th nationally in housing units that are owner occupied.

The present situation of extraordinary pressure and imbalance in housing comes from a combination of factors. Regarding supply:

- 80 percent of Rhode Island’s residentially planned land that has not yet been developed is planned for low density development (less than one unit per acre).

- Less than five percent of Rhode Island’s residentially planned land that has not yet been developed is planned for high density housing development (one quarter acre or less per unit).
- Loss of significant numbers of apartments over the past 20 years as a result of demolition of some public housing complexes and multi-family houses within older urban areas as well as conversion of units to condominiums.
- Loss of significant amounts of agricultural land and the affordable housing that was associated with the farms.
- Local zoning that limits the areas provided for other-than-single-family residences. Multi-family use is often not allowed “by right.”
- Building caps, moratoria, and locally imposed impact fees that have been enacted to limit development and to control associated costs and increases in the property tax.
- Recent building permit activity has been the lowest in decades, with Rhode Island recording the lowest percentage increase in the nation in 2002-2003.
- Housing production has largely been chasing the high end of the market, as there is little incentive for developers to build anything other than high price/high profit luxury homes.

Demand factors include:

- Modest population growth, with considerable in-migration from other states.
- Growing retirement and seasonal communities.
- Rising immigrant populations in the core cities.
- Decreasing household size, resulting in a disproportionate increase in housing demand compared to population growth.
- The lowest mortgage interest rates in over 40 years, broadening demand and allowing sellers to raise prices.
- Significant price differentials between the Metro Boston and Rhode Island housing markets, bringing increasing numbers of Massachusetts consumers into Rhode Island, adding to the price competition for housing.
- College students and working class families becoming direct competitors for housing units in mostly older neighborhoods. Rhode Island has nearly 85,000 students enrolled in post-secondary education, which exerts considerable pressure on housing availability.



Local Regulations Discourage Higher Development Densities

Clearly a significant limiting factor in the supply of affordable housing is local land management regulation. The mismatch between the carrying capacity of local sites and the regulated allowable density is the most obvious issue. As housing development has shifted towards outlying suburban and rural areas our residences have come to be built at much lower densities than the patterns found in traditional neighborhoods of Rhode Island's cities and in the village centers of rural and suburban towns.

The norm of recent residential growth has become single-family units on individual lots, and lot sizes have become larger and larger over time as development has spread into communities desiring to retain a rural character. While in the past our neighborhoods and villages of single units on small lots, duplexes, walk-up apartments, and triple deckers may have housed residents at a net density of 25 to 40 dwelling units per acre, the norm in modern residential development in outlying areas is to require lots of one or more acres for each new single family home. Somewhere along the line, our paradigm shifted from putting *multiple dwellings on each acre* to requiring *multiple acres for each dwelling*. While done for a number of laudable reasons, the stark reality is that large-lot requirements are a significant driving force behind the dramatic increase in land consumption in the residential sector as documented in Part 1, and in the escalating cost of housing.

To help address its housing needs, and to develop in the compact, efficient pattern recommended in this plan, Rhode Island and its communities need to find a means to accommodate housing at higher densities within defined areas that they identify as suitable (or which can be made suitable) for such development. We must find ways to replicate some of the best examples of our past development patterns – villages and neighborhoods that add to Rhode Island’s charm and distinctiveness – places like Providence’s Smith Hill and Elmwood, historic Bristol and Newport, and Woonsocket’s Constitution Hill, to name just a few.

Examples of these types of higher density development and others that have recently added to the local landscape are provided in Figure 121-03(1). These include many affordable housing developments as highlighted by the Housing Network of Rhode Island.

The public aversion to density is, in part, inspired by past examples of mediocre developments. Standards requiring high quality design and construction in new development can be instrumental in gaining public acceptance of increased density as attested to by the examples cited. Design treatments allow denser development to fit in with its surroundings and compliment prevalent architectural styles. The public must be assured that as new forms of denser development are proposed, that community officials will have, in place, affordable design standards and criteria that assure developments that contribute to the character of the community.

As demonstrated in the alternatives scenario analyses (see Part Four), there exists significant acreage within the urban services boundary that can support higher development densities. In fact, these analyses are likely to underestimate the resource, as they are limited to land classified as “undeveloped,” while recent trends have tended toward redevelopment of existing buildings – an activity now primed by historic preservation tax credits.



One example is the reuse of former mill buildings, which typically offer large amounts of floor area, multiple stories and central locations. Mills seem ideally suited for affordable housing and should also be considered for commercial, light industrial, or mixed use (e.g., artists’ lofts with gallery and studio space). Unfortunately, there is pressure on these properties, too, to be converted to high-end apartments or condominiums.

Redevelopment of vacant and abandoned properties is Rhode Island’s number one smart-growth opportunity. While much of the State’s old building stock – housing in particular

FIGURE 121-03(1)

EXAMPLES OF HIGHER DENSITY RESIDENTIAL DEVELOPMENT IN RHODE ISLAND

Compact Single-Family Detached 8-12 units per acre			
	Church Community Housing Corporation Newport	Smith Hill Community Development Corporation Providence	
Two and Three Family Units 8-16 units per acre			
	Stop Wasting Abandoned Property (SWAP), Providence	Blackstone Valley Community Action Program Pawtucket	
Multi-Family Walkup Flats and Apartments 16-50 units per acre			
	<i>The Governor</i> Omni Development Corporation Providence	<i>River Haven</i> <i>Condominiums</i> SMC Corporation, Woonsocket	
Multi-Family Elevator Apartments 50-200 units per acre			
	<i>The 903</i> Athena Group LLC & Paolino Properties Providence	<i>Residences</i> <i>at the</i> <i>Westin</i> The Procaccianti Group, Inc. Providence	
Mixed-Use Residential-Commercial 40+ units per acre			
	The Elmwood Foundation Providence	<i>Grandville at</i> <i>South County</i> <i>Commons</i> South Kingstown	

– needs to be upgraded, the advantages of convenient location, established infrastructure, and proximity to community amenities are strong incentives to do so. Public water and sewer allow for more density, and multiple units on a single lot may be a significant private or public investment opportunity.

However, in spite of these infill opportunities there will remain pressure to develop our rural landscape. The growth centers concept offers an opportunity to support more compact growth within designated rural centers that often lack the infrastructure to sustain the type of density found within the urban services boundary. There are often unique environmental constraints that must be fully assessed and mitigated to support any significant increase in development density. Nevertheless, there remain opportunities to target both existing and planned centers as the focal point of rural development, although it may require additional technical assistance by the State to bring this concept to fruition. A sampling of some of these potential centers and the issues that must be addressed are presented in Figure 121-03(2).

A New Legislative Framework for Affordable Housing Production

The 2004 amendments to the State's Low and Moderate Income (LMI) Housing Act base a solution to the problem of affordable housing on a planning response that, in many respects, attempts to address the constraints on supply. Among the specific planning aspects of the legislation are requirements that:

- Amendments to local comprehensive plans, where necessary, include an Affordable Housing Plan that identifies specific, quantified strategies to achieve the LMI Housing Act's goal of having at least 10 percent of every community's housing units subsidized and affordable to low- and moderate-income households.
- The State Planning Council adopt a *Strategic Housing Plan* with guidelines for higher density development, including inclusionary zoning and mixed-use development, as an element of the State Guide Plan.
- A Geographic Information System (GIS) dataset of areas of the State suitable for higher density development be developed.

Communities have responded with plans that include strategies that will increase the allowable density of different types of housing. In many cases, affordable housing will be accommodated in locally designated growth centers that are reflected on the Future Land Use 2025 map. These plans and the land suitability analysis that is a component of the Map responds to many of the requirements of the legislation, and form the foundation for the *Strategic Housing Plan* as a new element of the State Guide Plan. The State Planning Council is scheduled to adopt the *Strategic Housing Plan* and development guidelines in June 2006.

Figure 121-03(2)

Examples of Traditional Suburban and Rural Centers in Rhode Island

	<p>Planning for Environmentally Sound Centers...</p> <p>This figure illustrates three traditional centers in suburban and rural Rhode Island communities. Centers are conceptually shown on the Future Land Use Map (Figure 121-02(1)) as a means to accommodate higher density development, concentrate growth, and minimize future sprawl.</p> <p>Concentrating development in centers offers many land use benefits, but must be based upon community and site planning that carefully matches the type and intensity of use with the capability of the area to accommodate growth.</p> <p>Among many planning considerations, the following environmental factors must be given careful attention in planning for new or expanded centers, particularly in areas lacking public services:</p> <ul style="list-style-type: none">• Water Supply – Quantity, quality, operation and maintenance of new public systems, out of basin transfer, water withdrawal impacts to surface waters and wetlands• Water Quality – Waste water impacts to ground and surface water, storm water runoff, watershed impervious cover, existing water quality conditions• Wastewater Treatment – Applicable systems and limitations, operation and maintenance requirements, wastewater management districts• Hazardous Materials – Prohibition of specific uses and good management practices for handling and storage for permitted uses, including hazardous materials used by homeowners• Habitat – Impacts upon aquatic and terrestrial habitats• Site Suitability – Soils, wetlands, habitat, watershed location, groundwater impacts, agriculture, forest fragmentation
	
	

How This Land Use Plan Supports State Housing Plans

As noted earlier, the *State Housing Plan* calls for us to address the quantity, quality, variety, accessibility, and affordability of our housing stock. The *Strategic Housing Plan* adopted in June 2006, provides similar, though more targeted objectives that are grounded in specific and detailed development guidelines. The future land use vision described in this Plan addresses the goals of the former and establishes the foundation for the latter in the following ways.

By promoting residential development within the urban services boundary and growth centers, this Plan capitalizes on existing facilities and services, which allows for higher density, improved accessibility and greater variety. Density can equate to both increased quantity and affordability, while the services and facilities add to the quality of both the housing stock and the environment. The Plan and the Future Land Use 2025 map are predicated upon a detailed land use analysis that can identify areas and establish general guidelines suitable for higher density development. The achievement of the Plan's vision will rest, in part, on implementation of a State investment policy that provides the incentives necessary to reach these targeted levels of growth.



Will this be sufficient to address Rhode Island's housing needs? At the very least, the *Land Use Plan 2025* should stimulate State and local officials to re-examine the fundamental assumptions underpinning local zoning and land management in light of the State's pressing housing needs.

3-3 Economic Development

Economic development in Rhode Island is the story of the "new economy" replacing the old. It's research in our universities going commercial. It's artists' lofts bringing new life to old mill buildings. It's tourism and cultural activities in older cities that have suddenly become the places to be. It's taking advantage of our proximity to the Boston metropolitan area, our strategic location between Boston and New York, and the network of roads, railroads, seaports, and airports that link us to the rest of the country and the world. All the potential this suggests is enabled, or can be severely constrained, by land use decisions. Is Rhode Island's future one of community and opportunities for collaboration that feed the new economy, or scatter and isolation? Our answer will affect how well we capitalize on what we already have, and what we can become.

This Plan articulates a vision for a Rhode Island characterized by “dense centers of varying scales, both traditional and new...[for] housing, commerce and social interaction” (see Vision statement p.2-1) This is a model supportive of easier communication and cross-cultural exchanges, a variety of housing and lifestyle options, and the rediscovery and reuse of resources that for decades have suffered from disinvestment and neglect. Granting the greatest accessibility to daily activities to the greatest number of people, this model provides a friendly climate for entrepreneurs. Here they can interact freely with their peers, “pitch” their ideas, and make the new and creative economy grow.

Containing sprawl and establishing options to implement this model may well involve a major redrafting of our land use regulations on density, community design, and what is generally called *aesthetics*. However, the benefit will not be merely aesthetic; it will contribute to Rhode Island’s sense of place and *quality* of place. The Rhode Island Economic Policy Council talks about “a collective responsibility” on the part of all of us to maintain the State’s “rich mix of authentic places.” The Policy Council has posited quality of place as Rhode Island’s strong suit in the new economy, “a world where companies and the talent that drives them can locate anywhere.”

Developing and maintaining high quality places is crucial to Rhode Island’s economic future. They are as much a part of the business climate as tax incentives for research and development or good labor-management relations. In concert with sound transportation policies, they move people better, move goods better, and most importantly move ideas better, enabling the connections necessary in the new economy. Pride in our quality of place compels build-out to occur at an appropriate scale, and keeps us mindful of dwindling resources.

Land use practices directly affect energy use. The high cost of energy in Rhode Island is a strong disincentive to economic development. The model of “dense centers of varying scales” introduces efficiencies that can reduce energy use and lower energy bills. Methods of generating and distributing alternative and renewable energy can be tested and implemented more easily under economies of scale. Gasoline is conserved if more people can get to work or run errands without having to drive their cars. Mass transit is made more feasible by concentrating the number of customers in a service area, moving more people per unit of energy.

While renewable energy can pay for itself over the course of several years as it replaces expensive fossil fuels, conservation measures possible in walkable cities, towns and villages can help contain energy costs immediately. Because energy bills have bedeviled homeowners and companies in the Northeast for years, this will send a message to people and businesses looking to relocate in Rhode Island that we are bringing a longstanding problem under control.

Energy concerns, special places and networking opportunities aside, it is clear that density is essential for vital, sustainable communities. For centuries, Rhode Island cities and towns have been hubs of economic activity, and a rich history of commerce and

industry has resulted. Since the 1980s especially, Rhode Islanders have come to acknowledge the great potential that still exists in our urban centers. Downtown commercial buildings and former mill complexes are now being revitalized for a host of new uses – residences, retail centers, artists’ lofts, office spaces, business incubators, and light manufacturing facilities.

Rehabilitating and Reusing Underutilized Buildings

While it is good to see derelict properties rehabilitated and reused, planners should strive for a balance of uses – particularly when public assistance in the form of tax credits is involved. Conversions to fashionable residences should include worker-affordable housing. Former factories and mills should be considered for new commercial, industrial or mixed uses. Rezoning such properties exclusively for high-end residential use will miss the opportunity to use them, as they were in the past, to meet the broader needs of the community.

Traditional multi-story mills may no longer be ideal sites for heavy manufacturing because of new production methods, surrounding residential uses, or poor circulation through their neighborhoods. However, they should not be discounted as possible locations for offices, startup businesses or research facilities. In many of Rhode Island’s older central cities, these buildings dominate the inventory of industrial property. Some, such as those in Pawtucket’s arts district, are now housing new industries and cultural activities that could herald an inner-city renaissance. Would this happen if they were all converted to residences?



Having former industrial buildings or industrial-zoned parcels increasingly converted to residential use puts a premium on *all* industrial space. Vacancies in industrial parks are rare; a recent report in the *Providence Business News* has the figure “in the single digits, even the low single digits.” Quonset Davisville and the East Providence waterfront are redevelopment success stories rapidly unfolding, but there remains a dearth of “pad-ready” sites suitable for large operations. Some companies have been forced to leave the State to find suitable space, even though their roots are in Rhode Island.

The Future Land Use 2025 map recognizes the importance of using existing infrastructure in land use decisions and capitalizing on density. Some guidance is also necessary to identify large sites suitable for industrial development – existing and new, in the cities and in the suburbs – and reserve them as a valuable economic development resource. This is the subject of another State Guide Plan element, the *Industrial Land Use Plan*.

The Shoreline Region

The power of place is nowhere more evident than in Rhode Island's shoreline region. Many Rhode Islanders have strong emotional connections to communities and attractions along the State's coast, special places that have been important parts of their lives. Tourists from out of State are drawn every year to the area. Many of the fabled "cottages" of Newport of the late 19th and early 20th centuries were built by the rich and famous of New York. Block Island is called "the Bermuda of the North." Little Compton has the charm of old Cape Cod without the traffic.



Rhode Island's shoreline is remarkably diverse, including critical natural habitat, public and private beaches, summer colonies, historic villages, seaside estates, marinas and piers, and miles of rivers. But it also is a working shoreline, with Quonset and Davisville, oil tank farms, shipyards, naval installations, and major commercial fishing ports. Whether involved in maritime commerce, tourism, recreation, energy supply, military activities, or maintaining an ecosystem, coastal areas are an essential part of the history and future of Rhode Island.

Land development pressures in coastal areas have been steadily increasing for decades. Coastal communities must determine how best to protect the most fragile and valuable natural resources along their shores, avoid encroachment on working ports, provide generous opportunities for public access and recreation, and direct development away from areas subject to erosion and flooding from gale-force winds, storm surge, and sea level rise.

Land use controls are particularly important in the shoreline region. Strategies for resolving conflicts between competing uses must be in place. Local officials must recognize that new structures, poorly sited, may be extremely vulnerable to severe weather. Open space landward of sensitive features should be protected as a buffer to storm damage and erosion. Hazard mitigation plans should be developed to deal with potential problems before they become emergencies.

Transportation and Economic Development

The Interstate highway system and its interchanges created a series of new sites with excellent potential for commercial and industrial development – large tracts of undeveloped land with easy access to high volumes of traffic. This continues to be an attraction to this type of development. While much of this land has been identified in

municipal plans as future commercial and industrial sites, the implications of such development need to be carefully evaluated at both the State and local level.

The same holds true for large stretches of road frontage along major State and local highways and at their interchanges that are designated on Future Land Use maps for highway commercial/industrial or mixed-use development. Inasmuch as the value of this land is a product of public investment in the transportation infrastructure and its development will shape the perceptions, function and identity of the area, the State has a vested interest in these areas.



In the past 50 years, this substantial undeveloped acreage has encouraged much of Rhode Island's commercial and industrial activity to move from the urban centers to the inner-ring suburbs, to be near, or nearer, the Interstate highways and airports. Large commercial and industrial enterprises are certainly drawn to them because so many goods move nowadays by truck.

The availability and apparent attractiveness of these sites portends future development further from the State's existing centers, infrastructure, and concentrations of employable population. This may suggest a conflict with the development model mentioned elsewhere in this Plan; on the other hand, it is likely that some accommodation will be necessary to be able to provide new industrial sites for large operations that would be forced to move out of State otherwise, simply because there is not adequate space for them in existing urban or suburban centers.



The central tenet of the *Industrial Land Use Plan*, "match the plant to the land," should be applied in these situations. Matching the plant to the land means considering the needs of the operation and the sites that are available. This takes into account the production and distribution process (whether for goods or services), the building footprint, and the number of employees anticipated. The rule becomes, where possible, use what already exists. Where necessary, build new and extend the infrastructure, but do not do so haphazardly. Always work at the appropriate scale, and at the appropriate site. The appropriate site may well be undeveloped acreage along a transportation corridor.

Sensible Land Use Policies Support Economic Development

In sum, this Plan supports sound economic development policies, and does so in a variety of ways. It recognizes the importance of transportation, to “move people better” and “move goods better,” strategies the Economic Policy Council recommends. It promotes reuse of what in many cases is an underutilized resource, existing urban and serviced areas, while not ruling out new development along important transportation corridors. It emphasizes the role played by Rhode Island’s quality of place in making this a desirable tourist destination and place to live and work. And it seeks to optimize the use of working waterfronts such as Quonset Davisville and Galilee, building these facilities out to an appropriate scale respectful of other uses of Narragansett Bay.



3-4 Natural and Cultural Resources

The conservation and protection of natural resources has a direct effect upon the land use pattern in the State. Natural resources are a defining component of community character but also cross jurisdictional boundaries, and some are in jeopardy because of land use pressures and practices.

Agricultural Lands

Agriculture is a business producing greater than \$100-million annually in Rhode Island. Farms are an important component of the State’s landscape, local community character, and biodiversity. Spiraling land costs and competing uses are driving conversion of farmland to other types of development.

Urban and suburban areas encroach on agricultural lands throughout the State, creating the pressure to convert farmland to non-farm and urban uses. Additionally, land taxation, labor and fuel costs, weather, and other factors create constant challenges to farmers to keep their operations viable. State and federal efforts to support retention of farms include purchase of development rights to farmland, taxing farmland at reduced rates, and assisting farmers in developing new products and market opportunities and solving environmental concerns.



The Future Land Use 2025 map identifies areas of active farms on prime agricultural soils. These areas are recommended for continuation as farms in the future and are shown on the map as a committed use to be continued.

Natural Habitats and Forests

Rhode Island sustains a wide range of plant and animal life for its small size. As urbanization continues, the State's ecosystems will see a decline in the spatial extent and connectivity of natural habitat. Moreover, as cleared areas, roads, buildings, and other human-made environments surround forest patches, they will become more isolated and fragmented.



This hurts not only plants and animals, but people as well. Forests are believed to have a significant role in reducing greenhouse gases and enhancing air quality. In the forest, carbon is stored as biomass in vegetation. One potential mechanism to offset carbon emissions is by increasing carbon sequestration in forests. State Guide Plan Element 156, *Urban and Community Forest Plan*, has policies to stabilize overall forest cover at or near the present level, and gradually repair the forest canopies of urbanized areas to the level recommended for proper ecological functioning.

Forests, like agricultural lands, are under increasing pressures to become developed. The *Rhode Island Forest Resources Management Plan*, State Guide Plan Element 161, says that management for traditional wood-based forest products is difficult in Rhode Island because of small parcel size. The most valuable type of forest for commercial lumber production in the State is the white pine forest. Ironically, the soils where white pines grow are also the most valuable for residential subdivisions; the soil qualities that allow the white pines to grow are also ideal for on-site septic system drainage.

One example of how human use is encroaching on forestlands is the Pawcatuck Borderlands, presently the largest unfragmented forest in the urbanized Northeast corridor between Boston and Washington, D.C. Traffic is escalating on local roads and highways in the areas, preventing wildlife from migrating between habitats. Finite water resources are being consumed, impacting both the quality and quantity of water in local watersheds. While nearly 40 percent of the Borderlands are already protected in Connecticut (as the Pachaug State Forest) and Rhode Island (as the Arcadia Management Area), the remaining land's rural character is under pressure from development.

The Future Land Use 2025 map considered “forestlands (greater than 300 acres)” as a key resource. Generally, areas of forestlands are recommended for low-intensity development, conservation, and/or reserve within the Conservancy category on the map.

Coastal Resources and Narragansett Bay

Narragansett Bay is recognized as a nationally significant estuary and is one of the most densely populated estuary systems in the United States. It is the State’s most dominant



and important natural resource. Its economic development role within the broader “shoreline region” has already been discussed.

Urbanization, particularly along barrier beaches and coastal ponds has caused considerable modification of the coastline and perhaps a significant threat to the State’s coastal resources.

The quality of water in the Bay has been degraded by point source discharges, combined storm water overflows, silt, and runoff from paved surfaces. Its floodplain has been altered and/or encroached upon. Access is often cut off by development.

Narragansett Bay is host to multiple uses. The State’s largest urban waterfront, roughly 24 miles of Bay shoreline bordering the cities of Cranston, East Providence, Providence, and Pawtucket, is within the urban services boundary delineated on the Future Land Use 2025 map and will be a focus of future growth. The Rhode Island Coastal Resources Management Council (CRMC) is preparing the *Metro Bay Special Area Management Plan* to cope with the issues this may present, with an eye to provide a functional framework for future environmentally and economically sensitive redevelopment of the waterfront in the four cities.

Development in coastal areas must balance the need and desirability of a coastal location with the inherent hazards of shoreline erosion and exposure to periodic flooding and storm surges. Climatic change and sea level rise introduce the potential for more frequent and/or severe storm events, adding to the threat to improperly sited or constructed coastal area structures. Flood mitigation strategies should include acquiring particularly vulnerable areas for conservation uses to preclude construction there. Where development is permitted, “best practice” standards need to be followed that address structural design and construction, setbacks and buffer areas, limits on shoreline

modifications, the capacity of floodplains to store or convey floodwaters, and the extent of damage after a storm.

Wetlands

Rhode Island has many valuable wetlands and wetland systems in all parts of the State. Urbanization and transportation projects, particularly along major river systems, have caused considerable modification of our wetlands and continue to threaten them and their flood control capacity. The forested swamps of Providence, Kent, and Washington counties face the greatest potential impacts from continued population shifts and associated development. Protective buffers notwithstanding, the estuarine habitat of the State will remain under constant pressure from increasing development of surrounding uplands and tributary watersheds.



The restoration of degraded wetlands has become an important goal for Rhode Island. State Guide Plan Element 155, *A Greener Path: Greenspace and Greenways for Rhode Island's Future*, called for restoring 100 acres of degraded wetlands per year.

In the Land Suitability Analysis outlined in Part Four, wetlands were identified as a natural resource of State significance. Wetlands were one of the eight key natural resources layers used in assigning initial land intensity potential classifications for the Future Land Use 2025 map. Wetlands are recommended for conservation in the future and are shown as a Conservancy Use on the map.

Surface Water and Groundwater

Surface water resources are crucial not only for people as drinking water and for recreation, but also for other forms of life in various ecological communities. Many species of food and game fish and other wildlife depend upon streams for breeding, maturing, watering and feeding areas. Clean water in surface water bodies contributes to the overall health of our environment.

State Guide Plan Element 162, the *Rhode Island Rivers and Policy Classification Plan*, addresses this aspect of water resources. It endeavors to integrate water quality planning with land use planning and with planning for activities such as recreation and habitat preservation. The Plan is intended to provide clear, integrated, affirmative guidance for the management and the protection of Rhode Island's water resources at the State, local,

and especially the watershed level. Local watershed associations are encouraged to develop watershed management plans with a multi-objective management approach.

Although groundwater is directly related to surface water, it is an important resource in its own right. The two major uses in Rhode Island for groundwater are drinking water and irrigation. This is not to say that groundwater is immune from contamination. Once polluted, groundwater may not again be safe for drinking water use for many years, if at all.

In the Land Suitability Analysis presented in Part Four, water resources are identified as a natural resource of State significance. Water resources are four of the eight key natural resources layers. The Future Land Use 2025 map recommends that most of the areas designated as drinking water sources and other fragile water resource areas be limited to low intensity development, conservation, and or reserve within its Conservancy category. Generally, Rhode Island is thought to have widely available groundwater resources, but detailed information on the future quantity of these supplies is still under development by the Water Resources Board.

Cultural Resources

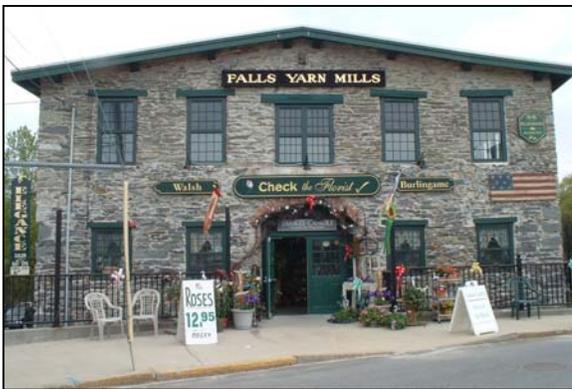
Rhode Island has a remarkable legacy of sites and buildings of historic, architectural, or archeological importance. In fact, we may have the greatest concentration of these resources in the country. More than 12,500 properties are listed on the National Register of Historic Places, having local, State, or national significance.

Rhode Island's cultural resources include historic houses and districts, buildings of architectural significance, landscapes reminiscent of the colonial era, historical sites, and archeological resources. Our cultural heritage is preserved in the tribal areas of the Narragansett Indian Tribe, in the settlement patterns of our many mill villages, and by mill buildings that were the birthplace of the Industrial Revolution. These resources create a rich context of community life. They give Rhode Island its own distinctive regional and ethnic character. Cultural resources play an important role in making Rhode Island a special place to live, work, and visit. Many of our State and local parks containing historic features and historic areas are among our favorite places to visit.

Fortunately, Rhode Island has shown a strong interest in identifying and preserving its historic and cultural heritage. Cultural resources have been well documented by the Rhode Island Historic Preservation and Heritage Commission (HPHC) in local historic surveys and in studies of individual sites and structures. Historic cemeteries have been inventoried and marked. Many State and municipally-owned properties are historic, associated with the most important persons and events of our past public life. They are also architecturally important, beautiful landmarks in prime locations, and true centerpieces in the life of our State and communities. Some of the most significant historic buildings and sites in Rhode Island are owned and maintained by historic societies, churches, and other not-for-profit and preservation groups. However, the vast majority are privately owned and maintained.

Restoration and maintenance of the historic building stock is an enormous challenge. Funding for protection, conservation, curation, and interpretation remains a patchwork at best, with many sources and a far greater need than supply. The incentives provided by tax act credits for commercial properties have been the single most effective means of restoring our historic buildings. However, restoration can be a daunting endeavor, especially considering the wear and tear many of our wooden historic structures have experienced. Still, the character of so many of our “special places” depends upon our continuing with this work.

Rhode Island has many outstanding examples of restoration and re-use of historic mill buildings undertaken in conjunction with brownfield remediation projects. Mill-built housing and working-class neighborhoods of historic three-deckers have increasingly been restored under publicly directed affordable housing programs using the historic tax credits. The State Building Code was amended in 2002 to address specialized issues of renovation within historic commercial structures.



In terms of land use, perhaps the most significant threat to the preservation of cultural resources is development in areas that are not protected by historic district zoning. The greatest risk involves new construction that is incompatible with its setting in terms of design, scale, site plan, or building materials, and which does not respect the historic network, view corridors, and vistas of the State.

By integrating a sense of the importance of our cultural heritage and “sense of place” into land use planning, the State and its municipalities can make a strong statement about how they will guide land use in the next 20 years. Ideally, preservation and development will exist in a harmonious relationship that will allow the State to grow and prosper. Retaining a balance between respect for the past and the needs of the future will ensure sound management of Rhode Island’s cultural resources.

3-5 Services and Facilities

Infrastructure plays an important role in defining a community and shaping development, but much of it is below ground and unseen. Our water and sewer systems are aging as they are some of the oldest systems in the country. Replacement of water lines to ensure quality service, upgrades of sanitary systems to eliminate inflow and infiltration of stormwater, and improved stormwater management districts are all needed. Upgrades in sewer treatment and replacement of poorly functioning on-site septic systems have been the most important factors in accomplishing water quality improvements for water resources throughout the State. More improvements to wastewater treatment facilities (WWTF) are needed to meet increasingly stringent discharge limits.

State and local governments will be required to continue and even increase expenditure for infrastructure improvements to meet existing and future needs. Creative community and development design that works in harmony with natural systems must also play an important role. The State Guide Plan’s *Urban and Community Forest Plan* recommends “maximum reliance on the environmental benefits [including runoff control] provided by trees as a means to reduce future service costs of development”, and offers a number of strategies towards this objective.

The urban services boundary on the Future Land Use 2025 map (see Figure 121-02(1)) reflects the areas where our water and sewers service areas exist and where they are anticipated to grow in the next 20 years. This map also depicts where both of these important elements of our infrastructure coexist to support more intense development. It is within this boundary that the stage for development is proposed that will capitalize on current infrastructure investments.

Rhode Island’s wastewater needs are reflective of the rest of the nation. Costs must be borne for facilities already used to convey, store, treat, recycle, and reclaim wastewater. Rhode Island’s current need for wastewater improvements to the existing systems, as expressed in priorities on the State Revolving Loan Fund list, tops \$767 million.

A greater reduction of future water and sewer infrastructure costs could be achieved under implementation of the Future Land Use 2025 map. Increased density of land use reduces collector capital costs; however, development that is too dense can have the opposite effect. Development at very high density needs larger, more expensive pipes to service the development.

The best locations for redevelopment and new growth should be underutilized urban areas within the urban service boundary on the Future Land Use 2025 map. Strategic design based on the map will be likely to lead to the lowest future infrastructure costs because improvements will be concentrated within or adjacent to existing areas of service.

Water Infrastructure / Supply

The increasing demand for water, coupled with an approaching limited availability and declining water quality, has made the planning and management of water resources a priority to land use planners. It is uncertain if we can sustain the current land use trends with a sufficient quantity and quality of water. For example, much of the State's recent development has taken place in areas that lack water supply infrastructure. State Guide Plan Elements 721 through 724 provide a policy framework for water resource planning to ensure that there will be a water supply adequate to support existing uses and future growth.



It is conservatively assumed that the per capita water demand will remain close to 2000 levels until 2025. Therefore, it seems likely that the future demands will have to be met either by developing additional water supplies or through increased efficiency in water use, or a combination of both. Cost-effective projects such as water reclamation and reuse can augment local water resources and reduce demands on existing supplies. The continuing development of conservation technologies and use of green building techniques will contribute to the dependability of the State's water supply.

In the past, problems of water supply could be solved by digging another well or by building another reservoir. While these solutions are still applicable in certain situations, they no longer offer long-term remedies in and of themselves. The high public cost of developing and maintaining public water systems, the potential for adverse environmental impact of new reservoirs, and contamination of both reservoir and groundwater supplies are among the issues of concern.

Water quantity and quality issues will have to be examined within future water supply management plans and local comprehensive plans. Rhode Island is part of a new century of water management that features an ethic of efficient water use and balancing land uses that are able to sustain the region's economy, culture, and environment. The Water Resources Board is in the process of completing a comprehensive statewide inventory of surface water and groundwater resources currently existing, used, or available to support future uses in nine watersheds. The agency is conducting specialized modeling activities

in several others. These studies will provide important data to be compared to the findings and recommendations of the *Water Supply Plan for Rhode Island*, State Guide Plan Element 722. Water Supply System Management Plans and municipal comprehensive plan updates should reflect the water availability data from each watershed to ensure that water supply development plans and planned land use and development are coordinated so that they are sustainable within the limitations of the watershed. Demonstrations of water availability will be required for new development in concert with meeting existing needs in all areas of the State.

Wastewater Infrastructure

Currently, approximately 69 percent of the State's population is served by a wastewater collection service, and the remainder are served by an on-site septic system. A total of 12 towns still have no sewer collection service. The sewered area covers about 25 percent of the land area of the State – an amount relatively unchanged since 1989. However, the Rhode Island Department of Environmental Management (DEM) has indicated that the use of on-site systems has become an increasing trend since then. There are at present about 157,000 on-site septic systems in the State.



Sewer service, like water service, extends concentrically from the urban core, and service districts are contiguous to already built-up areas. In most of these areas, the systems are combined with stormwater drainage. These sewer service areas are wholly within the urban service boundary on the Future Land Use 2025 map.

Otherwise, wastewater is handled by on-site septic systems. State Guide Plan Element 731, the *Rhode Island Nonpoint Source Pollution Management Plan*, identified several water bodies in the State that are showing signs of pollution due to nonpoint sources of total and fecal coliform bacteria. The DEM is considering requiring innovative/alternative technology designs for replacements of on-site systems within these critical areas to address septic pollution. Use of these technologies may be important for those areas outside of the urban service boundary.

The provision or accommodation of infrastructure is one of the most important functions carried on by any government with the participation of the private sector. The quality of life that we enjoy in our State will be a result of how we manage this growth by managing our infrastructure now and in the years to come. It is becoming increasingly important that we carefully evaluate the costs and benefits of new development that will place a high demand on existing wastewater treatment and public water supply systems.

3-6 Open Space and Recreation

The term “open space” is unfortunately vague. Does it refer to land that has been protected, or land that just hasn’t been developed – yet? Focus groups conducted by Public Opinion Strategies in 2004 found that the public perceived open space “as empty land, not near them,” and did not necessarily see how they benefited from it or could use it.

The Rhode Island Comprehensive Planning and Land Use Act defines open space as:

Any parcel or area of land or water set aside for public or private use or enjoyment or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space; provided that the area may be improved with only those buildings, structures, streets, and off-street parking, and other improvements that are designed to be incidental to the natural openness of the land.

By this definition, open space may be either permanently protected or subject to conversion (e.g., private golf courses, land enrolled in the Farm, Forest, and Open Space Program, etc.). Both in preceding chapters and in subsequent chapters, we use the term “greenspace” to distinguish those lands that are permanently protected from development.

In this plan, “recreation” space refers to open space that has been dedicated to recreational purposes. Land committed to recreation may mean development for “active” recreation, which includes constructed facilities such as sports fields, playgrounds, golf courses, swimming pools and tennis courts. A second type of recreational use, “passive” recreation, involves existing natural resources and can be engaged in at sites that are undeveloped or minimally developed. Examples include hiking, horseback riding, cross-country skiing, swimming at beaches, fishing, canoeing, and bicycling.

Open space can be for non-recreational uses too. Farmland is generally referred to as open space. Land surrounding public drinking water supplies such as the Scituate Reservoir is protected from development, but even passive recreation is prohibited.



Another category of open space is land owned by private conservation groups, such as the Audubon Society of Rhode Island and the Nature Conservancy. While much of these conservation areas are available for passive recreation, some lands are reserved for wildlife and habitat preservation and are closed to the public. Even these “restricted”

open spaces provide public benefits, such as wetland and habitat preservation, scenic views, and a rural landscape. Furthermore, they require few municipal services, are not expensive to maintain, and are primarily funded by non-governmental sources.

The Desire and Need

There is a clear consensus among Rhode Islanders that some land should be permanently preserved in a natural State, some land should be reserved for agriculture, and that some land should be dedicated to recreation. This consensus is evidenced by the fact that voters have overwhelmingly approved every open space and recreational development bond issue placed on a ballot since the State's Green Acres Program was first developed in the 1970s.

A Greener Path... Greenspace and Greenways for Rhode Island's Future (1994) called for one-third of the State's land area to be greenspace by 2020. Greenspace would include linear greenways consisting of bikeways, trails, river corridors, and more. It called for greenspace to be located in every community and it set an objective that no Rhode Islander would live more than 15 minutes from a greenway.

Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan, (2003) not only reinforced the goals of *A Greener Path*, but reported that three surveys – one of 1,400 Rhode Island households, one of State park and beach patrons, and one of State and municipal recreation managers – found agreement with the statement that “significant needs continue for land and facilities to accommodate public demands for outdoor recreation and protection of natural resources.”

Issues of Concern

During the period 1970 to 1995, land was developed at rate nine times faster than population growth. Once land has been developed, it almost never is returned to a natural condition. Approximately 205,200 acres of land in the State are developed.

Approximately 77,000 more acres are protected greenspace. An additional 90,000 acres are regulated wetlands. That leaves over 361,000 undeveloped acres available for some future committed use. The vast majority (91%) is planned and zoned for low density residential use (one housing unit or less per acre). As the State seeks to realize its vision of our future, State and local governments must consider several questions in setting and implementing objectives and policies that specifically relate to open space and recreation:



- How much land overall should be open space?
- How much land should be permanently protected greenspace?
- Is there a proper mix of public, private, and non-profit open space?
- What is the most effective and efficient mix of open space controls (e.g., public ownership, easements, regulatory controls, conservation design development, etc.)?
- How much and what types of open space should be dedicated to conservation?
- How much and what types of open space should be preserved for agriculture and silviculture?
- How much open space should be dedicated to recreation and what types of recreation?
- Where should open space and recreational facilities be located throughout the State?
- As we strive to increase density in urban areas, do some of these areas warrant special consideration? If so, what are they?

The analysis that went into developing the Future Land Use 2025 map attempted to address some of these questions by excluding “protected” lands from the analysis and identifying the following as constraints to development: rare species habitats; agricultural lands; surface water; ground water; drinking water surface supply watersheds; and major forests. The Future Land Use 2025 map indicates existing protected open space and major parks, wetlands, and prime active farmland as committed uses that should continue in the future.

If we are successful, this Plan’s recommendations are followed, 63 percent or more of the State’s landscape would remain as open, undeveloped land in 2025. One of our greatest challenges will be to permanently preserve as much greenspace as possible in both the rural areas and within the built environment.

Land needs for active outdoor recreation are based on projected demands, facility design criteria, and adequacy of service standards promulgated in another element of the State Guide Plan, *Ocean State Outdoors: The State Comprehensive Outdoor Recreation Plan*. That element should also be used as a companion document to this Plan to guide the State in providing a variety of recreational opportunities to our residents that range from small urban playgrounds to large tracts of undeveloped forests.

3-7 Transportation

Existing urban places and locations that are suitable for development need quality transportation services, but without sacrificing open space and pristine rural areas. To preserve the beauty of Rhode Island – i.e., our sense of place – for future generations, State and local officials need to manage land development and establish standards for

roads, sidewalks, shared-use paths and transit facilities that are responsive to safety, travel demand, capacity, environmental, and aesthetic concerns.

Transportation 2025, the long-range surface transportation Element of the State Guide Plan, addresses these and related concerns with goals and policies for integrating land use and transportation decisions and developing and maintaining transportation infrastructure designed to meet the State's travel needs.



As reflected in *Transportation 2025*, land use decisions must support transportation system objectives. In other words, the nature, character, and location of development allowed by communities must be related to the level of transportation infrastructure available and planned. The links of both to economic development have already been discussed. An orientation to transit, bicycle, and pedestrian needs in the siting and design of new development not only contributes to the concept of vital, workable cities and towns, but also can support more transportation-specific goals: reducing vehicle trips, making transit service more viable, and improving safety. In doing this, the State's transportation planning process must continue to reflect regional considerations and local plans.

The network of freeways, roads, sidewalks, trails, and waterways that has evolved over the centuries has left us with a vast range and variety of land uses that are not always the most efficient. As technology advanced and wealth increased, personal automobiles and the freeways built to connect cities have left us with a suburban landscape many describe as sprawl. Many urban and intercity transit options have been lost. This Plan recognizes that land and transportation resources are finite resources, both of which should be optimized to ensure as many options as possible for our diverse population, plus coordinated and smart growth.



Large new developments outside the urban services boundary not only require costly utility extensions, but almost always overburden existing roads because usually cars are the only transportation option. Concentrating growth within the urban services boundary and in rural centers, on the other hand, affords a better chance of achieving the customer density that can support improved transit service and reduce vehicle trips. This strategy, commonly referred to as Transit Oriented Development (TOD), is seen in the extension of commuter rail south of

Providence to Warwick and Wickford, and eventually perhaps as far south as Kingston and Westerly. The purpose is to establish nodes within walking distance of residential areas, employment centers and convenience retail.

Mitigating Congestion

Without TOD and similar strategies, new development will only add more vehicles to already congested roadways. To maintain capacity and functionality of these urban roadways, a fix-it-first policy is necessary to maintain riding surfaces, and signal coordination, and to promote safe bicycle and pedestrian access. However, we can't "build our way out" of congestion without threatening the fabric and character of neighborhoods and villages. The transportation infrastructure is essentially built-out, and we should instead have a policy of maintaining and better managing what already exists in order to get optimum performance.

Traffic congestion is an important issue. In fact, it is the most pervasive transportation

issue as it affects Rhode Islanders on a daily basis. Land use impacts not only the level of congestion but also where congestion occurs. As we sprawl out into the countryside, we bring with it more traffic on roadways that were not designed to handle the load. While the lane-miles of State roadways have essentially remained the same over the last 30 years, population, the numbers of licensed drivers, housing units, vehicles, and commuting distance all continue to increase. In short, demand



continues to rise, but the supply remains static. People lead busy lives and maintain hectic schedules of work, shopping, recreation, medical, civic, and social activities. More and more of these trips are driving trips, rather than transit or non-motorized.

In order to manage congestion, we need to reduce demand and make our roadways function better. One way to reduce demand is by diverting to other modes, including walking, bicycling, and transit (includes bus, train, and ferry). There are many land use and design strategies that help to accomplish this, including TOD.

The Problem of "Over-development"

In recent years, big box retail and office park developments, while providing tax and employment benefits, have exacerbated congestion. These developments typically funnel high volumes of cars to a principal arterial, requiring new traffic signals and overburdening the roadway. Strip development (fast food restaurants, gas stations, banks, etc.) also continues with its clutter of signage and excessive curb cuts, creating an unsafe environment for motorists and pedestrians. Local zoning ordinances that dictate

an excessive number of parking spaces have led to an overwhelming amount of pavement devoted to single-purpose parking, oftentimes only to support the busiest holiday shopping season. This increase in nonporous surface area in turn leads to other problems, such as nonpoint source pollution and urban flooding from storm runoff.



While over-developed commercial strips are problematic along some of the State's arterial highways, within the urban services boundary such corridors may offer future opportunities for redevelopment as mixed-use environs that better integrate transport and land use. Where services are present, introduction of higher density residential use and supporting facilities and uses through redevelopment could offer a number of benefits. Planning, at

both the corridor and community levels, will be needed to optimize the inherent accessibility and infrastructure potentials of such areas while not worsening congestion.

The environs of limited access highway interchanges represent another critical area for which integrated land use and transportation planning is essential to ensure optimum future use and reuse. Within the urban services boundary, where site characteristics are favorable and supporting infrastructure is available, such areas offer opportunities for concentrations of high intensity uses. Outside the urban services boundary, such areas may be suitable for designation as rural centers, if resource concerns can be addressed and appropriate services provided. In rural areas, the objectives for interchange areas must also include retaining the character and distinctiveness of the rural environs. In all cases, highway interchange areas must be considered scarce resources that are too important to be left to *ad hoc* land use decision-making. Special area planning, involving State, regional, and local interests, and integrating transportation and land use concerns, should be undertaken for highway interchange areas that have significant development or redevelopment potential. These areas should be identified through the corridor planning process.

Addressing Bicycle and Pedestrian Safety

Many roadways are without any pedestrian and bicycle facilities, and those that do provide bike lanes, shoulders and/or sidewalks are not perceived to be safe for a pedestrian or cyclist due to the high speed and close proximity of vehicular traffic. This is also a serious dilemma for transit users who walk to their stops. Through better design of reconstructed and resurfaced roadways, and with more thought given to the needs of non-motorized traffic, we can provide an environment more conducive to walking and bicycling. Communities should also consider traffic calming, restoring two-way traffic flow to one-way arterials (while retaining areas for bicyclists and pedestrians), reducing curb radii, and maintaining crosswalks and signals.

Another disincentive to walking and bicycling is the lack of connectivity. Cul-de-sac type developments were favored over grid street patterns to provide safety and privacy for residents, but an unintended consequence of this design has been isolation. This has forced people into their cars to make circuitous trips when in fact the school or store may be otherwise close enough to walk. A return to the traditional street grid pattern would help to diffuse rather than channel traffic, and improve connections. The State's Physical Alteration Permit (PAP) process could also enhance sidewalk connectivity along State highways via stipulations for short connections to be provided by developers seeking permits.



Corridor Planning

Corridor planning is emerging as a holistic approach that combines land use and transportation. It allows planners to look beyond their own municipal borders and combine strategies into workable, regional solutions implemented along an entire corridor. New development and revised zoning codes are recognized as having “upstream” and “downstream” impacts. At a minimum, corridor planning is a process that contributes to a general awareness of what is going on in neighboring municipalities, and perhaps even to coordinated planning, with obvious long-term benefits along the corridor.

The Rhode Island Statewide Planning Program, in cooperation with the Rhode Island Department of Transportation (RIDOT) and the Rhode Island Public Transit Authority (RIPTA), sponsored the Travel Corridor Planning Initiative in 2003. This planning concept emerged in Rhode Island in Transportation 2020 (2001 Update), the State's long range surface transportation plan as an effort to connect land use and transportation planning as well as mitigate traffic congestion. The objectives of this initiative were to define major travel corridors in the State (all modes of travel were included), identify major corridor planning issues, and formulate a vision for each corridor. This study included detailed mapping of the project areas, development of corridor profiles, a series of workshops for local planning officials in each corridor, followed by a series of public workshops.

The vision statements that were developed are the result of a public process with input from professional staff. They were not adopted as policies of the State, but they were used to formulate objectives, policies, and strategies in the 2004 update of the long-range transportation plan. The vision statements should also be used as a platform for more detailed individual corridor studies; to prioritize projects for the Transportation Improvement Program; and to assist communities in making local land use decisions and identifying growth centers.

Some common themes emerged when workshop participants were asked to rank the importance of various transportation and land use issues. In the most densely developed corridors, transit and traffic congestion were the primary concerns. Similarly, in the corridors that contain some fairly rural areas and are under pressure for development, land use and community character were selected as the most important issues. The corridors that had the greatest diversity of land, containing urban as well as rural areas, had mixed results. Additionally, some issues emerged that were beyond the scope of the Travel Corridor Planning Initiative, including local property tax and State surplus property along highway rights of way.

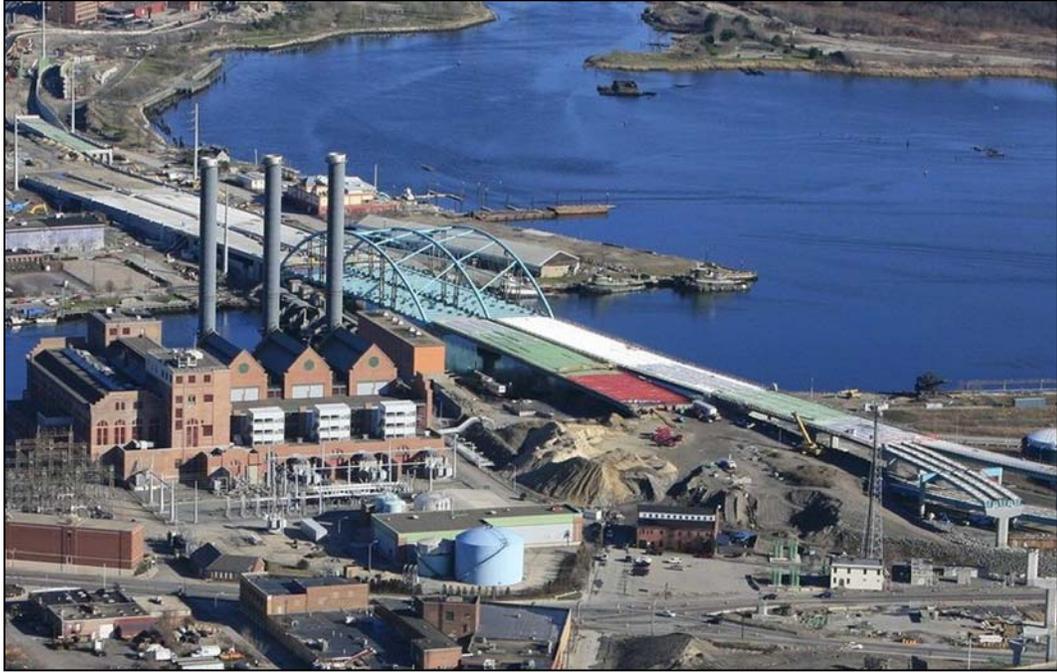
Access Management

Access management refers to better control of where vehicles enter and exit the roadway. The more access points there are, the more the capacity of the roadway is reduced, and the less safe it becomes. Therefore, access management techniques can improve the functionality (i.e., how efficiently traffic moves) and safety of the roadway. These will be most effective on collectors and arterials. This entails vigilance and creativity at the local level, and perhaps revision of zoning and subdivision regulations. Some access management techniques for commercial areas include combined driveways, service roads, interconnected parking lots, and reduced curb cuts.

Context-sensitive Solutions

Building roads and other transport facilities has never been an easy job. Designers and engineers have always been challenged with the need to develop facilities that meet travel demands, promote safety, and minimally impact upon the environment and their surroundings. Increasingly, they have been called upon to develop solutions that consider not just the highways and motor vehicles that travel upon them, but that also integrate multiple users (pedestrians, bicyclists) and respond to the desires of the larger community that the highway traverses and services. While strict adherence to design standards offers assurances in terms of capacity and safety, uniform standards are of less help in responding to other aspects desired by communities and residents.

Paradoxically, some of the solutions requested in the past by communities (new, bigger roads, bypasses, etc.) are now seen as possible detriments. Moving the greatest volume of cars at the fastest speed is not necessarily the goal of most roadway projects. In fact, slowing traffic and narrowing lanes may move fewer cars, but may be the best solution overall if it also helps bring a struggling downtown back to life. On the other hand, some projects rebuffed in the past by communities are now being reconsidered in the light of increasing congestion. Much depends on the situation, and on how creatively the design responds to the problems. Design details that preserve (or echo) local historic features, use landscaping creatively, and reflect a human scale can enhance the attractiveness of transportation infrastructure and help enlist community and public support for needed facilities.



Designers and the community at large must work through an iterative and interactive design process that balances meeting transportation needs with community objectives such as lessening noise, enhancing landscaping and aesthetics, and reducing speeds and other impacts, to arrive at a design solution that works for all. While known recently as “context sensitive design”, the principle is really just well-balanced transportation planning and design that uniquely fits a solution to the type of problem to be addressed, the characteristics of the surrounding area, and local support.

PART FOUR

HOW DO WE GET THERE?



PART FOUR: HOW DO WE GET THERE?

4-1 Introduction

The Vision set forth in Part Two establishes what we would like Rhode Island to look like in 2025. But before we get there, we need to have some understanding of what “there” represents. In this part, we address this question by quantifying how much land we may need for future uses and then consider alternative ways of satisfying that need.

In addition to presenting future land use alternatives, this part also documents the methodology used to conduct the analysis of the State’s land capability to support additional development. See Technical Appendix D, which is available on the Statewide Planning Program’s website (www.planning.ri.gov) or on CD-ROM (available upon request) for a detailed description of the methodology used. The information used to conduct this analysis was drawn from various Geographic Information System (GIS) data layers. The 1995 State Land Use/Land Cover layer was one of the primary coverages used in the analysis, as it was the basis for identifying “undeveloped land”. In addition, other GIS coverages such as open space/conservation land and active prime farmland were updated based upon the most recent available information. These additional efforts to make the analysis as current as possible also demonstrated the ability of the methodology to be rapidly refreshed with updated data. The Division of Planning intends to conduct such updates periodically such as when new land use/land cover data is available.

4-2 Residential Land Needs

Rhode Island’s total area is approximately 700,000 acres. This divides into about 638,000 acres of land and about 62,000 acres of open water. Approximately 138,600 acres, or 22 percent¹, is developed for residential use and represents the largest developed land use category. This estimate is conservative relative to the amount of land “committed” to residential use².

From data gleaned from municipal comprehensive plans, Rhode Island cities and towns have committed a total of nearly 472,000 acres for residential use in the future – about 74 percent of Rhode Island’s land area. The densities planned for these new homes on the 333,200 as yet undeveloped residentially planned acres, will obviously shape land use patterns and set trends for years to come.

An analysis using the Rhode Island Geographic Information System (RIGIS) compared the residential densities designated in Future Land Use maps found in municipal

1 Unless otherwise noted, all calculations referring to percentage of land use will be based on the 638,000 acres of *land* area.

2 The 1995 Land Use/Land Cover analysis on which it is based most likely counted the undeveloped portions of large residential lots committed to low density residential usage as an “undeveloped” land use category (woodland, wetland, etc.).

comprehensive plans with existing residential use as of 1995. This is summarized in Table 121-04(1). The table is based on the five categories of residential density (land area per dwelling unit) defined below:

- Low density -- greater than two acres
- Medium-low density -- one to two acres
- Medium density -- one-quarter acre to one acre
- Medium-high density -- one-eighth to one-quarter acre
- High density -- less than one-eighth acre

Table 121-04(1)

RESIDENTIAL DENSITIES: EXISTING (1995) AND PLANNED

Density Category	Acres* Developed as Residential (1995)	% of Residential Acres (1995)	Total Residential Acres* (from Future Land Use Maps)	% of Residential Acres (Future)
Low	8,200	6	180,000	38
Medium-Low	10,700	8	146,400	31
Medium	53,500	39	83,900	18
Medium-High	45,700	33	45,100	10
High	20,500	15	16,400	3
Total	138,600		471,800	

* rounded to the nearest hundred

Note: Approximately 12 percent of the existing residential acreage (16,200 of 138,600 acres) in the State is located outside of the areas identified as residential on the Future Land Use maps.

Source: Statewide Planning Program (RIGIS and analysis of municipal Comprehensive Plans)

Of the 333,200 undeveloped acres planned for residential use:

- approximately 52 percent is planned for low density
- approximately 41 percent is planned for medium low density
- approximately 9 percent is planned for medium density
- medium-high density and high density are expected to decrease

Of great concern are the findings that current plans indicate that approximately 93 percent of undeveloped land designated residential is planned for low density or medium-low density development. Of even greater concern, our analysis shows no new high

density or medium-high density development is planned other than to replace existing housing at those densities, at a rate less than one for one.

Based on an analysis of trends in household size and demographic projections of household formations (see Technical Appendix B), the number of year-round occupied housing units is projected to range from 425,781 to 443,375 occupied units over the planning horizon (2025). In terms of number of *additional* units projected for the period, the minimum-maximum ranges are 17,267 to 36,798.

Using the higher end of the range, if all residential units are distributed according to existing density patterns prevalent in Rhode Island in 1995, the additional residential area required would total 22,485 acres. Thus, the total residential acreage requirements in 2025 would be 161,169 (138,684 existing plus 22,485 added acres). However, if the projected net growth in housing of 36,798 units were distributed in a density pattern that reflects 1995 *zoning*, the additional residential acreage required would total 95,000 acres. Added to the existing 1995 residential acreage of 138,700, this would render a 2025 residential land use total of 233,700 acres – a 68 percent increase.

While none of the above figures for housing growth and increase in residential acreage can be known with certainty, it can be stated with reasonable assurance that:

- Rhode Island can expect continued housing growth, and
- The increase in residential acreage is likely to outpace housing unit growth by a substantial factor.

4-3 Land Needed for Economic Activities

Much of Rhode Island's land resources are allocated to support a robust and growing economy. Economic activities are dependent on the availability of suitable locations. Although the locational requirements of many business sectors are a great deal different in the Information Age from what they were in the Industrial Era, a fundamental premise is that land will still be required for them.

The dependence on land resources is both *quantitative* and *qualitative*. Quantitative requirements may be estimated based on trends, formulas, and rules of thumb. Qualitative requirements add variables that may compound initial quantitative assessments. Both dimensions of need are changeable, and continuingly changing, in a rapidly evolving economy. This section attempts to provide, based upon available projections and trends, a baseline quantitative estimate of land needed in 2025 to accommodate economic activities.

It is assumed here that Rhode Island's economy, including its employment opportunities, will continue to expand to meet the needs of its population for a high standard of living. That is the goal of the primary economic development element of the State Guide Plan, the *Economic Development Policies and Plan*, and all State economic policy. However,

some sectors will contract due to productivity gains or outsourcing; this trend will also be reflected in our analysis.

The estimation of land needs for economic activities through 2025 is based upon an update and expansion of an analysis contained in State Guide Plan Element 212, the *Industrial Land Use Plan*. See Technical Appendix C for details. The analysis indicates that Rhode Island could need to devote slightly less than 36,000 acres of land (5.6 percent of total land area) to support economic activities in 2025. This is a 54 percent increase over the 23,300 acres in commercial, industrial, or mixed-use that existed in 1995.

It is important to understand what these figures represent and what they do not represent. They represent the total land area estimated to be needed on a statewide basis, based on the assumptions given, to support economic activities in 2025. The calculations are highly sensitive to the employment density assumptions and to the contingency factor selected. The estimates look at *total* need at one point in the future, not *incremental* need in the intervening years, and they address only the demand side. If we presume that the 35,915 acres estimated to be needed in 2025 includes the 23,312 acres in commercial, industrial, or mixed-use in 1995, the *net* need would be 12,603 acres.

The Rhode Island Comprehensive Planning and Land Use Regulation Act of 1988 required that all cities and towns adopt a Future Land Use Map as part of the land use element of their comprehensive plan. The Future Land Use Map graphically portrays the future strategy and land use policy of the municipality. Zoning is required to be consistent with the municipality's Future Land Use Map, and is required to be brought into conformity with the Future Land Use Map within eighteen months of the Map's adoption. For the purposes of the following analysis, Statewide Planning assumes that these maps represent generalized zoning for municipalities.

How do these projected land uses compare with what has been identified as the need statewide? A summary of the findings from the composite is presented in Table 121-04(2).

In aggregate, the comprehensive plans, plan, and by extension zone, for 26,400 acres for industrial use, 18,200 acres for commercial use, and 8,200 acres for mixed-use. With the projected need in 2025 being 22,700 acres zoned industrial and 13,200 acres commercial and mixed-use, it appears that the need will be met by a comfortable margin. However, this assessment does not take into account the quality of the land planned for future economic use, i.e. constraints to development such as ledge, proximity to wetlands, poorly drained soils, odd parcel sizes, etc.

4-4 Land Needed for Other Major Activities and Specialized Land Uses

Besides residential and economic activities, there are other major land uses to be considered such as open space (greenspace) and recreation, transportation, and specialized activities such as institutional uses, energy facilities, and waste treatment and

Table 121-04(2)
COMPOSITE OF FUTURE LAND USE MAPS
SUMMARY OF FINDINGS

Use type	Acres* from Future Land Use Maps	% of Total RI Land
Commercial	18,200	3
Industrial	26,400	4
Mixed-Use	8,200	1
Residential	471,800	74
Total	524,600	82.0

* rounded to the nearest hundred
Source: Statewide Planning Program

disposal. For many of these functions, the issue is not as much an aggregate supply of land as it is the particulars of site requirements and ensuring that adverse impacts on other uses are avoided or minimized.

Greenspace

Reserving an adequate quantity of land to protect and conserve important natural resources and to allow the public access to and enjoyment of the outdoors is addressed directly in two elements of the State Guide Plan namely, *A Greener Path...Greenspace and Greenways for Rhode Island's Future* (1994) and *Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan* (2003).

The *Greenspace and Greenways* plan established a goal, by 2020, of permanently protecting via acquisition and regulation an integrated system of open space resources encompassing one-third of the State's land area. The *Outdoor Recreation* plan reiterated the goal of creating a connected greenspace and greenway system, but suggested that acreage goals and targets also be reviewed in light of the "rapid growth and continuing loss of greenspace" that the State has been experiencing.

Approximately 369,000 acres, about 58 percent of the State's total land area, was undeveloped in 1995. Of these, 77,000 acres (12 percent of the total land area) were identified as protected for recreation, conservation, or greenspace purposes leaving an additional 292,000 acres subject to development. An additional 126,000 acres of inland water and wetlands also have some level of protection against development thus bringing the total protected land and water area to a little over 200,000 acres or approximately 30 percent of the State's total (land and water) area. See Table 124-4(3).

An important question for this plan is what amount of the State's land area that remains unprotected and undeveloped should be brought into the Greenspace and Greenways system.

Transportation

Transportation infrastructure was the primary land use on approximately 8,700 acres in 1995. This included approximately 6,500 acres for roads³, 1,900 acres for airports, and 200 acres for railroads.

Future transportation system components are the subject of several State Guide Plan elements, including *Transportation 2025 – The Long Range Ground Transportation Plan*, the *State Airport Systems Plan*, the *State Rail Plan*, and the *Waterborne Passenger Transportation Plan*. These plans note that the State's basic transportation infrastructure is largely in place, and the addition of major new highways and other facilities is not contemplated, other than periodic upgrading and expansion of what already exists.

Institutional

Institutional uses, such as government buildings, hospitals, libraries, schools, colleges and universities, and similar public facilities, occupied 8,700 acres in 1995. While much of the future growth needs for governmental and institutional uses may be accommodated on existing sites and campuses, some expansion of the land devoted to this category can be anticipated. The amount of land likely to be required cannot be precisely predicted, but standards and siting criteria and/or market conditions that favor rehabilitation of existing sites over new construction could minimize the need for additional land. Overall, an estimate for added land for the institutional category through 2025 might be on the order of a ten to fifteen percent increase – i.e., 870 to 1,300 acres; but this estimate, admittedly, could be conservative, especially if a high level of reutilization of existing institutional sites is not stressed or attained.

4-5 Summary of Future Land Use Needs

Absent dramatic policy shifts, our forecasts estimate that if development continues at the densities and intensities of recent trends, 110,000 additional acres of developed land could be required for residential, industrial, commercial, and other development needs through 2025.

4-6 What Are the Choices?

In the previous section, we quantified what our need for land would be in 2025 based upon maximum growth in residential units and accommodating that growth at densities that reflect current trends. But is that the way we want to develop? To understand what our choices are we need to visualize and quantify the alternatives.

³ Likely a considerable undercount due to the nature of the 1995 land use study. As the study was based on aerial photo interpretation, most two-lane highways and local streets and roads were generally categorized and counted within the surrounding land usage.

This section describes the process using geographic analysis to develop the recommended 2025 Future Land Use Plan Map. A summary of the inputs, stages of analysis, factors considered, decision rules, and results for each major component of the analysis is provided. A more extensive description of the analysis methodology is provided in Technical Appendix D. The geographic analysis consisted of several interrelated parts:

- Land Availability Assessment – identified committed and available land within the State;
- Land Suitability Analysis – combined data on resource values and constraints to identify the varying suitability of lands for development;
- Land Intensity Potential Classification – combined suitability assessment with additional water resource and infrastructure considerations to assess an optimum development intensity potential for land in the State, especially undeveloped, unprotected areas;
- Development and Conservation Area Prioritization – introduced proximity factors to prioritize undeveloped, unprotected areas for development or conservation;
- Alternative Land Use Patterns or “Scenarios” – defined four options for future urban form of the State and constructed generalized geographic patterns illustrating these alternatives in terms of intensity and distribution of future development;
- Evaluation and Scenario Selection – assessed each scenario in terms of land availability by intensity requirements and for policy conformance, and selected a preferred scenario as a basis for the recommended future land use map;
- Selected Scenario Refinement as Recommended Future Land Use Map – analytical and cartographic refinement of the selected scenario to produce a recommended future land use map.

Data Sources Used in the Analysis

The Rhode Island Geographic Information System (RIGIS) database provided most of the data used in the geographic analyses. The 1995 RIGIS Land Use/Land Cover dataset served as a primary data source for identifying land committed to development and several other land characteristics; other data included in the analysis were RIGIS-licensed and published, and are documented in the *RIGIS Data Catalog* available on the RIGIS data distribution website.

While the RIGIS database is an excellent compendium of statewide geographic data, it is recognized that due to the varying ages of individual RIGIS datasets (1995 to 2002), actual land cover/use or other conditions may have changed. For this reason, the analyses of this plan are *useful for statewide land use planning purposes only*. Analyses presented are intended as a general guide for directing development, not as local or site development decision-support tools. The generalized data herein may, however, serve as indicators for where more detailed local site data should be gathered when a specific land

use is proposed. *As always, municipal zoning ordinance and subdivision and land development regulations should be consulted when specific land use change is being contemplated for an area.*

Land Availability Assessment

Areas designated as *developed* included all residential, commercial, industrial, commercial/industrial mixed land, institutional land, and roads, airports, railroads, other transportation, water and sewage treatment facilities, waste disposal facilities, power lines, developed recreation, cemeteries, mines, and quarries and gravel pits. Areas classified as *undeveloped* included all vacant land, pasture, cropland, orchards, groves, nurseries, confined feeding operations, idle agriculture, forest, brush land, beaches, sandy areas, rock outcrops, transitional areas, and mixed barren areas. Areas designated as *water or wetland* included open water, and freshwater and saltwater wetlands of various types.

The land availability analysis developed the following data concerning the status of Rhode Island’s (1995) land base:

Table 121-04(3)
RHODE ISLAND LAND AVAILABILITY, 1995

Total Land and Water	Acres	% of State Area*
Developed land ⁺⁺	205,200	29%
Undeveloped land	369,000	53%
Inland water	35,900	5%
Wetlands	90,000	13%
Total land and inland water**	700,000	100%
Undeveloped Land	Acres	% of State Area*
Undeveloped, unprotected land	292,100	42%
Undeveloped, protected land	76,800	11%
Undeveloped land**	369,000	53%
Protected Land and Water	Acres	% of State Area*
Protected, undeveloped land	76,800	11%
Wetlands	89,600	13%
Inland water	35,900	5%
Total protected land and water**	202,300	29%
* Figures include inland waters but are exclusive of Narragansett Bay and coastal waters		
** Totals may not sum due to rounding (rounded to nearest hundred)		
⁺⁺ Certain urban parks and playgrounds may be counted as “developed”		

Source: RIGIS 1995 Land Use and Open Space datasets

As indicated in the above table, as of 1995, Rhode Island was approximately 29 percent developed. Approximately 53 percent of the State was undeveloped. Inland water and

wetlands comprised about 18 percent of the State. Approximately 11 percent of the State's land was permanently protected while approximately 42 percent was undeveloped and unprotected.

Land available for future development is not equal in terms of its ability to accommodate development efficiently and without external effects. The geographic analysis assessed available land with regard to various intrinsic and locational factors considered important to making land use decisions consistent with the policies of the State Guide Plan and municipal comprehensive plans.

Land Suitability Analysis

“Suitability” refers to an ability to be fitted for a given purpose. Suitability as applied to land recognizes that we have a limited amount of land, and that each unit of land possesses a mix of intrinsic characteristics that make it more or less useful for particular purposes. While almost all land can be developed if enough money and effort are put into the task, the suitability concept seeks to identify those areas best suited to accommodate future growth with minimum impact on the natural resource value and public expense. Properly planned and directed development can protect valuable resources and accommodate the range of necessary uses in locations where access and water supply and wastewater disposal services are available or can be feasibly and economically provided.

Land suitability factors considered here are based on natural resource values, physical constraints or hazards to development, and factors reflecting regulatory or State Guide Plan policy concerns. Land areas shown by RIGIS data as “protected” were excluded. Eight key factors were selected as resource/constraint layers in the analysis:

- Surface Water
- Flood Hazard Areas
- Soils Constraints for Individual Sewage Disposal Systems (ISDS)
- Rare & Endangered Species Habitats
- Agricultural Lands
- Major Forests
- Groundwater
- Drinking Water Surface Supply Watersheds

See Technical Appendix D for more information on the eight key resource/constraint layers created from the various RIGIS coverages, and the geographic selection rules applied in the creation of each layer.

Table 121-04(4) provides area and proportional data on the co-occurrence or concentration of the eight resource/constraint layers as determined in the suitability analysis. The co-occurrence of resource concerns is presented from lowest

(concentration = 0) to highest (concentration = 8). Data on resource factor concentrations are labeled “Statewide,” include all lands in the State whether developed or not, and data labeled “Undeveloped/Unprotected Land,” cover just the portion of the State determined to be uncommitted or available land.

Land Intensity Potential Classification

The Land Intensity Potential Classification part of the geographic analysis examined the influence of the eight suitability factors in combination with the proximity to infrastructure factors to assign a *Land Intensity Potential Category* to land. The intent was to determine a general level of development intensity that could be sustained, based upon a combination of natural and built factors.

Five generalized land intensity potential categories were defined by the Statewide Planning Program's staff after study of the results of the Suitability Analysis, review of the methodology used in the prior (1989) *State Land Use and Policies Plan*, and input from the State Planning Council’s Technical Committee. Additional information used in the assignment of intensity potentials is found in Technical Appendix D.

Table 121-04(4)
LAND SUITABILITY ANALYSIS:
CONCENTRATION OF RESOURCE
FACTORS/CONSTRAINTS

Resource Layers	Acres*	% of State Area*	Acres*	% of State Area*
	Statewide (all land)		Undeveloped/unprotected land	
Concentration = 0	90,000	13	10,500	1
Concentration = 1	167,000	24	77,400	11
Concentration = 2	221,000	32	132,600	19
Concentration = 3	154,000	23	97,400	14
Concentration = 4	54,000	8	33,400	5
Concentration = 5	13,000	2	8,700	1
Concentration = 6	1,700	<1	1,000	<1
Concentration = 7	100	<1	51	<1
Concentration = 8	3	<1	3	<1
Totals:	700,803	102	361,054	52

* Rounded to the nearest thousand, except 100. Total may not sum due to rounding.

Source: RISPP Land Use 2005 GIS analysis based on RIGIS data.

Table 121-04(5) defines the five land intensity potential classes.

Table 121-04(5)
LAND INTENSITY POTENTIAL CLASSIFICATIONS

Land Intensity Potential Category	Intensity Potential Level / Description
A	Higher Intensity Development Potential including: <ul style="list-style-type: none"> • Residential uses at 5+ du/acre* average density • Commercial, Industrial, Mixed Uses
B	Moderate Intensity Development Potential including: <ul style="list-style-type: none"> • Residential uses at 1 - 4 du/acre* average density • Commercial, Industrial, Mixed Uses
C	Low Intensity Development Potential including: <ul style="list-style-type: none"> • Residential uses at 0.25 - 0.9 du/acre* average density • Limited ** Commercial, Industrial, Mixed Uses • Conservation
D	Conservation-limited, Resource-based Development Potential including: <ul style="list-style-type: none"> • Residential uses at <0.25 du/acre* average density • Limited ** Commercial, Industrial, Mixed Uses
E	Conservation -- very limited development potential

* Residential ranges selected reflect average overall densities in dwelling units (du) per acre.

** Commercial, Industrial, Mixed-use type and intensity per recommendations of State Guide Plan 125, *Scituate Reservoir Watershed Management Plan*

Table 121-04(6) provides the calculated area for each land intensity potential category.

Table 121-04(6)
LAND INTENSITY CLASSIFICATION ACREAGES, 1995

Land Intensity Category	Approximate GIS Acreage*		Developed
	Statewide	Undeveloped	
A	117,800	22,700	94,900
B	132,600	85,600	47,000
C	94,900	79,800	15,100
D	64,900	45,800	19,400
E	129,800	112,600	17,200
P**	102,000		
W***	58,100		
Totals	700,000	346,500	193,600

Source: RISPP Land Use 2025 Geographic Analysis based on RIGIS data.

* Rounded to nearest hundred

** Protected Land

*** Water with buffer

Summary Findings: Land Intensity Potential

The following findings require some qualification. The GIS analysis techniques and data described in this section are only useful in examining broad suitability across a generalized geographic area. No determination of specific site suitability for a particular use can be made without detailed field study involving engineering, wetlands, and soils determinations. Moreover, an indication that an area is inherently capable of supporting intensive development does not imply that it *should* so be developed, or developed within the timeframe of this plan. Policy considerations and other factors, such as attaining an efficient land use pattern, reserving sufficient land for future needs, and effectively utilizing existing infrastructure capacity, must also be considered.

The Land Intensity Potential Classification analysis indicates that a significant quantity of the State's land (~250,000 acres) appears capable of supporting moderate to high intensity development (as defined in the intensity categories established). A sizable portion (~142,000 acres) of this land had already been developed although some of the land may have been abandoned or underutilized. Such lands should be considered prime candidates for investigation of reuse opportunities and potential for intensive uses – although in some cases site-specific factors, such as contamination (which were not included in the analysis) would have to be addressed.

For undeveloped areas, the analysis indicates that statewide, there are over 100,000 acres of undeveloped land which appear (when suitability factors, sensitive water resource areas, and infrastructure availability are considered in combination) capable of supporting a moderate to high intensity usage however, some of this land may have been developed since the 1995 survey. As noted in Part 1, recent aerial photographs indicate that approximately 30 percent of the land identified as undeveloped in 1995 has since been developed.

4-7 Development/Conservation Prioritization

Further processing of the geographic data was performed to assign *relative* priorities for development or conservation to undeveloped, unprotected land within the State. Areas were identified as “primary,” “secondary,” or “tertiary” based on factors determined by the staff and reviewed with the Technical Committee.

Development Priority Factors

To assign development priorities, lands classified Category A, B, or C in the Land Intensity Potential Classification were evaluated relative to their geographic relationship to key infrastructure. “D” or “E” classified lands were *not* assigned a development priority since these two categories are intended either for the lowest intensity land development or conservation purposes. To assign conservation priorities, lands classified Category C, D, or E) were evaluated relative to their geographic relationship to key land conservation areas. “A” or “B” classified lands were *not* assigned a conservation priority.

Lands in intensity potential category “C” were processed for both the development and conservation priority assignments (and thus received both a conservation priority value and a development priority value.) In areas where the development and conservation priority category values were dissimilar, a “primary” value (either development or conservation), if present, was used to determine assignment. Category “C” areas lacking a primary classification (either development or conservation), and those “C” areas having “primary” ratings in both development and conservation were assigned to an “open” classification, and carried forward in the database for final assignment in a later stage of the analysis.

Table 121-04(7) provides area results of the Land Intensity Potential Classification by Development/Conservation Priority category for the primary and secondary development and conservation categories, and for the “open” Category “C” areas. These are interim results intended as inputs to further processes, and are not appropriate for development decision-making on an individual site.

Table 121-04(7)
LAND INTENSITY AND PRIORITIES SUMMARY

Land Intensity Categories A, B, & C Primary & Secondary Development Priorities			
Primary + Secondary	Statewide Acreage	Undeveloped Acreage	Developed Acreage
Intensity Category A	114,200	22,000	92,200
Intensity Category B	105,700	63,800	41,900
Intensity Category C**	23,300	12,400	10,900
Total*	243,200	98,200	145,000
Land Intensity Category C [Open] Development & Conservation Priorities			
“Open” Intensity Class C	Statewide Acreage	Undeveloped Acreage	Developed Acreage
Development Primary / Conservation Primary	5,800	3,000	3,000
Development Secondary / Conservation Secondary	17,000	16,400	500
Conservation Secondary / Development Tertiary	15,000	15,000	500
Conservation Tertiary / Development Secondary	7,700	7,000	800
Conservation Tertiary / Development Tertiary	6,100	5,200	800
Total*	51,600	46,600	5,600
Land Intensity Categories C, D, & E Primary & Secondary Conservation Priorities			
Primary + Secondary	Statewide Acreage	Undeveloped Acreage	Developed Acreage
Intensity Category C**	72,200	62,800	9,600
Intensity Category D	49,000	35,200	13,800
Intensity Category E	110,200	96,400	13,800
Total*	231,400	194,400	37,200

*Rounded to nearest hundred

** includes Class “C” areas assigned “open” value

4-8 Scenario Analysis: Assessing Alternative Patterns for Future Land Use

After determining how much land is available for development and analyzing how much of that land can accommodate development and at what level of intensity, we were then able to prepare and evaluate alternative development scenarios from which we could select that which best represents our vision. This section describes the steps in the geographic analysis that were used to devise and evaluate several alternatives that resulted in the Future Land Use Map 2025.

Scenario Planning

Scenario planning is a “what-if” tool used by planners to define and assess growth alternatives for metropolitan regions in geographic terms. The scenario technique allows public officials, land use stakeholders, and the public to develop a shared vision for the future, expressed geographically and quantifiably, by analyzing combinations of various forces that affect growth.

Scenario Analysis Performed for Land Use 2025

Several key questions were considered in developing alternative future land use scenarios for evaluation in this plan:

- Can the State grow and retain its unique character at the same time?
- How can the State accommodate growth as it expands its urban services?
- What impact will growth have upon the State’s natural environment and rural landscapes?

The scenario planning performed as part of the geographic analysis for *Land Use 2025* was designed to present clear alternatives as to how the State might grow over the next 20 years. Public input, including results from the 2001 Public Survey and 2003 Regional Workshops (see Part 121-02), were considered in defining and evaluating alternative scenarios developed by Statewide Planning Program staff, working with (stakeholder) input via the Technical Committee. Additional public input on the scenarios and the recommended alternative took place during public review of the final draft plan.

Description of Scenarios Evaluated

Four alternative scenarios, or generalized future land use patterns, were developed for evaluation. RIGIS data and the Statewide Planning Program’s GIS analysis capabilities were used to create and evaluate each of the four scenarios. Geographically, each scenario represents the area, or footprint, within which the majority of development to accommodate growth needs through 2025 was postulated to occur. In order to provide contrast, the four alternatives were constructed with differing assumptions relative to the efficiency of future land use, and with differing levels of land use intensity, in particular different mixes of residential density. The four scenarios devised were:

Trend Scenario

This scenario postulates that the majority of future needs would be met by development close to existing development, and that growth would continue to take place throughout the State, without geographic focus. A key assumption of this scenario is that future growth would occur in a pattern and at densities reflecting recent growth and development trends. This scenario was assumed as the default i.e. the likely future that would result in the absence of policies to provide incentives for other development patterns and thus, served as a baseline for contrasting with the other three scenarios.

Centers & Corridors Scenario

This scenario postulates a focusing of future growth and development within defined centers (existing and potential) and within connecting corridors following major highways. Centers used were based largely upon those identified in municipal affordable housing plans but also considered earlier work by the Economic Policy Council and Statewide Planning Program staff input. Corridors were selected based upon work done by Statewide Planning in 2003 to define and characterize major travel corridors within the State. A target was selected for this scenario to accommodate projected needs within an area that was (at least) 20 percent smaller than that required by the Trend scenario. To accomplish this, densities would be somewhat higher than the Trend alternative, but would not approach the intensities found in Rhode Island's traditional urban areas.

Urban Infill Scenario

This scenario postulates that future growth and development would primarily occur as infill within and along the boundaries of currently urbanized areas, as defined by the availability of urban services (public water or sewer service). The boundaries of this scenario were devised by combining RIGIS datasets of public water and public sewer service areas. A 1,000-foot buffer was added to reflect potential future expansion of service areas. A target was selected for this scenario to accommodate projected needs while using at least 30 percent less land than required for the Trend scenario.

Composite Scenario

This scenario postulates that future growth needs would be accommodated primarily within an area consisting of the urban infill scenario supplemented with the addition of (selected) centers and (selected) corridor segments. These supplemental areas were determined to represent logical and geographically balanced opportunities for future growth based upon existing development conditions, land suitability, and/or local plans. Overall intensities would be similar to (but slightly lower than) the 1995 statewide density patterns. A target was selected for this scenario to accommodate projected needs within an area that was (at least) 35 percent smaller than that required by the Trend scenario.

A major variable in distinguishing among the scenarios, apart from their geographies, is their differing mixes of residential densities. Varying residential density mixes were selected for the scenarios to provide contrast while ensuring that each scenario provided the estimate of housing units needed and meet the target efficiency level selected for it. This variable relates directly to each scenario’s forecasted land needs.

Table 121-04(8) shows the differing mixes of density assumed for residential growth under the four scenarios. As described earlier, a fundamental assumption of the Trend Scenario is that projected growth in residential units will be expressed within the density parameters of current local plans, laws, and regulations. To quantify this, a composite of the thirty-nine municipal Future Land Use Maps⁴ was prepared and analyzed by Statewide Planning Program (See Figure 121-04(5)). As can be seen in Table 121-04(8), the three other scenarios are based on residential density mixes which assume that housing demand will be met by producing significantly more new housing in the higher density categories than under the Trend scenario.

Table 121-04(8)
ASSUMED DENSITY DISTRIBUTION OF NEW RESIDENTIAL DEVELOPMENT THROUGH 2025 UNDER FOUR SCENARIOS

	Trend	Centers & Corridors	Infill	Composite
Residential Density Range	Estimated percentage of total new units through 2025			
High & Medium-High (4.0+ du./ac.)	13	30	59	38
Medium (1.0-3.9 du./ac.)	18	18	32	35
Medium Low & -Low (<1.0 du./ac.)	69	52	10	27

Figures 121-04(1) through 121-04(4) illustrate the geographical distribution of the four scenarios. In these depictions, the boundary of each scenario area is designated by a white line. The map color scheme indicates lands of differing development capacities. *Within* each of the scenario boundaries, areas categorized for development are shown in red, and areas categorized for conservation in purple. *Outside* each of the scenario boundaries, areas categorized for development are shown as light pink, and areas categorized for conservation appear as light green. Currently developed land is shown as gray, and currently protected land as dark green in all scenarios. Each scenario map can be seen as presenting an alternative future development pattern, with the various colors depicting areas having varying suitability or land use intensity potentials.

⁴ A Future Land Use Map is a required component of the Local Comprehensive Plans adopted by every municipality under State law.

The GIS analysis also provided statistics on different categories of land shown on each map. Each scenario's graphical depiction and its accompanying data profile thus provide a basis for assessing how well the scenario meets the State's future land needs, and for characterizing its potential support for the vision, goals, and policies of this plan and other State Guide Plan elements.

4-9 Evaluation of Scenarios

Each scenario was quantitatively assessed on its capacity to accommodate the State's forecasted growth needs through 2025 without significant negative impacts.

Estimates of total undeveloped land needed to accommodate each scenario were based on the needs established for residential and non-residential land in the analyses described earlier in this part of the Plan. The Trend Scenario was taken as the baseline. Land required was based upon the residential density mix provided for in local plans and land management ordinances. See Technical Appendix D for further information.

Table 121-4(9) provides estimates of land needed to accommodate future growth under the four scenarios.

Table 121-04(9)
PROJECTED LAND NEEDS THROUGH 2025
UNDER FOUR SCENARIOS

	Trend	Centers & Corridors	Infill	Composite
Land Use Category	Acres (rounded to nearest hundred)			
Residential High & Medium High (4.0+ du./ac.)	900	2,100	3,900	2,600
Residential Medium (1.0-3.9 du./ac.)	4,100	4,100	7,500	8,000
Residential Medium Low & Low (<1.0 du./ac.)	90,400	66,300	8,100	31,900
Subtotal Residential	95,400	72,500	19,500	42,500
Commercial, Industrial, & Mixed-Use	12,600	10,100	8,800	8,200
Institutional	1,100	900	800	700
Total	109,100	83,500	29,100	51,400

The land need projections for the four scenarios can be understood as follows:

- The estimated land needed for the Trend Scenario represents an upper limit estimate of undeveloped land required to accommodate new growth in the State through 2025 assuming no major departures from recent development patterns.
- The land needed for the other three scenarios represent varying estimates of undeveloped land required to accommodate new growth in the State through 2025, if local policies and development practices change to encourage greater land utilization efficiency.

While existing developed land is assumed to continue in productive use under all scenarios, due to data limitations, redevelopment or more intensive reuse of existing underutilized developed land is not explicitly factored into the analysis. Reuse of existing underutilized developed land to accommodate growth could further reduce the land need estimates in all cases.

Analysis Results: Efficient Accommodation of Future Needs

All four scenarios provide sufficient developable land to meet the State's forecasted growth needs through 2025. However, the scenarios differ significantly in their efficiency of land utilization – measured by how much land they require for growth, as well as how closely they match the quantities of land suitable for different intensities of development to the demands anticipated for land in the various intensity categories. (See Table 121-04(10))

Trend Scenario

Under the Trend Scenario, 109,000 acres of land, or 17 percent of the State's land area is estimated to be needed to accommodate forecasted growth through 2025. Under the Trend Scenario, the State would be 45 percent developed, and 55 percent undeveloped by 2025. In terms of matching capability to need, while more than 40 percent of the Trend Scenario's land would be potentially suited for higher intensity development, over 80 percent of its forecasted land demand (see Table 121-04(8)) would be found within the lower intensity development categories. This mismatch allows the potential for a large portion of the scenario's higher intensity land to be (under) utilized in order to meet the demand for low intensity uses, or for areas found most suitable for conservation to be impacted in order to satisfy low-intensity demands. Overall, *the Trend Scenario does not efficiently utilize land in accommodating anticipated growth through 2025.*

Figure 121-04 (1)
Scenario 1: Trend

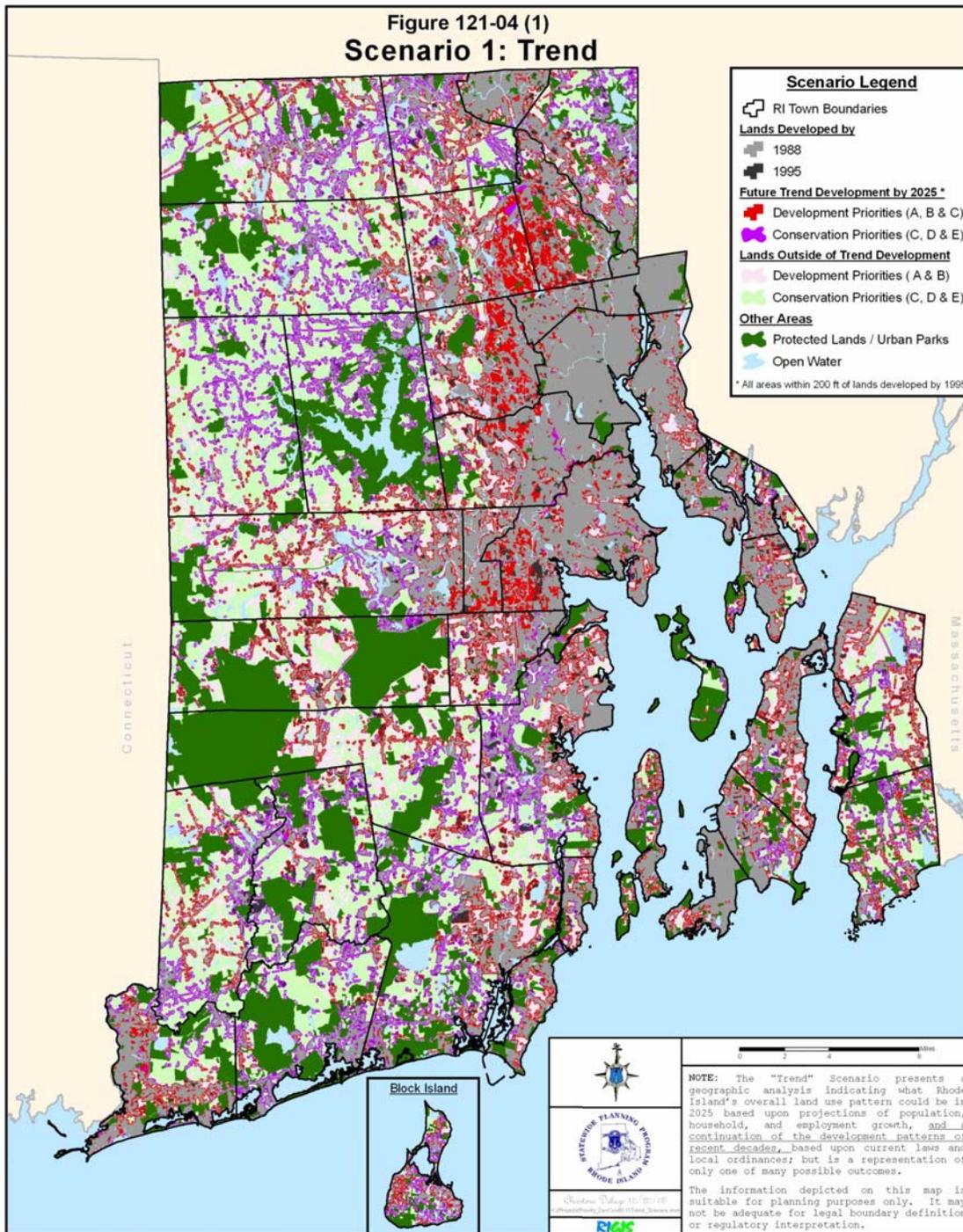


Figure 121-04 (2)
Scenario 2: Centers and Corridors

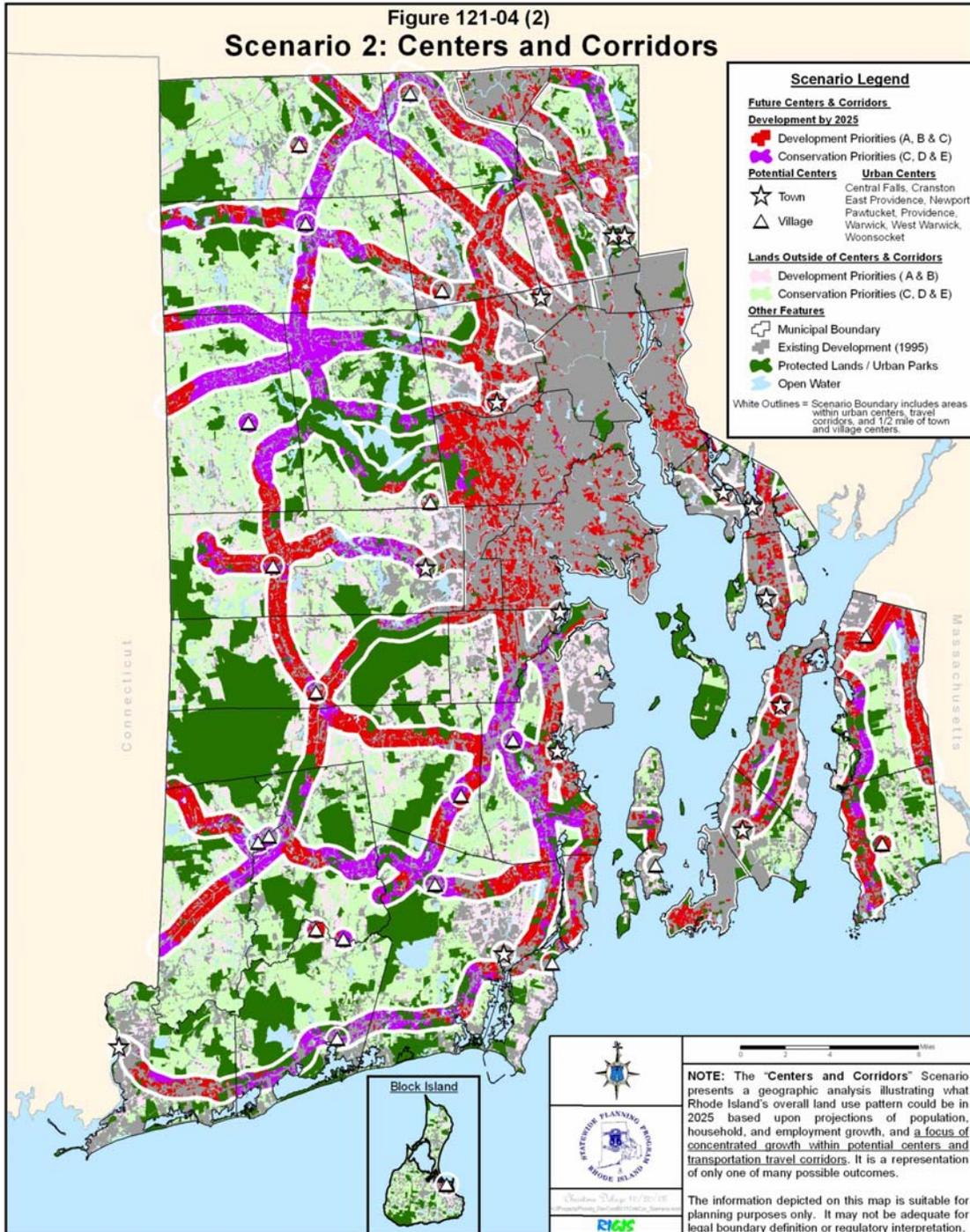


Figure 121-04 (3)
Scenario 3: Infill

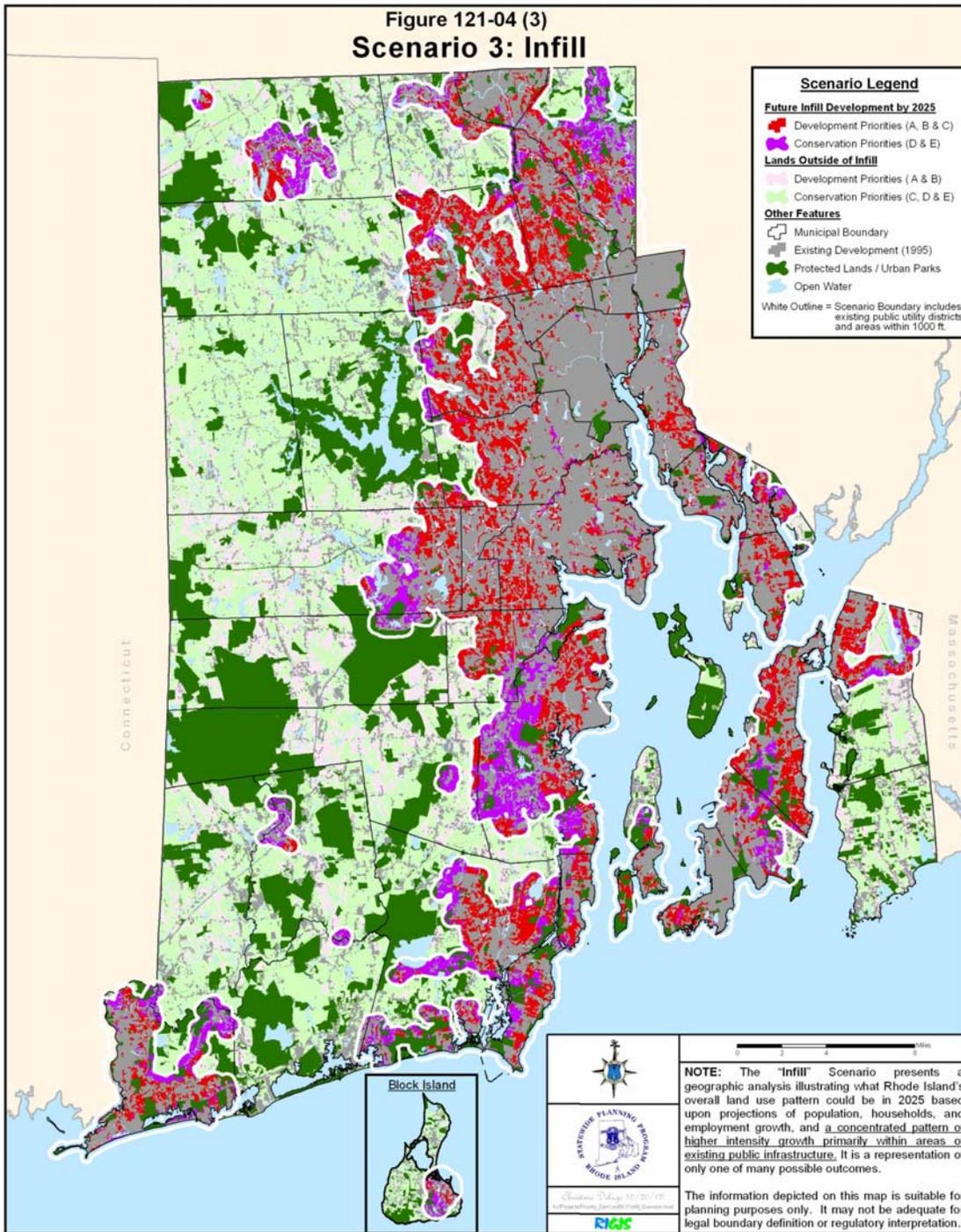
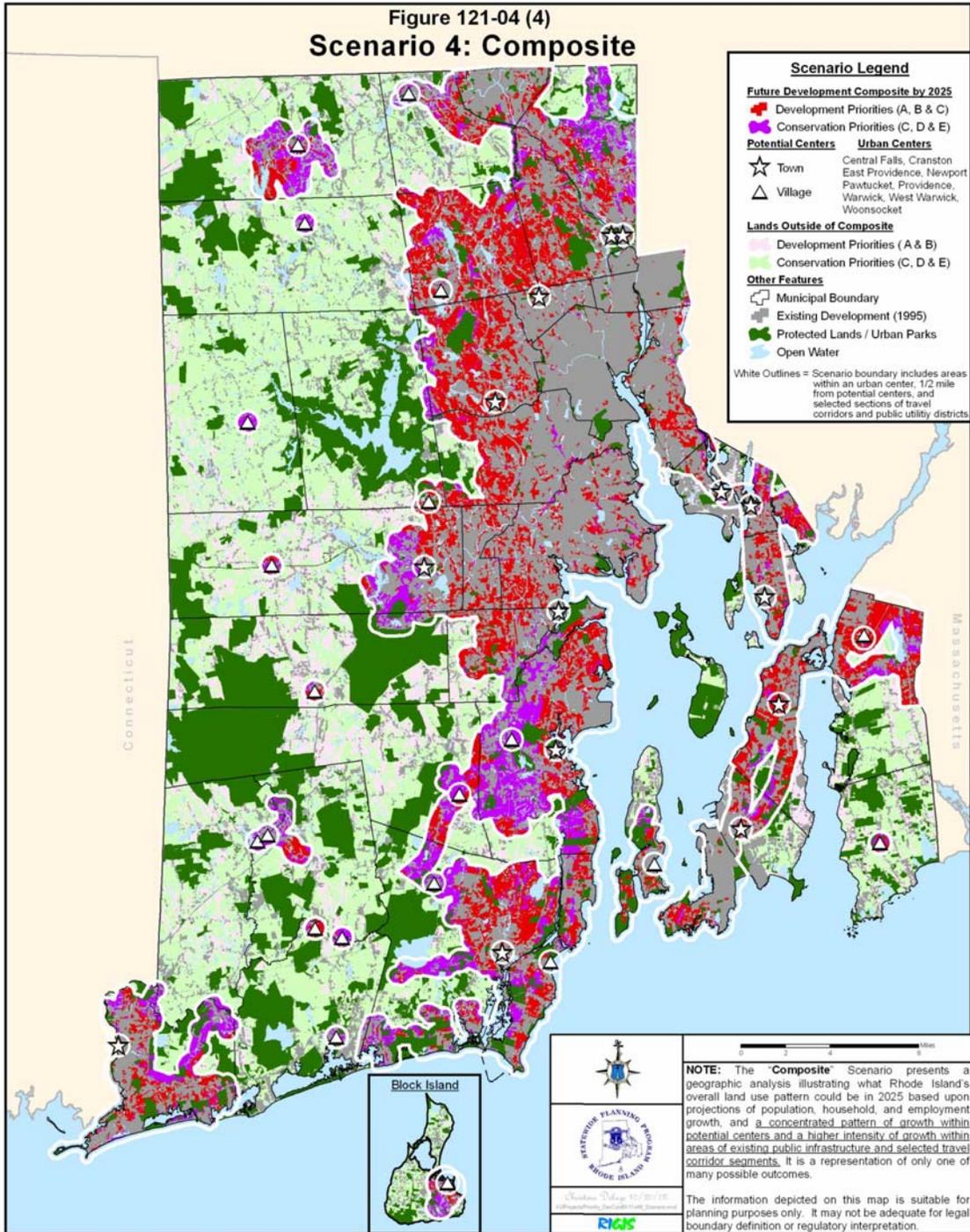


Figure 121-04 (4)
Scenario 4: Composite



Centers and Corridors Scenario

The Centers and Corridors Scenario would utilize 83,000 acres of undeveloped land, or 13 percent of the State's land area to meet the State's future growth needs through 2025. By 2025, 41 percent of the State would be developed, and 59 percent undeveloped. Approximately 40 percent of this scenario's land is classified for higher intensity development potential, but, as with the Trend Scenario, the bulk (~80 percent) of the Centers & Corridors Scenario's land demand is anticipated to be in the lower intensity categories. As with the Trend, this mismatch could be met by underutilization of higher capacity land, or by impacting upon conservation land, or both. *This scenario would be more efficient than the Trend, using 24 percent less land.*

Infill Scenario

The Infill Scenario anticipates development of only 29,000 acres, or 4.5 percent of the State's land area to meet the State's growth needs through 2025. In 2025, the State would be 33 percent developed, and 67 percent undeveloped under this scenario. Approximately 55 percent of this scenario's land is classified as potentially suited for higher intensity development. The Infill Scenario does provide sufficient quantities of land to satisfy estimated needs for different intensity-level development. *This scenario would make the most efficient use of land, accommodating the State's needs while using 73 percent less land than forecasted under the Trend option.*

Composite Scenario

The Composite Scenario would use an estimated 51,000 acres, or 8 percent of the State's land area, to meet growth needs through 2025. In 2025, the State would be 37 percent developed, and 63 percent undeveloped under this alternative. Approximately 52 percent of this scenario's land is classified as potentially suited for higher intensity development. Like the Infill Scenario, the Composite Scenario provides a good match between the quantities of land estimated to be needed for different intensity-level developments; surplus land would exist in all categories. *The Composite Scenario would provide 53 percent more efficient land utilization than the Trend alternative.*

Table 121-04(10) summarizes aspects of the quantitative comparison of the four alternative scenarios. Both the Trend and Centers and Corridors scenarios would require substantially more land to satisfy the State's growth requirements than either the Infill or the Composite scenarios. The Trend Scenario would require more than twice the land than either the Composite or Infill scenario. The Infill and Composite scenarios would require only 5 percent or 8 percent (respectively) of the State's land area to satisfy growth needs through 2025. The Trend Scenario and the Centers and Corridors Scenario are significantly less effective than the other two scenarios in matching available land capability with estimated land needs.

Table 121-04(10)

QUANTITATIVE* COMPARISON OF FUTURE LAND USE SCENARIOS

Acres	Trend	Centers & Corridors	Infill	Composite
Total land area of State	638,000	638,000	638,000	638,000
Existing developed land (1995)	205,000	205,000	205,000	205,000
Additional land estimated to be needed for <u>new</u> development through 2025	109,000	83,000	29,000	51,000
Total estimated developed acres* in 2025	314,000	288,000	234,000	256,000
Total estimated undeveloped acres* in 2025	386,000	412,000	466,000	444,000
Net uncommitted, developable land remaining in 2025	183,000	209,000	263,000	241,000
Percent Land Area	Trend	Centers & Corridors	Infill	Composite
Total land area of State (~638,000 acres)	100	100	100	100
Minus existing (1995) developed land** (~205,000 acres)	32	32	32	32
Net undeveloped land area of State (1995)	68	68	68	68
Additional land estimated to be needed for <u>new</u> development through 2025	17	13	5	8
Percentage of State area developed in 2025	49	45	37	40
Percentage of State area undeveloped in 2025	51	55	63	60
Net uncommitted, developable land remaining in 2025	29	33	41	38

* Acres (rounded to nearest thousand)

** Developed Land includes some “protected land” as parks & active recreation

Analysis Results: Policy Considerations

Each of the four scenarios was also qualitatively assessed relative to its conformance with the goals and policies from Part Two and other State Guide Plan elements.

Trend Scenario

The Trend Scenario assumes current laws and local ordinances would continue to regulate land use. It shows the potential implications of current land use management strategies assuming ongoing land and housing market conditions. As shown in Figure 121-04(1), the Trend Scenario would result in a highly diffuse or sprawling development pattern leaving a relatively small amount of unfragmented open areas. It would be characterized by relatively low densities, expanding road networks, and unconcentrated public investments.

The wide dispersion of development could potentially threaten the amount and integrity of important resources including farmland, critical natural areas, existing protected lands, and large forest tracts. The proliferation of developed uses across watersheds would constitute increased risk for contamination of wetlands and water bodies, including potable supply sources. Low densities and scattering of development would make public provision and management of supporting infrastructure and services more expensive, for many areas.

The emphasis on low-density residential development would limit housing choice and make development of affordable units in adequate numbers problematic. Separation of uses and low densities would also make public transit prohibitive and create a high reliance on automobiles for transportation needs. Absent expansion of highway capacities, high levels of congestion could result from increased auto travel demands.

Centers and Corridors Scenario

The Centers and Corridors Scenario would represent a departure from current trends. Development activity would be focused within highway corridors and in existing and new centers throughout the State. While development would be more concentrated, and overall densities somewhat higher than the Trend Scenario would yield, this Scenario's overall densities would still be approximately 30 percent lower than the overall density of Rhode Island's residential development in 1995. As shown in Figure 121-04(2), this scenario would result in a dispersion of development throughout most areas of the State by following highway corridors. While somewhat more compact than the Trend Scenario, important resources including farmland, critical natural areas, existing protected lands, and large forest tracts would still be susceptible to development impacts, given the dispersion of roadways throughout the State. This pattern of growth could be especially problematic where corridors cross major potable supply watersheds, increasing contamination risk.

The concentration of development in centers could make public provision and management of supporting infrastructure and services more economical for these areas; however, the reverse could be true within some parts of the extensive corridor network. Concentration of development in narrow linear bands along major roads could facilitate transit service provision by allowing direct routing and concentrating potential patronage. The aggregation of growth within highway corridors would necessitate careful access management so that corridor roadways retain their functional capacities and avoid congestion. While the Centers and Corridors Scenario postulates residential development at density approximately 30 percent lower overall than existed in 1995, potentially limiting housing choice and affordability, this effect could be offset if sufficient higher density areas were provided within the centers. This Scenario offers geographically distributed opportunities for growth – all communities in the State would include one or more centers, and/or be traversed by corridors of concentrated development.

Infill Scenario

The Infill Scenario would represent a departure from current trends and would produce a pattern of very concentrated growth. As shown in Figure 121-04(3) new development would occur as infill within currently urbanized areas and along the urban fringe. Residential densities would be comparable (approximately five percent lower) than current (1995) levels, but considerably (nearly 50 percent) higher than under the Trend Scenario. The Infill Scenario would have less impact upon major resource areas (particularly in the western portion of the State) but there could be potential for increased impacts on the Bay and shoreline areas.

Given this Scenario's concentrated, higher-density development pattern, a highly developed public transit system would be needed to avoid highway congestion. Similar concerns may apply to the ability of other infrastructure to support increased intensities within the concentrated growth area. However, the concentrated nature of the Infill Scenario would be expected to provide economies in service provision or expansion.

The Infill Scenario does not offer a geographically balanced distribution of future growth. Growth opportunities would be limited in the rural western and southeastern portions of the State and several communities would not be expected to incur any new growth under this Scenario. The Infill Scenario would provide most new housing in the higher density categories; only 9 percent of new housing would be anticipated within the lower density categories. This Scenario's concentration on higher density housing production could result in an imbalance between demand for lower density housing and supply.

Composite Scenario

The Composite Scenario would be a significant departure from current trends, and would emphasize compact urban growth and higher intensities, but would not be as limiting in these parameters as the Infill Scenario. Development would be significantly concentrated within currently urbanized areas, along the urban fringe, and in existing and potential centers. The Composite Scenario would include opportunities for limited, compact

development within centers in rural and suburban communities. Overall, densities would be considerably (~28 percent) higher than under the Trend Scenario, but slightly (~16 percent) lower than current (1995) levels. The Composite Scenario would have less impact than either the Trend or Centers and Corridors scenarios upon major resource areas, particularly in the western portion of the State. However, careful management would be necessary to avoid increased impacts on the Bay from increased development activity along the shoreline. A highly developed public transit system would be needed to avoid highway congestion, and the capacities of other supporting infrastructure could require expansion or upgrading.

The Composite Scenario offers growth opportunities to all areas of the State, including limited, compact growth centers in the rural western and southeastern portions of the State. All communities would have opportunities for new growth under this scenario. In terms of housing mix, while the Composite Scenario emphasizes new housing at higher densities with 38 percent of its new unit production planned within the two highest-density categories, it would also include 25 percent of its production within the lower density categories. This balanced housing production would help ensure that a range of housing choice remains available while supporting affordable options as the market evolves.

Table 121-04(11) summarizes aspects of the quantitative comparison of the four scenarios.

Table 121-04(11)

EVALUATION OF SCENARIOS ON POLICY CONSIDERATIONS

	Trend	Centers & Corridors	Infill	Composite
Land Efficiency	low	low	moderate	high
Concentration of Growth	low	moderate	high	high
Growth Opportunities for All Communities	high	high	low	high
Potential for Housing Diversity	low	moderate	moderate	high
Infrastructure System Support	low	low	high	high
Transport System Support	low	moderate	high	high
Resource Protection	low	low	high	high

4-10 Scenario Selection

In August 2005, the Technical Committee selected the Composite Scenario as the preferred scenario to form the basis of the State's land use plan. This recommendation was based upon the scenario evaluations illustrating a clear difference between where current trends are leading versus a future based on a more compact and managed growth pattern. The Composite Scenario offers a means to accommodate necessary growth in a compact and balanced fashion, while minimizing the negative effects and diseconomies of sprawl.

Pursuing policies that will restore and reinforce the tradition of focusing growth in and around existing towns and cities appears to offer the best prospect for allowing future Rhode Islanders to live, work, and travel in ways that fully utilize the public investment in roads, transit, water, and sewer services, while creating the fewest impacts to critical resources and maintaining the distinctiveness of various parts of the State's urban and rural landscapes.

4-11 Comparing the Composite Scenario to Municipal Plans

Following selection of the Composite Scenario as the preferred future land use pattern, an evaluation was performed to assess its correlation to municipal future land use maps and Affordable Housing Plans, as contained in local comprehensive plans. This was done to identify both areas of consistency and of differences, which will be reviewed with municipalities during their next comprehensive plan update. Further, the analysis sought to identify areas where the selected scenario might need to be adjusted to produce a recommended future land use map for this Plan. The analysis included two steps, first to compare the Composite Scenario with the composite of the municipal future land use maps, shown as Figure 121-04(5) and secondly to compare with municipal Affordable Housing Plans.

The Composite of Municipal Future Land Use Maps was created by summarizing the land use categories shown on future land use maps in municipal comprehensive plans. The twelve generalized future land use categories from the Composite Municipal Future Land Use Map were contrasted against the land intensity classifications contained in the Composite Scenario.

Table 121-04(12) shows the results of this comparison. The comparison revealed some areas of differences but determined the State and local composite maps did not differ greatly overall.

Figure 121-04 (5)
Composite of Municipal Future Land Use Maps

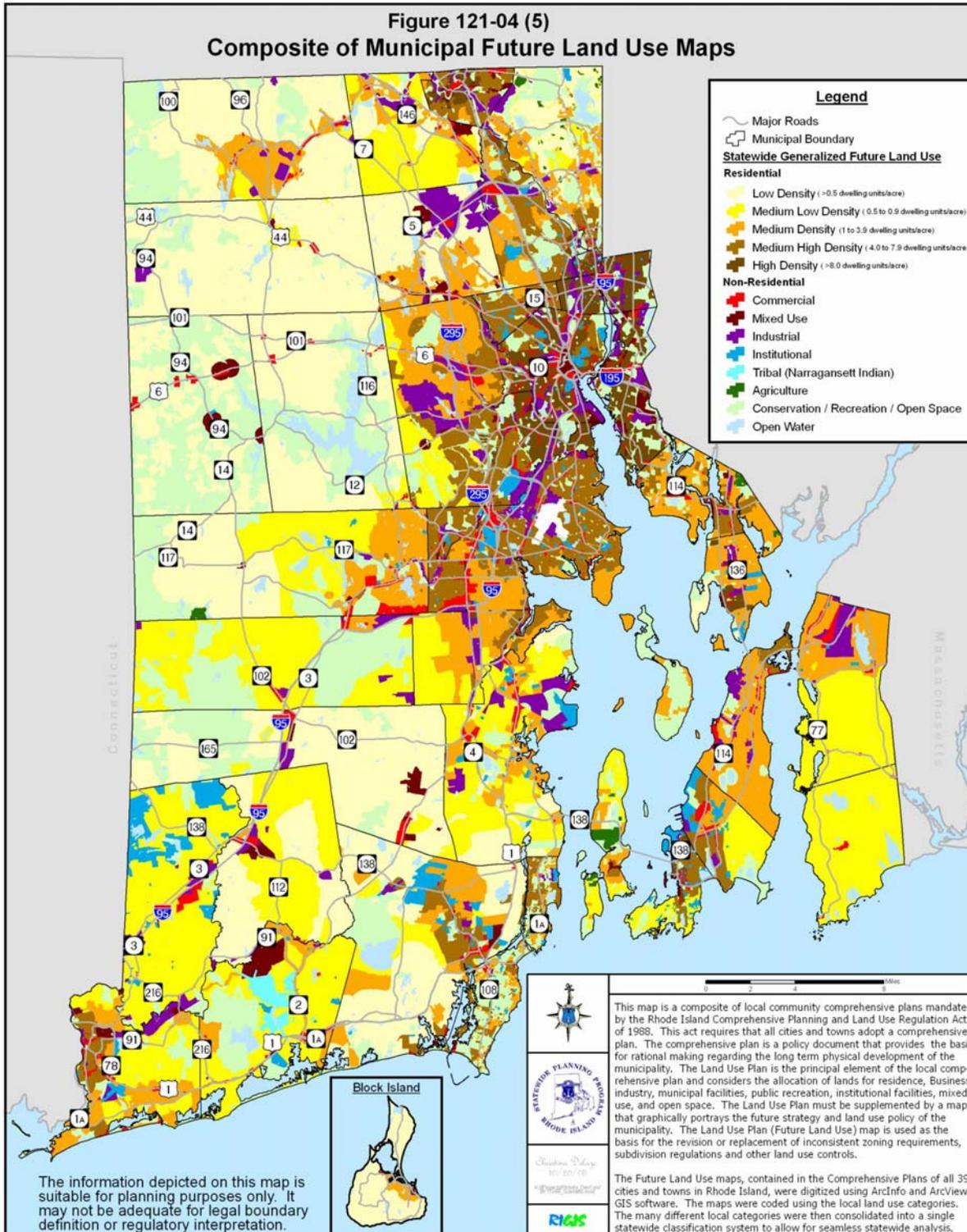


Table 121-04(12)
COMPARISON OF COMPOSITE SCENARIO LAND INTENSITY POTENTIAL CLASSIFICATIONS AGAINST MUNICIPAL FUTURE LAND USE

Future Land Use Category (from Municipal Comprehensive Plans)		Urban Service Area	Urban Centers	Town Centers	Village Centers	Reserve Lands
Residential	High Density	✓	✓	✓	✓	✓
	Medium-High Density	✓	✓	✓	✓	✓
	Medium Density	✓	X	✓	X	X
	Medium-Low Density	✓	✓	X	X	X
	Low Density	X	✓	X	✓	X
Non-Residential	Commercial	✓	✓	✓	✓	X
	Industrial	✓	✓	✓	✓	X
	Mixed-Use	✓	✓	✓	✓	✓
	Institutional	✓	✓	✓	✓	✓
	Agricultural	✓	✓	✓	✓	✓
	Open Space, Conservation, and Recreation	X	✓	X	✓	X

✓ = Composite Scenario and Future Land Use Map Composite generally match; no areas of significant differences

X = Composite Scenario and Future Land Use Map Composite differ

Comparison of the Composite Scenario's land classifications with the land use categories assigned in the Composite of Municipal Future Land Use Plans show that:

- *Within the Composite Scenario area, there is a good correspondence between the municipal future residential use categories and the Composite Scenario land intensity classifications; however, the municipal future land uses show more Conservation/Recreation/Open Space use than the Composite Scenario.*

- *Within potential urban centers*, municipal future land uses generally match the Composite Scenario's land intensity classifications except for a few places where a municipal medium residential future land use is proposed and the Composite Scenario indicates a higher land intensity potential classification.
- *Within the potential town and village centers*, most of the municipal future land uses align closely to the land intensity classifications of the Composite Scenario. All the potential centers indicated on the Composite Scenario are indicated within the municipal future land use composite as places for desired development of various intensities. The low density and medium-low density residential future municipal land uses, however, differ from the Composite Scenario, which indicates higher intensities.
- *Outside of the Composite Scenario area*, more significant differences exist between the two composite maps. Only the two highest categories within the municipal residential future land uses – medium-high and high density – coincide well with the land intensity potential classifications of the Composite Scenario. In the other three municipal residential categories – medium, medium-low, and low density – the planned municipal land uses are generally higher than the Composite Scenario's proposed intensities. There are also areas where the planned municipal future land use is for commercial or industrial use and the Composite Scenario indicates a lower land intensity classification.

Comparison with Affordable Housing Plans

Under legislation passed by the General Assembly in 2004, affordable housing plans are required by twenty-nine communities and must be included as a component of the Housing Element of their local comprehensive plan. These plans were examined to determine where municipalities have planned for potential centers and areas of affordable housing. Twenty-five affordable housing plans identified locations for centers. All of the potential centers indicated on the Composite Scenario have also been identified in local affordable housing plans as places providing affordable housing opportunities.

- Following the endorsement of the Composite Scenario by the Technical Committee as the basis for the future (2025) State land use map, additional geographic and cartographic refinements were made in response to comments made by the State Planning Council and the public. The product of this effort is the Future Land Use Map 2025 that appears in Part Two as Figure 121-02(1).

PART FIVE

WHAT MUST BE DONE TO ACHIEVE OUR VISION?



PART FIVE: WHAT MUST BE DONE TO ACHIEVE OUR VISION?

In this Plan we have adopted a vision for the next 20 years that we are confident preserves Rhode Island's unique quality of place while meeting our needs for reasonably affordable housing, a vibrant economy and a healthy environment. But do we have the means to achieve this vision? The following examines some of Rhode Island's capabilities.

5-1 The State Guide Plan

Our State benefits from a tradition of statewide land use planning, dating back at least as far as a special report in 1955 by the Rhode Island Development Council, *Background for a Guide Plan for the Future Development of Rhode Island*. In that report, the Development Council recognized that there were "natural and cultural resources which have been and will continue to be most significant in the development of our State" and called for a management regime that set the foundation for the current State Guide Plan system of 30 elements.

In 1963, the Statewide Planning Program was established. Its charge included preparing and maintaining the Guide Plan, and centralizing and integrating long-range goals, policies and plans with short-term projects and plans. The State Planning Council, heading the Statewide Planning Program, adopted its first land use plan in 1969.

The State Guide Plan promotes planning coordination in several ways, being used as both a resource and review mechanism for projects and implementation measures, such as:

- Proposals requesting federal funds.
- Applications for U.S. Army Corps of Engineers permits.
- Environmental Impact Statements.
- R.I. Economic Development Corporation projects.
- Projects being reviewed by the Energy Facility Siting Board.
- Applications for various loans, grants, or other federal or State financing.
- Rules and regulations promulgated by State agencies.
- Property leases and conveyances proposed before the State Properties Committee.

Besides these, one of the most important roles the State Guide Plan plays in coordinating planning is in the review of local comprehensive plans. This determines whether the State will certify a local plan so that State projects are bound to be consistent with it in the same way that local projects are consistent with the State Guide Plan.

5-2 State Investments

As noted in Part Two, one of the things that sets this plan apart from earlier efforts is the delineation of an urban services boundary and growth centers together with the recommendation for a State investment strategy that directs growth towards these areas. These areas can sustain additional growth, be it new development or reuse, infill, and redevelopment at more intensive levels and this growth should be encouraged by State investments.

What are these investments? For the most part, they are public expenditures currently being made – but without any overriding consideration of how they support adopted State land use policy. Currently the Division of Planning administers a number of programs, many of which include substantial amounts of federal funds. These include:

- Small Cities Community Development Block Grants,
- Neighborhood Opportunities Program,
- Transportation Improvement Program, and
- U.S. Economic Development Administration grants

Beyond these programs, other agencies administer programs that deal with water and wastewater infrastructure, economic development, recreation and open space, historic preservation, and education. In addition to these grant and loan programs there is the area of regulation that in many cases can be just as important in encouraging or discouraging development.

These programs, if taken together and prioritized, can form the foundation of public support for a sustainable State land use program. As such, it is intentional that the first implementation strategy of this plan calls for a prioritized investment strategy.

5-3 Local Comprehensive Plans

Legislative efforts to implement the current land use element of the State Guide Plan concentrated on updates to the State’s enabling statutes for municipal planning, zoning and subdivision, and land development review – all of which were substantially rewritten. After years of effort, legislation was passed that equipped municipalities with the

To achieve Land Use 2025, we must anticipate challenging issues related to land use - housing, economic development, natural and cultural resources, services and facilities, open space and recreation, and transportation-develop strategies to meet them. A State investment policy that supports growth in the urban services core and community centers and provides technical assistance to municipal planners is intended to aid cities and towns in implementing necessary policies.

statutory authority necessary to be firmly in charge of the planning, zoning, and design of their future land use within a framework set by the State Guide Plan.

Local planning, of course, is not new. Municipal plans have been required by law for at least 35 years (see Section 45-22-7 of the R.I. General Laws), their primary objectives to underpin zoning regulations and guide capital improvements. Since the 1960s, Rhode Island municipalities have prepared and adopted local plans, many with the help of the State's former Department of Community Affairs.

Now, under the *Rhode Island Comprehensive Planning and Land Use Regulation Act* (1988), Rhode Island cities and towns must have a locally adopted Community Comprehensive Plan that must be updated at least once every five years. Municipal plans are required to be reviewed by the State for consistency with State goals and policies; in turn, State agency projects and activities are to conform to local plans that have received State approval. Adopted local plans also set the basis for the exercise of key local implementing powers for land use – zoning and development review ordinances.

This legislation codifies a message conveyed to State planners in the 1970s: *all land use activity is local*. With the exception of federal and State-owned property, and environmental protection regulations, all decisions about which land uses to permit are made at the municipal level. This is not to understate the potential regional impacts of major local development or building trends. However, it is essential to have an understanding and appreciation of the municipal requirements for planning and the process for implementing such plans. Viewed this way, Rhode Island's 39 municipal land use programs become key components for implementation of the *State Land Use Policies and Plan*.

The Rhode Island Comprehensive Planning and Land Use Regulation Act specified the requirements for municipal comprehensive plans, calling each “a statement (in text, maps, illustrations, or other media of communication) that is designed to provide a basis for rational decision-making regarding the long term physical development of the municipality.”¹ There are nine required elements: goals and policies, land use, housing, economic development, natural and cultural resources, services and facilities, open space and recreation, circulation, and implementation.

According to the legislation, the land use element is supposed to designate “the proposed general distribution and general location and interrelationship of land use for residential, commercial, industry, open space, recreation facilities, and other categories of public and private uses of land.” But it also must go further:

The land use element is based upon the other elements... and it shall relate the proposed standards of population density and building intensity to the capacity of the land and availability of planned facilities and services. A land use plan map, illustrating the future strategy and land use policy of the municipality, as defined by the comprehensive plan, is required. The

¹ RIGL 23:22.2-6

land use plan must contain an analysis of the inconsistency of existing zoning districts, if any, with the land use plan. The land use plan should specify the process by which the zoning ordinance and zoning map shall be amended to conform to the comprehensive plan.²

The legislation gave municipalities total discretion in their definition and categorization of land use. State standards for preparing comprehensive plans, issued by the State Planning Council, reflected the local prerogative approach, likewise not specifying land use categories for mapping.

Without directions for standardizing categories for land uses, each municipality seems to have developed a unique land planning and zoning system and terminology, and this is clearly evident in their individual approaches to land use mapping. The State law did specifically *require* consistency with both State agency plans and plans of adjacent municipalities, but a system with 39 distinct local plan and map categories makes comparison and analysis to determine consistency very difficult.

In an effort to bring some conformity to the process, Statewide Planning created a Composite Future Land Use Map from the 39 municipal maps by interpolating the numerous municipal land use categories. This map, shown as Map 121-04(5), was used in assessing alternative future land use scenarios in Part Four.

This is to say that plans currently exist for the entire area of the State – all 700,000 acres. Zoning and other land use regulations are in place to control development of every parcel in the State. Clear details of Rhode Island’s overall land use plans, that is, the minimum requirements for future building on all the 480,000 individual land parcels in the State, are contained in the multiple public plans, development regulations and codes of local agencies.

These official plans and regulations mandate the shape and scale of building envelopes, site design work, and public improvement standards for all physical development within the State. Land use regulations, in all their permutations, create Rhode Island’s greenspace, community design and infrastructure at the State, municipal, and neighborhood levels. Land use regulations go far beyond the listing of uses to which land can be put within certain zones.

Thus, there exist detailed instructions for building and conserving that cover the entire State. Piecing the regulatory requirements together from all the plans and regulations would create a blueprint for the State’s future land use. Unfortunately, to date only the general outlines of this blueprint are discernible from a statewide or regional perspective. As mentioned above, the 39 major pieces of the blueprint are held by the individual cities and towns. Only a few of those pieces contain the design details and three-dimensional character that a good blueprint or model provides. The strategies outlined herein attempt to complete that blueprint.

² Ibid

5-4 Planning Capacity

As of the writing of this Plan, 33 of the 39 municipalities had full-time planning staff. This is a significant increase since the adoption of the previous land use plan, and can be attributed to both the new legislative requirements for planning and the increase in development activity particularly in rural communities. While on the one hand the professional planning capacity in local government has significantly increased, it is also very strained with limits on personnel and budgets.

In our discussions with local planners, the second most mentioned problem was *local capacity*. This reflected the frustration of local officials who feel there is a significant gap between land use planning in theory and reality, i.e., the ability of communities to implement what they know from theory to be the best land use practice. In their view, both project-specific development review and long-term planning require a greater level of knowledge, information, and resources than are available on the municipal level.

They also noted that workloads are overwhelming local officials. Planners spend most of their time reacting on a case-by-case basis rather than acting proactively by developing or implementing plans. The frustrations of the professional staff are often compounded by local boards and commissions that generally lack training in planning and development principles, or in their legal powers and authority.

In response to these issues, this plan proposes implementation goals and strategies to:

- Provide communities with more technical assistance.
- Provide local boards and commissions with more education and training.
- Provide communities with model ordinances, best practices, forecasting models, etc.
- Promote regional cooperation and information sharing.

As the Division of Planning attempts to respond to this need for technical assistance at the local level, this response may result in limiting capacity at the State level in other planning disciplines unless accompanied by appropriate staff resources?

5-5 Implementation

This part outlines a framework of objectives and strategies for realizing the plan's vision for Rhode Island 2025. Under the goals for a Sustainable Rhode Island Greenspace, Community Design, Infrastructure, and Implementation, a total of 25 major objectives and nearly 90 specific strategies have been established. The matrix that follows lists the goals and objectives together with their related strategies. The table identifies the key agents, and a lead agent, for each strategy. Strategies are also identified as short-term, long-term, or ongoing. Additional work will focus on developing performance measures for each of the goals, and these will be published as an addendum to this report.

Table 121-05(1)

**GOALS, OBJECTIVES, AND STRATEGIES FOR
RHODE ISLAND'S FUTURE LAND USE**

A Sustainable Rhode Island			Lead Agencies*	Time Frame*
Goal	1	A sustainable Rhode Island that is beautiful, diverse, connected, and compact with a distinct quality of place in our urban and rural centers, an abundance of natural resources, and a vibrant sustainable economy.		
Objective	1A	<i>Focus growth within the urban services boundary and in centers of different sizes and types; support traditional centers instead of new development.</i>		
Strategies	1	Identify the most important or viable existing centers within Rhode Island, and the character and activities of each center.	M, SPP	ST
	2	Scrutinize the undeveloped areas currently planned for commercial, industrial, and mixed uses and consider their viability as new centers to provide for major land use needs, particularly multi-family housing and community facilities.	M, GSRI, DEM, WRB	ST
	3	Convene stakeholders to assess the impacts of increased density upon the environment and existing infrastructure capacity.		
	4	Prioritize State investments to support growth within the urban services boundary and in State approved growth centers.	SPP, GOV, GA, M	LT / O
	5	Promote the preparation and adoption of strategic plans for growth center redevelopment as recommended by the Governor's Growth Planning Council and as provided for in the Handbook on the Local Comprehensive Plan.	M, SPP	ST

*Abbreviation key immediately follows table

<i>Strategies continued</i>	5 cont.	Coordinate State and municipal efforts to contain sprawl by limiting growth outside the urban services boundary or approved growth centers.		
	6	Investigate opportunities to promote greater use of Transfer of Development Rights (TDR) and similar land management techniques, and provide technical assistance to municipalities on the establishment and operation of such programs.	M, SPP, GSRI	ST
	7	Utilize transfer of development rights programs, conservation development, and similar techniques to focus future growth within areas identified in this plan as having the fewest environmental constraints and most public services.	M, SPP	ST
Objective	1B	<i>Support regional and watershed-wide planning to coordinate policy development and promote cooperative implementation of plans, programs, and projects affecting more than one community.</i>		
Strategies	1	Establish and maintain a statewide system for the provision of water supply availability information to State, regional, and municipal entities for sustainable current and future uses.	WRB, WS	ST / O
	2	Consider the capacity of water sources and water availability within watershed basins and/or sub-basins in establishing land intensity goals and regulations.	WRB, SPP, M	ST / O
	3	Consider geology, hydrology, and soil suitability in establishing appropriate land uses and intensities.	WRB, SPP, M	ST / O
	4	Relate development intensity to water requirements, use priorities, source, and type of existing and proposed infrastructure.	WRB, SPP, M	ST / O
Objective	1C.	<i>Promote holistic systems planning approaches at the watershed level.</i>		

Strategies	1	Support the participation of watershed organizations in land use planning and management decisions.	DEM, WRB, SPP, M, RC	ST / O
	2	Encourage the integration of Special Area Management Plans (SAMP) for the Bay and other coastal areas with State, regional, and municipal land use planning and management.	CRMC, SPP, M	ST / O
The Greenspace System			Lead Agencies	Time Frame
Goal	2	A statewide network of greenspaces and greenways that protects and preserves the environment, wildlife habitats, natural resources, scenic landscapes, provides recreation, and shapes urban growth.		
Objective	2A	<i>Permanently protect critical natural resources.</i>		
Strategies	1	Identify and prioritize the most critical Greenspace resources, both rural and urban.	SPP, DEM, M, CRMC, WRB, DOH	ST
	2	Pursue protection of identified critical natural resource areas.	M, DEM, CRMC	LT
	3	Protect existing open space from conversion to other uses.	DEM, DOT, M, CRMC, SPCOM	O
	4	Establish a permanent system for funding & for technical assistance for Greenspace protection.	GOV, GA, DEM	ST
	5	Develop and maintain a Statewide Future Greenspace Network Map.	DEM, SPP, M	O
	6	Support agricultural uses and viability; preserve farmland for active agricultural uses.	DEM, M	ST / O
Objective	2B	<i>Upgrade and maintain urban and community Greenspace.</i>		

Strategies	1	Require significant native or drought-tolerant landscaping in all publicly funded projects.	M, DOT, SPCOM	O
	2	Upgrade landscape requirements in municipal development regulations.	M	O
	3	Enhance community and regional Greenspace connections during the municipal development review process.	M	O
	4	Maintain adequate vegetated buffers wherever possible and/or provide landscape treatments to buffer effectively all highways, roads, and streets.	M, DOT	O
Objective	2C	<i>Provide a diverse, well-balanced system of public outdoor recreation facilities.</i>		
Strategies	1	Preserve and expand opportunities for public access to natural resources and recreation facilities.	M, DEM, CRMC	LT / O
	2	Maintain and expand the State and local network of trails and pedestrian paths, in both natural and built areas.	M, DEM, CRMC, DOT	LT / O
	3	Strengthen and expand community-based opportunities for open space and outdoor recreation, particularly in urban areas.	M, DEM	LT / O
Objective	2D	<i>Use Greenspace to shape urban development patterns.</i>		
Strategy	1	Coordinate State land protection priorities with community comprehensive plans.	SPP, DEM, M	O
Objective	2E	<i>Ensure that shoreline areas compose a significant portion of the Greenspace system.</i>		
Strategies	1	Strengthen and implement land use controls to protect shoreline areas.	M, CRMC	ST
	2	Prioritize shoreline areas in State and local land acquisition efforts.	DEM, M	ST

Community Design			Lead Agencies	Time Frame
Goal	3	Excellence in community design: communities that are high quality, energy efficient, safe, healthful, distinct, diverse, and aesthetically pleasing; communities that are rich in natural, historical, cultural, & recreational resources; communities that provide abundant economic opportunities.		
Objective	3A	<i>Give a majority of the State's residents the opportunity to live in traditional neighborhoods, near growth centers. (Note: Traditional neighborhoods are generally residential areas with a mixture of housing types, with public water and sewer service, sidewalks, transit connections, and house lots of one-half acre or less.)</i>		
Strategies	1	Prepare and adopt neighborhood-based strategic plans to accomplish revitalization, redevelopment, and development of new neighborhoods.	M, HRC	ST
	2	Identify existing traditional residential neighborhoods and accessory uses such as shopping, open space areas, and transit connections.	M	ST
	3	Identify areas suitable for new traditional residential neighborhoods within the State's public water service areas, adjacent to centers and other residential neighborhoods, or adjacent to rural village centers.	M, WRB	ST
	4	Promote infill and redevelopment with supporting amenities and services within existing neighborhoods in areas that are underutilized or where larger replacement structures would be appropriate.	M	LT / O
Objective	3B	<i>Preserve and enhance special districts and special places, supporting particular uses and resources.</i>		

Strategies	1	Identify special districts or special places, and define their character, functions, and contributing features.	M	ST
	2	Evaluate the extent to which existing land use plans, regulations, and capital improvement projects provide for preservation and improvements to the special district.	M	ST
	3	Promote the preparation and adoption of Special District Improvement Plans and revise land use regulations to be consistent with the plans.	M, EDC	ST
Objective	3C	<i>Maintain and protect the rural character of various areas of the State.</i>		
Strategies	1	Identify existing rural centers, villages, mill complexes, and special districts; define their character, contributing elements, and active uses.	M	ST
	2	Evaluate assets, constraints, and the extent to which the existing centers contain potential sites for new development within or adjacent to the centers.	M	ST
	3	Enable and promote clustering of new development into much denser concentrations within, and adjacent to, existing rural centers or existing neighborhoods.	M	ST
	4	Protect the character of rural roads, areas, and important vistas through land use controls, such as deep frontage setbacks and configuration of open space in new developments.	M	ST
	5	Develop and apply zoning techniques appropriate for conservation of fragile or important resources.	M	ST
	6	Develop plans for existing undeveloped areas as future neighborhoods, centers, or reserves; revise land use regulations to be consistent with the plans.	M	LT

<i>Strategies continued</i>	7	Locate small-scale convenience shopping uses, community facilities, and institutional facilities within or adjacent to rural centers.		
	8	Ensure that zoning requirements for such uses/areas provide designs that are compatible with the scale and character of rural environments.	M	O
Objective	3D	<i>Provide a diverse, affordable housing stock.</i>		
Strategies	1	Preserve the existing affordable housing stock, both publicly subsidized and market units.	HRC, RIH, M	O
	2	Identify good potential sites for higher density housing, considering capacity for water service, sewer service, transit connections, and employment centers.	HRC, SPP, M	ST
	3	Adopt guidelines for development of higher density housing uses, particularly near identified centers, that respect the carrying capacity of the land and community context.	HRC, SPP, M	ST
	4	Provide examples of high-density residential development that complements community design standards.	HRC	ST
Objective	3E	<i>Focus development within the urban services boundary and designated growth centers.</i>		
Strategies	1	Maintain a current inventory of industrial and commercial space in order to direct public and private investment towards existing major employment centers.	EDC	O
	2	Provide incentives, such as financing and tax sharing, for regional development of major new industrial centers.	EDC	O
Objective	3F	<i>Ensure that public facilities and properties exemplify best practices of community design.</i>		

Strategies	1	Upgrade existing State and municipal facilities in terms of functionality and community design. Public facilities should be well-designed, well-maintained, and well-landscaped to serve as landmarks and anchors within the communities and centers where they are located.	M, SPCOM	O
	2	Maximize the potential of existing public buildings and properties through optimum use, good maintenance, and creative re-use.	M, SPCOM	O
	3	Develop special district plans for each State reservation, such as government centers and universities, and for major employment centers. Plans should include use, re-use, and development of buildings, as well as design guidelines for built and natural features.	M, SPCOM	ST
	4	Coordinate with the host municipality to foster compatibility with land use plans and regulations for areas surrounding State reservations.		
Objective	3G	<i>Increase energy efficiency through building design and location.</i>		
Strategies	1	Locate new public facilities, in or near to urban or rural centers, and ensure good transit and pedestrian connections to adjacent neighborhoods.	DOA, SPCOM	O
	2	Incorporate Leadership in Energy and Environmental Design™ (LEED) “green building” techniques in new construction and rehabilitation wherever possible.	M, SPCOM	O
	3	Maximize infill and redevelopment in areas that are underutilized or where larger replacement structures would be appropriate.	M, SPCOM	O

Infrastructure			Lead Agencies	Time Frame
Goal	4	First class supporting infrastructure that protects the public's health, safety, and welfare, fosters economic well-being, preserves and enhances environmental quality, and reinforces the distinction between urban and rural areas.		
Objective	4A	<i>Maintain fully functional water and sewer systems; focus development to maximize the investment and capacity of these community assets.</i>		
Strategies	1	Evaluate the capacity of the existing systems and natural resources to serve the planned build-out of the State.	WRB, DEM, SPP, M	ST
	2	Identify and correct problems within the existing systems. Install all emergency connections and finalize all emergency agreements.	WRB, DEM, WS, M	LT
	3	Identify where capacity exists for greater development intensity than currently planned for; evaluate capacity for the systems to serve new development, major rehabilitation projects, and proposed centers.	WRB, DEM, WS, M	ST
	4	Upgrade and repair systems to serve the major planned redevelopment in urban areas, both rehabilitation & new developments.	WRB, DEM, WS, M	LT
	5	Identify parts of existing service areas where upgrades of the water and sewer system is unfeasible or unsuitable and direct major development away from these areas. Revise land use plans and regulations accordingly.	WRB, DEM, CRMC, WS, M	ST
	6	Establish overall water availability for watersheds as determined by water resource agency data and studies.	WRB	LT

Objective	4B	<i>Protect drinking water supply resources.</i>		
Strategies	1	Acquire control of and protect key resource areas in proximity to reservoirs, wellheads, and aquifers supplying public drinking water, in order to protect both existing water systems and future expansions.	WRB, DEM, DOH, WS, M	ST / LT
	2	Revise land use plans and regulations to prohibit inappropriate development in locations that could degrade drinking water quality.	M, DEM, DOH, WRB	ST
	3	Maintain the quality of the drinking water supply to rural centers, major uses, and concentrated clusters through a well-controlled system of community wells and small, well-designed public water systems.	WRB, DEM, DOH, M	O
	4	Limit the expansion of such systems to areas planned as higher density development centers to avoid sprawl.		
Objective	4C	<i>Utilize infrastructure to avoid or mitigate significant negative environmental impacts from development.</i>		
Strategies	1	Ensure that wastewater collection and treatment systems and facilities are properly maintained, operated, and upgraded or expanded in accordance with community plans in order to reduce water quality impacts and accommodate desired focused growth within urban areas.	DEM, M	O
	2	In rural areas lacking public systems, ensure that wastewater management and land use policies are coordinated and supportive.		
	3	State of the art on-site treatment technologies should be employed to facilitate focused growth within centers and other areas designated by community plans for higher intensity development.	DEM, M	O

<i>Strategies continued</i>	4	Limit the proliferation of treatment systems (and development) in areas designated in community plans for preservation or open space.		
	5	In areas without public wastewater treatment systems, ensure that wastewater is properly managed to protect & enhance water resources.		
	6	Provide for the phase-out of existing cesspools and replacement with current technology, on-site systems, with priority for sensitive water resource areas.	DEM, M	O
	7	Focus development in higher density, mixed use centers served by transit and sidewalks to reduce the need for driving and help attain the State's air quality goals (reduction of greenhouse gases and other automotive emissions).	M, DEM	O
Objective	4D	<i>Locate new infrastructure in appropriate areas.</i>		
Strategies	1	Identify and map priority areas for extension of public water and sewer service in order to support major economic development and concentrations of related uses in those centers with the most potential.	M, WRB, DEM	ST
	2	Identify and map the priority areas for extension of public water and sewer service in order to support development of traditional residential neighborhoods and development of larger-scaled residential developments.	M, WRB, DEM	ST
Objective	4E	<i>Promote intermodal centers and greater reliance on transit.</i>		
Strategies	1	Upgrade and maintain the 14 existing multi-modal terminals in the State with an aim of serving many more travelers.		
	2	Plan and develop new multi-modal stations, particularly new and restored rail stations, to serve future demand.	DOT, RIPTA, M	LT

<i>Strategies continued</i>	3	Plan for land use (transit oriented development) surrounding terminals and their auxiliary uses, to support the mass transportation use. Revise plans and regulations accordingly.		
	4	Support an effective, efficient intermodal transportation system connecting centers by providing transit supportive features including extensive, connecting sidewalk and pathway networks, commuter parking, bus, taxi, and bicycle facilities.	DOT, M	LT / O
Objective	4F	<i>Provide pedestrian connections through all centers and urban districts.</i>		
Strategies	1	Require sidewalks in new development in all urban centers and neighborhoods. Ensure safe pedestrian connections and discourage combinations of land uses or design features that cause pedestrian-vehicular conflicts, especially around schools and in commercial and mixed-use districts.	M, DOT	O
	2	Construct infill sidewalks and pedestrian connections through capital improvement programs and during roadway or streetscape projects.	M, DOT	O
	3	Reduce the isolation of existing neighborhoods and facilities through enhanced pedestrian improvements in the form of sidewalks, traffic controls, and crosswalks.	M, DOT	O
	4	Discourage cul-de-sac street patterns in favor of interconnected street designs that encourage walking.	M	O
Objective	4G	<i>Maintain the functional integrity of existing and planned roadways.</i>		
Strategies	1	Develop detailed, multi-community corridor plans particularly along State and interstate highways and around major intersections.	SPP, DOT, M	ST
	2	Coordinate transportation and land use planning techniques and controls to upgrade and protect the character of the corridors.		

<i>Strategies continued</i>	3	Coordinate transportation and land use planning efforts in access management. Revise municipal land use regulations and State permitting procedures accordingly.	M, DOT, SPP	LT
	4	Evaluate the opportunities and issues presented by highway interchange areas and coordinate planning efforts to maximize economic benefits of the existing infrastructure and to promote uses that are complementary to the municipalities and the region. Minimize sprawl and environmental impacts of interchange development through land use controls.	M, DOT, EDC, SPP	ST
	5	Protect the character and quality of scenic roadways through coordination of municipal land use controls for areas adjacent to the roadways and State transportation planning for areas within the right-of-way.	M, DOT, SPP	ST
	6	Use land use plans and regulations to support ride-sharing, commuter parking, and mass transit in order to encourage alternatives to single occupant per vehicle commuting in all major developments and centers.	M, DOT, SPP	ST
	7	<p>Restrict land uses that exacerbate traffic congestion and conflict.</p> <p>Separate land uses with different traffic and pedestrian characteristics.</p> <p>Control new development through municipal land use regulations to ensure compatibility of land use with transportation capacity and functions of roadways servicing it.</p> <p>Mitigate the transportation impacts of existing development through municipal planning and public improvement projects.</p>	M, DOT, SPP	LT

Implementation			Lead Agencies	Time Frame
Goal	5	Implement and maintain the vision. Continue to support public stewardship for land use through strategic public investments in growth centers, land conservation, development, and enhanced planning capacity at the local and regional levels.		
Objective	5A	<i>Reform Rhode Island's property tax system in a manner that supports the goals and objectives of this plan.</i>		
Strategies	1	Participate in efforts to reform the existing Rhode Island property tax system, stressing its negative impact on the land use decision making process.	GOV, GA, SPP, DOA, RIPEC, GSRI	ST
Objective	5B	<i>Encourage municipalities to maintain clear and current land use plans and coordinated regulations to attain land use goals on a statewide, regional, and community level.</i>		
Strategies	1	Enhance the State and municipal comprehensive planning system's ability to coordinate and clarify the land use plans, projects, and regulations of the State with those of the municipalities.	SPP, M	O
Objective	5C	<i>Develop and maintain excellent land use information and technology systems.</i>		
Strategies	1	Upgrade and maintain the Rhode Island Geographic Information System as a centralized statewide database for all aspects of land use and water data and mapping.	DOA, SPP, WRB	O
	2	Upgrade the State and community information bases and technology systems to contain all pertinent land use data and to establish and maintain the capacity for effective information sharing.	DOA, M	O

<i>Strategies continued</i>	3	Promote establishment of electronic data and mapping systems at the State and community level and the transfer of all pertinent land use information to electronic systems.	DOA, M	ST
	4	Aim for parcel-based land use and water data for the entire State and all municipalities, to be shared through the RIGIS system.	DOA, M, WRB	ST
	5	Ensure that all State agencies and municipalities maintain current, mapped data identifying the areas and zones to which their regulations apply.	DOA, M	O
	6	Update State land use data every five years.	DOA, SPP, DEM	O
Objective	5D	<i>Ensure that State and municipal planning officials are well-trained and properly supported.</i>		
Strategies	1	Develop and maintain the professional capacity of State and municipal agencies with responsibility for land use planning, development, administration, zoning enforcement, building inspection, resource conservation, engineering, and public works.	DOA, SPP, RIAPA, GSRI, WRB	O
	2	Develop and maintain the technical capacity of citizen planning.	SPP, GSRI, RIAPA	O
Objective	5E	<i>Revise current statutes to ensure that Rhode Island's planning enabling legislation will be the contemporary and responsive foundation for State and municipal land management decisions.</i>		
Strategies	1	Engage stakeholders in a thorough review and evaluation of the "Comprehensive Planning and Land Use Regulation Act" and update, as necessary, to address such areas as electronic data and mapping, required elements, amendment procedures, and required updates.	SPP, M, RIAPA	ST
	2	Evaluate the currency and effectiveness of the existing State enabling legislation for redevelopment and, where needed, recommend revisions to facilitate redevelopment and urban revitalization efforts.	SPP, M, RIAPA	ST

<i>Strategies continued</i>	3	Revisit the concept of “Projects of Regional Significance” and assess the efficacy of establishing a process that provides for meaningful input by State and regional interests on major development projects that have impacts beyond those managed by local decision-making processes.	SPP, M, RIAPA	ST
Objective	5F	<i>Achieve greater integration of State and municipal planning systems and support regional efforts.</i>		
Strategies	1	Update and revise requirements and review procedures for Community Comprehensive Plans. Plans should include maps illustrating existing and proposed future conditions for greenspace, community development and revitalization, infrastructure, and zoning/land use regulations. Consider requiring updated and extended community plans every ten years.	SPP, M, RIAPA	ST
	2	Evaluate, consolidate, simplify, and strengthen the State Guide Plan system to facilitate coordination among State agencies and the municipalities under direction of the State Planning Council.	SPP, M	ST
	3	Promote information sharing and coordination of State agency plans and projects which pertain to land use, under the direction of the State Planning Council.	SPP, DEM, DOT, CRMC, WRB, HRC	O

Abbreviation	Agency
CRMC	Coastal Resources Management Council
DEM	Department of Environmental Management
DOA	Department of Administration
DOH	Department of Health
DOT	Department of Transportation
EDC	Economic Development Corporation
GA	General Assembly
GOV	Governor
GSRI	Grow Smart RI
HRC	Housing Resources Commission
LT	Long-Term (6 - 10 years)
M	Municipalities
O	On-going
RIAPA	RI American Planning Association
RIH	RI Housing
RIPEC	RI Public Expenditure Council
RIPTA	RI Public Transit Authority
RC	Rivers Council
SPCOM	State Properties Committee
SPP	Statewide Planning Program
ST	Short-Term (0 - 5 years)
WRB	Water Resources Board
WS	Water Suppliers

REFERENCES

1. Calthorpe, Peter and William Fulton, *The Regional City* (Washington, DC: Island Press, 2001).
2. Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program, As Amended* (Providence, RI: CRMC, 1996).
3. Davis, Marion, "Industrial Sites Rare, Prices Soar," *Providence Business News*, Oct. 3-9, 2005.
4. Diamond, Henry L. and Patrick Noonan, *Land Use in America* (Washington, DC: Island Press, 1996).
5. Economy.com, "Rhode Island," *Précis, State Edition*, May 2004, www.economy.com.
6. Governor's Growth Planning Council, *2001 Property Tax Subcommittee Report* (Providence, RI: Governor's Growth Planning Council, 2002b).
7. Governor's Growth Planning Council, *Growth Centers: Recommendations for Encouraging Growth and Investment in Economically and Environmentally Sound Locations in Rhode Island* (Providence, RI: Governor's Growth Planning Council, 2002a).
8. Governor's Growth Planning Council, *Vacant and Abandoned Property: Effective Solutions for Rhode Island* (Providence, RI: Governor's Growth Planning Council, 2003).
9. *Grow Smart Rhode Island, A Strategy for Saving Rhode Island from Sprawl and Urban Decay: Grow Smart Rhode Island's Candidates' Briefing Book*, October 2004, www.growsmartri.com/briefingbook2.html.
10. *Grow Smart Rhode Island, The Costs of Suburban Sprawl and Urban Decay in Rhode Island, Executive Summary*, H.C. Planning Consultants, Inc., and Planimetrics, LLP (Providence, RI: Grow Smart Rhode Island, 1999).
11. Ortiz, Edward, "Got Trees? Providence is Cutting Down More than It's Planting," *Providence Journal*, May 23, 2004.
12. Rhode Island Department of Environmental Management, Division of Agriculture, *Division Report: Agricultural Land Preservation* (Providence, RI: RIDEM, 2004).
13. Rhode Island Department of Environmental Management, Office of Environmental Coordination, and the Rhode Island Division of Planning, *Rhode Island Nonpoint*

Source Management Plan, State Guide Plan Element 731 (Providence, RI: Statewide Planning Program, 1995).

14. Rhode Island Department of Labor and Training, A Decade of Change in Rhode Island: An Analysis of Private Sector Employment in the Ocean State, 1992-2002, www.dlt.ri.gov/lmi/publications.htm (2003).
15. Rhode Island Department of Labor and Training, A Year in Review, 2004: Establishment Employment in Rhode Island, www.dlt.ri.gov/lmi/ces.htm (2005a).
16. Rhode Island Department of Labor and Training, Labor Market Information, www.dlt.ri.gov (2005b).
17. Rhode Island Development Council, Background for a Guide Plan for the Future Development of Rhode Island (Providence, RI: RI Development Council, 1955).
18. Rhode Island Division of Planning, Comprehensive Conservation and Management Plan for Narragansett Bay, State Guide Plan Element 715, Executive Summary (Providence, RI: Statewide Planning Program, 1992).
19. Rhode Island Division of Planning, Land Use 2010: State Land Use Policies and Plan. State Guide Plan Element 121 (Providence, RI: Statewide Planning Program, 1989).
20. Rhode Island Economic Development Corporation, Reinvesting in Rhode Island Brownfields (Providence, RI: RIEDC, 2004).
21. Rhode Island Economic Policy Council, A Rhode Island Economic Strategy: 10 Ways to Succeed Without Losing Our Soul (Providence, RI: RIEPC, 2001).
22. Rhode Island Foundation and Rhode Island Public Expenditure Fund, Cities Count - Connecting People and Places for the Future of Rhode Island (Providence, RI: RI Foundation & RIPEC, 2004).
23. Rhode Island General Laws, Title 45, Chapter 22.2, Rhode Island Comprehensive Planning and Land Use Regulation Act (1989).
24. Statewide Planning Program, 2000 Census Data for Transportation, Technical Paper 153 (Providence, RI: Statewide Planning Program, 2004c).
25. Statewide Planning Program, An Analysis of Rhode Island Land Use (Providence, RI: Statewide Planning Program, 1999).
26. Statewide Planning Program, Briefing Material for Governor Lincoln C. Almond, Census 2000: Redistricting Data, March 22, 2001 (Providence, RI: Statewide Planning Program, 2001).

27. Statewide Planning Program, Housing and Residential Land Demand: Rhode Island 2025, Technical Paper 157 (Providence, RI: Statewide Planning Program, 2005b).
28. Statewide Planning Program, Industrial Land Use Plan. State Guide Plan Element 212 (Providence, RI: Statewide Planning Program, 2000a).
29. Statewide Planning Program, Land Use Trends in Rhode Island 1961 to 1988, Technical Paper 146 (Providence, RI: Statewide Planning Program, 1998).
30. Statewide Planning Program, Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan. State Guide Plan Element 152 (Providence, RI: Statewide Planning Program and Rhode Island Department of Environmental Management, 2003).
31. Statewide Planning Program, Rhode Island Forest Resources Management Plan (Providence, RI: Statewide Planning Program, 2005a).
32. Statewide Planning Program, Rhode Island Growth Priorities for 2000 and Beyond (Providence, RI: Statewide Planning Program, 2000c).
33. Statewide Planning Program, Rhode Island Land Use Trends and Analysis, Technical Paper 149 (Providence, RI: Statewide Planning Program, 2000b).
34. Statewide Planning Program, Rhode Island Population Projections: State, County and Municipal, 2000-2030, Technical Paper 154 (Providence, RI: Statewide Planning Program, 2004a).
35. Statewide Planning Program, Transportation 2025 (2004 Update). State Guide Plan Element 611 (Providence, RI: Statewide Planning Program, 2004b).
36. United States Bureau of the Census, www.census.gov (2005a).
37. United States Bureau of the Census, 2002 Census of Agriculture - State Data, http://151.121.3.33:8080/Census/Pull_Data_Census (2005b).
38. United States Small Business Administration, Office of Advocacy, Small Business Profile: Rhode Island, www.sba.gov/advo/stats/profiles/04ri.pdf (2004).
39. University of Rhode Island Cooperative Extension Service, Remote Sensing Land Use and Vegetative Cover in Rhode Island, Bulletin No. 200 (Kingston, RI: University of Rhode Island, 1974).
40. Water Resources Board, Message from the Chairman and General Manager, www.wrb.state.ri.us/tour/chairman.html (2005).

41. Office of Federal Housing Enterprise Oversight, "Largest U.S. House Price Increase in More than 25 Years, OFHEO House Price Index Shows Annual Rise of 13.4 Percent," Press Release, Sept. 1, 2005.
42. Dodson Associates, Urban Environmental Design Manual, Appendix - Development Criteria, prepared for the Rhode Island Department of Environmental Management (Ashland, MA: Dodson Associates, 2005).

Land Use 2025

Rhode Island of 2025 will be a unique and special place, retaining its distinctive landscape, history, traditions, and natural beauty, while growing to meet its residents' needs for a thriving economy and vibrant places to live.

