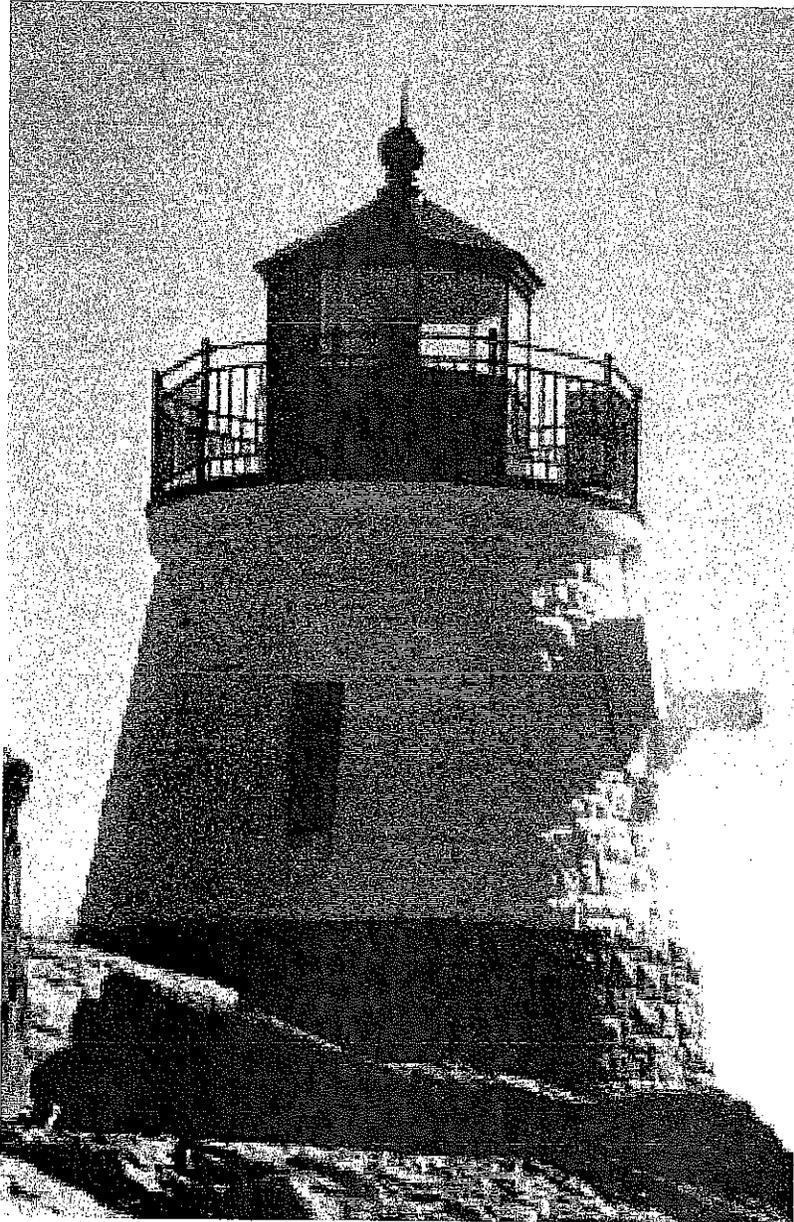


ECONOMIC DEVELOPMENT POLICIES AND PLAN



Report Number 99
April 2000 *Revised August 2001*
State Guide Plan Element 211

STATEWIDE PLANNING PROGRAM

Rhode Island Department of Administration

Information Services

One Capitol Hill

Providence, Rhode Island 02908-5872

www.planning.state.ri.us

STATEWIDE PLANNING PROGRAM
Rhode Island Department of Administration
One Capitol Hill
Providence, RI 02908-5872
(401) 222-1220

Economic Development Policies and Plan
REVISIONS PURSUANT TO SHOWCASE STATE INITIATIVE

The State of Rhode Island has been involved, with several private sector partners, in the Showcase State Initiative for Natural Disaster Resistance and Resilience. The purpose of the Initiative is to help Rhode Island communities reduce deaths, injuries, property damage, economic losses, and human suffering caused by natural disasters. Part of this effort is to prevent, to the greatest extent possible, natural hazard events from escalating into disasters. These natural hazard events include hurricanes, floods, and ice storms.

The *Economic Development Policies and Plan*, an element of the State Guide Plan, has been revised to include language pertaining to the mitigation of natural hazard events, including an explanation of hazard mitigation and why it is important when making economic development or land use decisions. These policies are intended to help implement the principles of the Showcase State Initiative. The State Planning Council formally adopted these revisions on August 9, 2001.

Please substitute the attached pages for the corresponding pages in this element. The revisions may also be downloaded from the Statewide Planning Program website, www.planning.state.ri.us.

01-02-09: Hazard Mitigation

Rhode Island, a coastal state, is vulnerable to flooding, high winds, ice storms, and coastal erosion. These are known as *natural hazards*. Under extreme conditions, they can become *natural disasters* with severe impacts.

Natural disasters are costly. For example, in 1938 the City of Providence suffered \$16.3 million in damages due to hurricanes. In 1954, that figure was \$25.1 million. Considering the recent and planned redevelopment of downtown Providence, the cost of flooding and wind damage could be much higher today. Throughout Rhode Island, more than \$83 billion worth of residential and commercial coastal property would be at risk if a repeat of these two hurricanes, or some other natural disaster, were to occur. ((63))

According to the Institute for Business and Home Safety (IBHS), an insurance industry advocacy group, when businesses are forced to close as a result of a natural disaster more than 43 percent never re-open and another 29 percent close within two years. ((64)) Small businesses are more vulnerable to disasters than large businesses. These are sobering statistics, as more than 97 percent of Rhode Island's businesses have 500 or fewer employees. ((65))

Proper planning for natural disasters can help reduce the loss of jobs and taxes caused by business closings as well as limiting their environmental impacts. Recognizing this, in 1998 Governor Almond signed an Executive Order designating Rhode Island as the first "Showcase State for Natural Disaster Resistance and Resilience" in the country. ((66))

The goal of the Showcase State program is to reduce losses due to natural disasters by careful planning and decision making that in effect create a disaster-ready and disaster-resilient statewide economy. This involves identifying areas prone to natural and other hazards in the community (such as floodplains and areas of coastal erosion), assessing economic vulnerability (in terms of businesses and impacted populations) in the event of a storm or other event, business recovery planning, and fine-tuning once a disaster strikes and is handled.

The Showcase State program is a mitigation strategy. The U.S. Economic Development Administration defines mitigation as "sustained action that reduces or eliminates long-term risk to people and property from natural hazards and their effects." It is an ongoing effort by government, business and industry, associations, and individuals to lessen the impact of natural disasters on families, homes, businesses, and the community. ((67))

The Showcase State program is being implemented on several fronts, community by community and statewide. Working with the University of Rhode Island, Sea Grant, and the R.I. Emergency Management Agency (RIEMA),

several municipalities — including Charlestown, Narragansett, Providence, and Pawtucket — have identified risks in their respective communities and written strategies for their reduction. A statewide Showcase State Coordinating Committee has been in place since 1998, offering the opportunity for Statewide Planning to work with RIEMA and the IBHS to incorporate the principles of hazard mitigation into the State Guide Plan. A statewide hazard mitigation plan is under development by RIEMA while appropriate policies within the various elements of the State Guide Plan are being drafted.

In the *Economic Development Policies and Plan*, mitigation language has been written into Policies B-2, B-5, B-8, B-9, and B-17 under “Objective B, Facilities.”

03-02-02 OBJECTIVE B: FACILITIES

Work with economic development practitioners to encourage sustainable industrial and commercial development that advances the long-term economic and environmental well-being of the state, and is consistent with the State Land Use Policies and Plan, the Industrial Land Use Plan, and other applicable elements of the State Guide Plan.

Policies to Achieve Objective B:

1. Reclaim brownfields by environmental remediation and encourage use of the "built environment."
2. Conserve and enhance desirable existing industrial areas, office complexes, and concentrations of service activities to maximize the investment and utilization of existing infrastructure. New or expanded public sewer and water services and highways should be provided to industrial and commercial development only where such development is appropriate in terms of the natural constraints imposed by the land, air, and water in the immediate vicinity of such development, and vulnerability to natural hazards; and where the area is being developed at an intensity that is consistent with state land use policy, and when such development will not promote wasteful use of resources. When possible, an industry's needs should be matched with the appropriate site in order to maximize the return on the infrastructure investment.
3. Ensure adequate investment to maintain and improve a balanced, intermodal transportation system that meets the needs of the state's commerce and labor force. Make the transit system and intermodal connections user-friendly for all members of the riding public. Maintain shipping channels and recognize the economic potential of T. F. Green Airport and other state airports.
4. Encourage higher densities, mixed uses, careful design, transit and pedestrian-friendly land use and development patterns, and location near existing hubs and corridors to avoid "sprawl." Maximize the use of alternative modes of transportation, such as bicycling, walking, and mass transit.
5. Relate industrial and commercial development to overall land use by promoting the use of development controls and performance standards that mitigate natural hazards and conflicts with other land uses and activities.
6. Encourage investment by the public and private sectors that will stabilize and improve housing and commerce in deteriorating urban areas.
7. Promote the control of land development along arterial highways in order to preserve their functional integrity, capacity, safety, and appearance.
8. Contribute to the stabilization and redevelopment of central business districts through the provision of supporting services such as transportation access, parking, utilities, and police and fire protection, as well as the adaptive reuse of historic buildings that contribute to the commercial and cultural economic base of these

areas. Public subsidy enticements to industries other than traded industries should only be considered where they contribute to the stabilization and redevelopment of such areas. Viable economic reuses should be found for historic buildings that can contribute to the economy. Ensure that all reconstruction and redevelopment meet current natural hazard mitigation criteria.

9. Designate sites in developing communities and in or near smaller urban centers in rural communities for industrial or commercial development as needed to meet state and municipal economic objectives. Select locations with natural characteristics favorable for economic development that have or can be supplied with the public facilities and services necessary to support the type of economic activity planned, and that are readily accessible to a labor force. These locations must also be consistent with the general development patterns set forth in the state land use policies and plan element and with all other applicable elements or provisions of the State Guide Plan. Sites selected, and the economic activities that use these sites, should be compatible with the scale, historic character, disaster preparedness, and other aspects of the surrounding community.

10. Locate industrial development causing other than domestic waste discharges in areas served either by public sewerage systems or by appropriately permitted and maintained private systems.

11. Support agricultural base to include turf, ornamentals, vineyards, forestry, field crops, dairy and livestock. Seek alternative niche markets to support smaller, more diverse farms. Promote the preservation of prime farmland and provide the technical support to keep agriculture environmentally and economically sustainable.

12. Encourage development of sport and commercial fisheries both inshore and offshore up to levels of maximum sustainable yield by supporting the provision of appropriate infrastructure, research and training facilities, aquaculture, management activities, and enforcement of water quality standards. Reserve suitable port access areas for commercial fishing vessels.

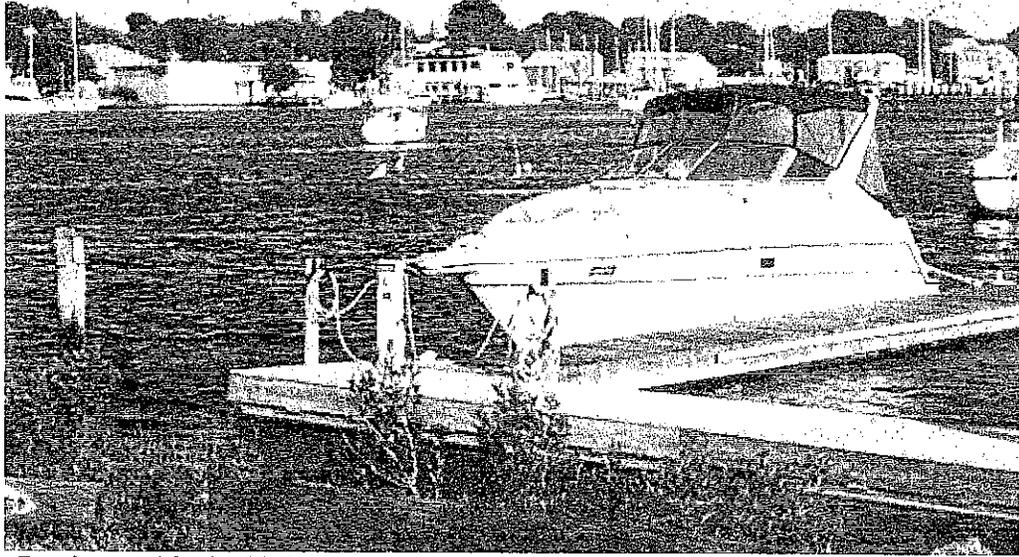
13. Encourage new industrial development in the coastal zone that places a priority on the maximum efficient and appropriate utilization of existing marine infrastructure, such as the Port of Providence and Quonset Davisville.

14. Encourage areas used for commercial development to be selected and configured to make the most efficient use of scarce shoreline locations.

15. Promote tourism as a major industry, and encourage and support the use of the wide range of facilities that make up the industry's infrastructure.

16. Encourage the reuse of industrial land as industrial land to the maximum extent feasible.

17. Note areas most vulnerable to natural hazards and locate development away from these areas whenever possible. Provide appropriate mitigating measures wherever such hazards exist.



Barrington Yacht Club (foreground); Warren waterfront (background)

03-02-03 OBJECTIVE C: CLIMATE

Maintain a business environment conducive to the birth, sustenance, and growth of suitable industry and commerce.

Policies to Achieve Objective C:

1. Promote the implementation of a growth development strategy giving priority to economic development programs directed at the promotion, maintenance, and expansion of existing firms.
2. Encourage and promote locally and regionally initiated economic development efforts as set forth in the economic development elements of local comprehensive plans.
3. Attract and give assistance to those types of industry that best capitalize on Rhode Island's strengths, and are potentially most beneficial to the state's employment, the needs of firms, resources, fiscal soundness, and related development goals.
4. Expand all markets, in state, national, and international, for the state's products and services, through improved communications and promotion.
5. Encourage reservation of prime industrial sites through protective regulation or acquisition, recognizing the importance of factors such as topography and soil characteristics, availability of water and sewer service, access to transportation facilities, proximity to water bodies, and availability of labor.
6. Maintain public infrastructure, both structural (physical) and non-structural (social). Provide additional infrastructure where it is clearly demonstrated as

necessary and in a manner that will protect the long-term health of the state's natural and fiscal resources.

7. Recognize Rhode Island's quality of life as an asset that improves the state's "business climate." Protect and enhance the quality of life by promoting sustainable development.
8. Recognize cultural diversity and heritage as major assets to be protected and promoted.
9. Recognize Narragansett Bay as a major economic resource.
10. Encourage initiatives to ensure a competitive and fair tax environment for all Rhode Island residents and businesses.
11. Work with local government officials to study and better understand the relationship between land use and property tax.
12. Recognize education as an essential component of economic development.
13. Encourage and promote initiatives aimed at creating competitive utility rates.
14. Enhance the affordability and reliability of the state's energy supplies by pursuing energy conservation and supporting wider use of indigenous renewable energy resources where environmentally benign and economically feasible.

03-03 Implementation

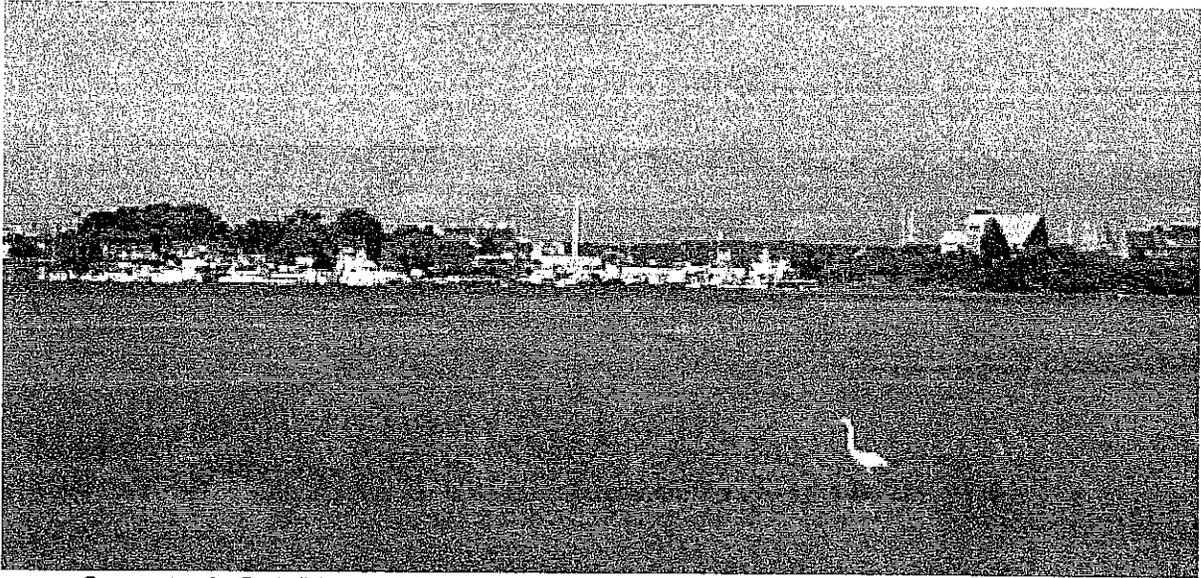
A centralized planning process has been deemed necessary by the state legislature to ensure the orderly development of the state. A State Guide Plan is mandated as a means for centralizing and integrating long-range goals, policies and plans with short-range project plans and for implementing programs prepared on a decentralized basis by the agency or agencies responsible in each functional area.

The State Guide Plan's goals for the physical, economic, and social development of the state are implemented through the review of all projects and comprehensive plans for consistency with Guide Plan elements. In economic development, these include:

- EDC Conformance Reviews – applied to projects at Quonset Davisville and other industrial parks owned and operated by the R. I. Economic Development Corporation, and to projects financed by the EDC.
- Comprehensive Economic Development Strategy (CEDS) – the annual process by which project proposals are solicited from municipalities, agencies, educational institutions, and nonprofit development organizations for inclusion in the CEDS on a "Priority Project List." Successful proposals have been keyed to specific objectives and policies in the former *Economic Development Strategy*. That process will continue with the *Economic Policies and Plan*, and presents one of the most effective means of implementing the plan.

- Economic Development elements of Local Comprehensive Plans – to ensure that local efforts proceed with a sensitivity to possible impacts to neighboring communities and the state as a whole.

There is no timetable set for implementation, but the objectives and policies of the *Economic Development Policies and Plan* are expected to remain relevant through the year 2020. Implementation of economic development policies will not take place in a vacuum, but consistent with other elements of the State Guide Plan, which emphasizes the importance of maintaining "quality of life" as something possible only if development is tempered with a preservation of our environment.



Succotash Salt Marsh Management Area, South Kingstown, Rhode Island

63. Providence Emergency Management Agency, *Strategy for Reducing Risks from Natural Hazards in Providence, Rhode Island* (Providence, RI: Providence Emergency Management Agency, 2000). According to this source, damages from the 1938 hurricane would amount to approximately \$225 million in today's dollars, and those from Hurricane Carol would be \$134 million.
64. Firms with fewer than 500 employees are considered "small businesses" by the U.S. Small Business Administration.
65. Institute for Business & Home Safety, "What Does Rhode Island Have to Lose?" Media advisory, Feb. 8, 2000.
66. Governor Lincoln Almond, "Showcase State Initiative," Executive Order 98-13.
67. Federal Emergency Management Institute/Economic Development Administration, *Disaster Resistant Jobs Training*. Workbook for "Train the Trainer" course at National Emergency Training Center, Emergency Management Institute, Emmitsburg, MD, Oct. 31-Nov. 3, 2000 (FEMA/EDA, Washington, DC, 2000).

ECONOMIC DEVELOPMENT POLICIES AND PLAN



Report Number 99

April 2000

State Guide Plan Element 211

STATEWIDE PLANNING PROGRAM

Rhode Island Department of Administration

Information Services

One Capitol Hill

Providence, Rhode Island 02908-5872

www.planning.state.ri.us

The Statewide Planning Program, Rhode Island Department of Administration, 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. Preparation of this report was supported by grants from the Economic Development Administration of the U.S. Department of Commerce.

Copies of this information are also available in Braille, large print, audio cassette, and electronic file on computer disk. Contact the Statewide Planning Program, One Capitol Hill, Providence, RI (401) 222-1220.

ABSTRACT

TITLE: Economic Development Policies and Plan

SUBJECT: Discussion of economic development issues and key state economic indicators. Establishes a state economic development goal with related objectives and policies consistent with the State Guide Plan.

DATE: April 2000

AGENCY AND SOURCE OF COPIES: Rhode Island Statewide Planning Program
One Capitol Hill
Providence, Rhode Island 02908

PROJECT GRANT: Grant Number 01-25-03524-02

SERIES NUMBER: Report Number 99

NUMBER OF PAGES: 80

ABSTRACT: This document is the third comprehensive economic development plan prepared as an element of the Rhode Island State Guide Plan. It updates and supersedes, Report Number 51, adopted by the State Planning Council in 1986.

This plan discusses the issues that are influencing Rhode Island's economic development. A single comprehensive economic development goal is derived with related goals and policies drawn from other elements of the State Guide Plan. Economic indicators are updated in an effort to quantify the states' strengths and weaknesses.

STATE PLANNING COUNCIL

Robert L. Carl, Jr., Ph.D., Director, Rhode Island Department of Administration
(Chairman) [represented by Barbara F. Weaver]

Mr. John P. O'Brien, Chief, Statewide Planning (Secretary)

William D. Ankner, Ph.D., Director, Rhode Island Department of Transportation
(designee of Honorable Lincoln C. Almond, Governor)

Mr. Daniel Beardsley, Executive Director, Rhode Island League of Cities and Towns

Stephen Cardi, Esq., Public Member

Mr. Russell C. Dannecker, Senate Fiscal and Policy Advisor, (designee of
Honorable Paul S. Kelly, Senate Majority Leader)

Mayor Francis A. Gaschen, President, Rhode League of Cities and Towns

Ms. Armeather Gibbs, Director, Governor's Office of Municipal Affairs
[represented by Mr. Tony Phillips]

Ms. Geri Guardino, Governor's Office

Mr. Vincent Masino, Public Member

Mr. Stephen McAllister, Budget Office, Rhode Island Department of Administration

Honorable John O'Leary, Mayor, City of Cranston [represented by Mr. Kevin Flynn]

Mr. John Palmieri, Director, Providence Planning and Development

Ms. Melisa Ridenour, Federal Highway Administration (non-voting member)*

Ms. Janet White, Public Member

Rep. John B. Harwood, Speaker of the House
[represented by Representative Thomas Winfield]

*Advisory member

THE TECHNICAL COMMITTEE

Frank L. Nunes, Public Member (Chair)

M. Paul Sams, R.I. Water Resources Board (Vice Chair)

Raymond Allen, R.I. Public Utilities Commission

Lisa Bryer, Town of Jamestown

Molly Clark, Public Member

Marilyn Cohen, Town of North Kingstown

Walter Combs, R.I. Department of Health

Merrick A. Cook, Jr., City of Central Falls

Diane Feather, R.I. American Planning Association

Janet Keller, R.I. Department of Environmental Management

Dennis Langley, Urban League of Rhode Island

Robert Letourneau, R.I. Department of Transportation

Janis Loiselle, Governor's Office

Patrick Malone, Brown University

J. Dennis Maloney, RI Economic Development Corporation

Gerhard Oswald, Town of Bristol

Ralph Rizzo, Federal Highway Administration*

Samuel Shamoon, City of Providence

Kristine Stuart, Public Member

Lee Whitaker, East Greenwich

*Advisory member

PREFACE

The Rhode Island State Planning Council, initially called the Policy Committee, was organized on December 20, 1963. It was established by statute in 1978 and is charged with developing and maintaining a State Guide Plan as the basic guide for the long-term physical, economic, and social development of the state. The Statewide Planning Program within the Department of Administration provides staff support to the Council.

The Statewide Planning Program prepares and maintains plans for the physical, economic, and social development of the state; encourages their implementation; and coordinates the actions of state, local and federal agencies and private individuals within the framework of the state's development goals and policies. Sections 42-11-10 and 12 of the General Laws establish the basic charge. This mandate requires that the Program formulate plans which help guide the state's efforts to promote economic improvement and which integrate these efforts into an overall framework which also considers requirements for physical development, protection of the environment, and the overall needs of the state's population.

The Economic Development Strategy, which was adopted as an element of the State Guide Plan in 1986, established a basic goal and specific policies for economic development which recognize "fixed elements" such as topography, climate, and natural resources, and which use the "flexible elements" of labor force, transportation, and infrastructure. Its purpose was to present strategies for the use of the flexible elements in ways which emphasize the strengths and minimize the weaknesses of the fixed elements, and which are consistent with related goals, policies, and plans.

Today, however, strategies for economic development are being developed by the Rhode Island Economic Policy Council. This changes the focus of the economic development element of the State Guide Plan. The new element, *Economic Development Policies and Plan*, will not include strategies *per se*, but its objectives and policies will be used by staff to review all projects and comprehensive plans that by statute must be reviewed by the Statewide Planning Program for consistency with the State Guide Plan. The issues in this element are not presented, and the policies are not given, in priority order. In our reviews, the economic development policies will be balanced with policies in other elements of the State Guide Plan, addressing land use, transportation, recreation and open space, water supply, housing, and energy.

The review process assures the implementation of the policies that are set forth in the elements of the *State Guide Plan*. For example, the Statewide Planning Program is the single point of contact (SPOC) designated by Executive Order 83-11 to administer the state process for reviewing and commenting on proposed federal financial assistance and direct development activities. All eligible applications for federal loans, grants or technical assistance must be consistent with comprehensive state, area, and local plans. Moreover, the State Planning Council and the State Guide Plan are the major state mechanisms for relating state policy and priorities to ongoing development activities. By law, projects of the Economic Development Corporation must be reviewed by the Council for conformance to the State Guide Plan.

Critical elements for any state economic development planning process are collaborations between long-range planners and strategic planners, between state officials and local practitioners, and between the public and private sectors. The staff has drawn upon all these sources for guidance in developing the *Economic Policies and Plan* as a tool to be used over the short and long term.

Staff members responsible for the plan include Joyce Karger, Senior Planner, and Everett Carvalho, Senior Planner, of the Economic Development Planning Section, working under the supervision of Bruce F. Vild, Supervising Planner, and John P. O'Brien, Chief of Statewide Planning. Joyce Karger was the chief author. Everett Carvalho prepared the graphics. Linda O. Resendes, Sr. Word Processing Typist assisted with word processing and formatting. Kim A. Gelfuso, Information Services Technician made the draft available for review on the Statewide Planning Program web site. Additional staff assistance was provided by Mansuet J. Guisti, Supervising Draftsperson.

This plan was written and prepared for publication under Task 2101 as described in the work program of the Statewide Planning Program for Fiscal Years 1999. and 2000. It was supported by state funds and by a grant from the Economic Development Administration of the U.S. Department of Commerce, under Section 302(a) of the Public Works and Economic Development Act, as amended.

Report Organization

The *Economic Development Policies and Plan* is divided into parts and chapters each with a number designation. For example, Part Two, Chapter Three is headed **02-03**. Each part is paginated separately. Page numbers appear at the bottom of each page, the part number first, then a decimal point, and then the page number. Thus the second page of Part Two is numbered **2.2**.

Tables and figures follow a convention established by Statewide Planning whereby each is keyed to the State Guide Plan by a hyphenated numbering system. A three-digit number preceding the hyphen corresponds to one of the following categories of the Guide Plan:

000	State Guide Plan Overview
100	Resources Management and Utilization
200	Economic Development
300	Environmental Programs
400	Human Services
500	(Reserved)
600	Transportation Systems
700	Utility Systems
800	(Reserved)
900	(Reserved)

The Economic Development Policies and Plan falls within the Economic Development category and is numbered **211**. The numbering system for each table and figure therefore designates, for example, the second table in Part Two as **Table 211-02(2)**. The number **211** also appears before each part number (e.g., **211-01**, **211-02**).

This report incorporates a system of citing sources that should relieve some of the congestion common to footnotes in this type of document. All references are numbered in the Bibliography in the order in which they are cited in the plan. Numbers enclosed by double parentheses indicate citations in the text. The authors credit a direct quotation by using the reference number from the Notes and References followed by the number of the page on which the quotation is found in the reference. Thus, quoted or paraphrased material from page 22 of the ninth reference listed in the Notes and References will be cited **((9:22))**. Narrative that relies on significant portions of one or more references, and footnotes that clarify the text, will be identified by reference number only (e.g., **((9))**).

Adoption

This report was adopted by the State Planning Council as Element 211 of the State Guide Plan on April 13, 2000. It replaced the older version, known as the *Economic Development Strategy*, also designated as Element 211, on that date.

TABLE OF CONTENTS

	Page
Abstract.....	i
State Planning Council.....	ii
Technical Committee.....	iii
Preface.....	iv
List of Tables.....	ix
List of Figures.....	ix
Part	
211-01: Background to an Economic Development Plan.....	1.1
01-01: Introduction.....	1.1
01-02 Issues of Current Concern.....	1.3
01-02-01: The Global Economy.....	1.5
01-02-02: Yesterday's and Tomorrow's Industries.....	1.5
01-02-03: Business Climate.....	1.7
01-02-04: Physical Infrastructure.....	1.8
01-02-05: Transportation Infrastructure.....	1.9
01-02-06: Taxes.....	1.16
01-02-07: Labor Force.....	1.19
01-02-07: Land Use.....	1.21
211-02: Rhode Island Economic Profile.....	2.1
02-01: Introduction.....	2.1
02-02: Demographics.....	2.3
02-02-01: Population Changes.....	2.3
02-01-02: Labor Force.....	2.8
02-03: Employment.....	2.10
02-04: Personal Income.....	2.15
02-04-01: Transfer Payments and Personal Income.....	2.18

TABLE OF CONTENTS (continued)

	Page
02-05: Production of Goods and Services	2.19
02-05-01: Goods-producing Industries	2.20
02-05-02: Services	2.22
02-06 Defense Employment and the Rhode Island Economy	2.22
02-07: Job Loss and Gain	2.25
02-08: Housing Prices	2.28
02-09: Land Use and Zoning	2.30
02-09-01: Agricultural Land	2.31
02-10: Natural Resources	2.34
02-10-01: Sustainable Development	2.32
02-10-02: Narragansett Bay	2.34
02-10-03: Parks and Recreational Areas	2.38
211-03: Economic Development Goal, Objectives, and Policies	3.1
03-01: Introduction	3.1
03-02: Objectives and Policies	3.2
03-02-01: Objective A: Employment	3.2
03-02-02: Objective B: Facilities	3.3
03-02-03: Objective C: Climate	3.5
03-03: Implementation.....	3.6
Notes and References	BIB-1

LIST OF TABLES

Number	Title	Page
211-01(1)	The Relative Cost of Doing Business	1.7
211-01(2)	Industrial Site Suitability Analysis (1988 and 1999)	1.8
211-01(3)	Vacant Site Suitability Analysis (1988-1999)	1.21
211-02(1)	Percent Change in Gross US, New England, and State Product 1990-1997	2.1
211-02(2)	Educational Attainment: Population 25 Years and Older	2.8
211-02(3)	Top Employers in Rhode Island	2.10
211-02(4)	Per Capita Income 1985-1997	2.15
211-02(5)	New England Annual Average Hours and Earnings (1998)	2.16
211-02(6)	Rhode Island Total Personal Income	2.18
211-02(7)	State and Local Property Tax Collections Per \$1,000 of Personal Income 1996	2.30
211-02(8)	RI Farms: Number, Size and Land in Farms 1987-1996	2.31
211-02(9)	Ecologically Critical Resources for the Health of Narragansett Bay	2.35

LIST OF FIGURES

Number	Title	Page
211-01(1)	General Recommendations of Rhode Island Economic Development Plans	1.4
211-02(1)	Rhode Island Population by Age 1970-2000	2.4
211-02(2)	Population Percent Increase by Race 1980-1990	2.6
211-02(3)	Rhode Island Population 1988-1998	2.6
211-02(4)	Population Change in Rhode Island 1980-1995	2.7
211-02(5)	Rhode Island Resident Labor Force 1988-1998	2.9
211-02(6)	Services Manufacturing Employment 1988-1998	2.11
211-02(7)	Rhode Island 1998 Wage and Salary Employment by Division	2.12
211-02(8)	Rhode Island Private Sector Employment: Top 10 Industries 1998	2.13
211-02(9)	Contribution to Rhode Island Economy: Top 10 Industries 1998	2.13
211-02(10)	US and RI Average Hourly Earnings of Production Workers 1987-1997	2.17
211-02(11)	Total Defense-Related Employment 1970-1995	2.24
211-02(12)	Private Industry Defense-Related Employment 1970-1995	2.24
211-02(13)	Insured Unemployment by Industry Attachment 1998	2.27
211-02(14)	Insured Unemployed by Sex and Age 1998	2.27
211-02(15)	Comparison of US, NE, RI Unemployment Rates 1988-1998	2.28
211-02(16)	Median Sale Price of Single Family Homes in RI 1988-1998	2.29

211-01 BACKGROUND TO AN ECONOMIC DEVELOPMENT PLAN

01-01 Introduction

Rhode Island, like the rest of New England, is densely developed, with limited natural resources. Its natives cherish its traditions and environment. In spite of dense development, nearly 60 percent of the state is woodland or open space. Recreational and leisure activities are plentiful. The state features more than 400 miles of coastline with some of the finest salt-water beaches in New England. Such resources contribute significantly to the quality of life in Rhode Island. This naturally influences land use regulation, resulting in a constant effort to balance the conservation of these resources with economic development.

Consequently, the types of industry, the kinds of jobs, and the quality of life desired are among the many considerations that must go into planning for economic development. Such planning must be an integral part of a comprehensive process for overall resource management in the state, striking the desired balance between potentially conflicting goals and interests.

Rhode Island requires each city and town to prepare a comprehensive plan by virtue of the Comprehensive Planning and Land Use Regulation Act (Chapter 45-22 of the R.I. General Laws, as amended). Each plan is subject to review by the state and must include certain elements, one of which is an economic development element that includes “identification of economic development policies and strategies, either existing or proposed by the municipality, in coordination with the land use plan element.” The Act directs the comprehensive plan to reflect local, regional and statewide concerns for “expanding and stabilizing the economic base” and promoting “quality employment opportunities.” While it is generally agreed that the state and local communities need to build on their assets by improving the business climate, the skills of their workers, and their infrastructure and by diversifying the industrial base, Rhode Island’s comprehensive planning process helps account for other concerns (e.g., quality of life) that seem, at first glance, unrelated to economic development.

During the ten years since the Statewide Planning Program published the *Economic Development Strategy* and made it part of the State Guide Plan, Rhode Island has gone from a period of record employment and growth spurred by the so-called “Massachusetts Miracle,” new construction, and regional expansion of the defense industry, to a prolonged recession with a slow recovery, and back to something approaching full employment. Regardless of the shifts in Rhode Island’s economic health, however, the overall development goal set forth in 1986 in the *Economic Development Strategy* is still relevant:

To foster and maintain a vigorous economy able to provide an adequate number and variety of activities that generate wealth for the people of the state.

Although economic recovery is a high priority, it is, in many ways, problematic for Rhode Island. The state's economy is not diversified. In addition to the defense industry, Rhode Island continues to depend on shrinking industries such as jewelry and textile manufacturing that are highly susceptible to national economic downturns and foreign competition. This limits the state's ability to sustain economic growth on a level with the rest of the region.

The state's early start in industrial development, which can be traced to 1790 when Samuel Slater established the Slater Mill in Pawtucket, has resulted in an aging industrial base employing primarily unskilled and semi-skilled labor. Manufacturing jobs have been lost to places with lower taxes and lower costs, or simply to automation and productivity improvements. The decrease in jobs between 1986 and 1996 was greater than 30 percent, mostly due to capital flight and defense cutbacks, as compared to 4 percent in the rest of the country. ((1)) With few notable exceptions, the service sector, which has dominated the Rhode Island economy since 1988, has not replaced these lost jobs with secure, high paying alternatives. Consequently, Rhode Island has lost population and a portion of its labor force through out-migration. Between 1990 and 1998 the state's population declined by 1 percent and the labor force declined by 4 percent. ((2))



Slater Mill, Pawtucket, Rhode Island

01-02 Issues of Current Concern

How to achieve a healthy state economy has been the topic of several plans written by state agencies, commissions, or consultants. While there seems to be a consistency to the problems that plague Rhode Island's economy, there have been difficulties, either fiscal or political, implementing the solutions that policymakers consistently propose. Therefore, many recommendations for solving Rhode Island's economic woes keep resurfacing.

Figure 211-01(1) illustrates similar recommendations appearing in several documents published in the state since 1968. In that year the Special Commission to Study the Entire Field of Economic and Industrial Development in Rhode Island made six recommendations; all have been echoed in eight subsequent reports on Rhode Island's economic development. Those recommendations were:

- Improve business climate
- Diversify industrial base
- Target industries
- Upgrade labor force skills
- Form economic development organization
- Involve communities

In 1983, for example, the Strategic Development Commission's *Greenhouse Compact* recommended that the state improve its business climate, diversify its industrial base, define target industries, and upgrade its labor force skills. The referendum that would have enabled the state to implement these recommendations was defeated at the polls, however.

As the state began its economic decline in the '90's, the same recommendations were made in 1992 and 1993 by the Northern Rhode Island Economic Development Partnership, the Rhode Island Defense Economic Adjustment Project, and the Governor's Economic Strategy Task Force. This time, however, legislation was enacted facilitating the implementation of some of these recommendations, including a law providing tax incentives to encourage biotechnology and medical manufacturers to relocate or expand existing operations in Rhode Island, an Enterprise Zone act designed to attract new businesses to depressed areas, a law giving municipalities the authority to freeze or repeal wholesale inventory taxes, and a worker's compensation reform package.

Even with these efforts, and with the current low levels of unemployment in Rhode Island, the state's economy has continued to lag behind the rest of New England. Fundamental problems remain to the creation of wealth in Rhode Island: dependence upon shrinking industries, the state's limited land resources, low skills and educational levels of the workforce, and low wage rates relative to the rest of New England.

Figure 211-01(1)

GENERAL RECOMMENDATIONS OF RHODE ISLAND ECONOMIC DEVELOPMENT PLANS

PLANS	RECOMMENDATIONS							
	IMPROVE BUSINESS CLIMATE	DIVERSIFY INDUSTRIAL BASE	TARGET INDUSTRIES	UPGRADE LABOR FORCE SKILLS	CALLS FOR PLAN	FORM ECON DEVELOPMENT ORGANIZATION	IMPROVE/MAINTAIN INFRASTRUCTURE	INVOLVE COMMUNITIES
THE REPORT OF THE SPECIAL COMMISSION TO STUDY THE ENTIRE FIELD OF ECONOMIC AND INDUSTRIAL DEVELOPMENT IN RHODE ISLAND (1968)	●	●	●	●	●	●	●	
A STUDY TO DEVELOP AN ACTION PLAN FOR THE ECONOMIC AND INDUSTRIAL DEVELOPMENT OF RHODE ISLAND (1968)	●		●	●	●	●	●	●
THE RHODE ISLAND ECONOMY: A PLAN FOR ITS FUTURE (1972)	●	●	●	●	●	●		
REPORT OF ECONOMIC ADJUSTMENT PROGRAM - RHODE ISLAND (1973)	●	●	●	●	●	●	●	
ECONOMIC DEVELOPMENT STRATEGY FOR RHODE ISLAND (1979)			●			●	●	●
ECONOMIC DEVELOPMENT STRATEGY TASK FORCE - A REPORT TO THE BOARD OF DIRECTORS OF THE BLACKSTONE VALLEY CHAMBER OF COMMERCE (1982)	●		●		●	●		
THE GREENHOUSE COMPACT: CULTIVATING RHODE ISLAND'S FOURTH ECONOMY (1983)	●	●	●	●				
ECONOMIC DEVELOPMENT STRATEGY: STATE GUIDE PLAN ELEMENT 211 (1986)	●	●	●	●	●		●	●
TECHNICAL ASSISTANCE REPORT: ECONOMIC CONVERSION ASSESSMENT AND POLICY (1991)	●	●	●				●	
RHODE ISLAND'S CHOICE: HIGH SKILLS OR LOW WAGES (1992)				●				
MOVING RHODE ISLAND FORWARD (1992)	●	●	●	●		●	●	●
DEVELOPING RHODE ISLAND'S ECONOMY FOR TODAY AND TOMORROW (1992)	●		●	●		●	●	●
THE SECOND REVOLUTION: NORTHERN RHODE ISLAND'S STRATEGIC ECONOMIC DEVELOPMENT ACTION PLAN (1992)	●	●	●	●	●	●	●	
FOCUSING ON THE FUTURE: REPORT OF THE RHODE ISLAND DEFENSE ECONOMIC ADJUSTMENT PROJECT (1993)	●	●	●	●		●	●	●
WORKING TOGETHER TO DEVELOP RHODE ISLAND'S ECONOMY FOR TODAY AND TOMORROW: JOBS-R1 PHASE I UPDATE, PHASE II REPORT (1993)	●	●	●	●				
CREATING THE FUTURE: THE ECONOMIC PLAN FOR RHODE ISLAND (1994)	●		●	●		●		
MEETING THE CHALLENGE OF THE NEW ECONOMY (1997)	●	●	●	●			●	

Analysis of the economy and proposed solutions continue to be made. Governor Lincoln Almond formed an Economic Policy Council in 1995. The Council is composed of CEOs of several Rhode Island corporations, a representative of the state AFL-CIO, and leading Rhode Island academicians.

After analyzing Rhode Island's economy in 1996, the Economic Policy Council concluded in its report, *Meeting the Challenge of the New Economy*, "that the state needs a new approach to economic development that will transform its economy from one based on low value-added manufacturing competing on the basis of cost, to one based on manufacturing and services competing on the basis of higher value-added quality, innovation, and entrepreneurship."

The latter describes industries that are part of the "new economy." The Policy Council's report identified three major structural difficulties that account for Rhode Island's difficulty in shifting to the new economy, and the resulting economic lassitude:

- (1) Existing industries are not investing, modernizing and improving productivity fast enough.
- (2) A high percentage of the state's businesses are in the industries of yesterday, rather than the industries of tomorrow.
- (3) Rhode Island's business climate is poor. ((3))

On the other hand, a recent report by the Progressive Policy Institute states that Rhode Island is slowly shifting into the new economy, ranking in the middle of the states that are evolving from traditional industries to include more industries that are considered "high-tech" or more adaptable to the new economy. ((4))

01-02-01: The Global Economy

As the Economic Policy Council pointed out in *Meeting the Challenge of the New Economy*, economic prosperity is linked to the state's ability to develop industries that can prosper in the new global economy. Worldwide competitiveness is enhanced by capital improvements such as modern technology, machinery and equipment, as well as worker training to put these to efficient use.

In order to assist companies in the global arena, the R.I. Economic Development Corporation has developed an export management training program that is funded through the Rhode Island Resources Investment Council. This program helps companies develop international business strategies for increasing overseas sales.

The Economic Policy Council notes that Rhode Island manufacturers spend less than half the rate of the rest of the nation on capital improvements, and ranks 46th in the nation in this area. Upgrading equipment is a major challenge facing many smaller businesses that are isolated from similar companies. The Economic Policy Council has suggested that more cooperation among related industries (clustering) will encourage better, more modern production methods and business management practices and improve firms' competitiveness. ((5)) Boat building and related marine trades have been promoted as one of the clusters.

The report also recommends that the state promote and fund manufacturing and service industries that will bring income into the state by selling to businesses or individuals not living or located in the state. These “traded industries,” clustered appropriately, are likely to define Rhode Island’s niche in the global economy in the years to come.

01-02-02: Yesterday’s and Tomorrow’s Industries

As Figure 211-01(1) illustrates, the development and maintenance of target industries has been recommended in a number of reports. In 1979, the consulting firm Harbridge House, Inc., focused on attracting new industry and development to the state, trying to “find a set of industries whose growth in Rhode Island would maximize Rhode Island’s future employment and income.” An underlying assumption of the study was that the existing mix of industry in the state (i.e., heavy orientation toward manufacturing, and with manufacturing declining industries like leather products and textiles) had resulted in Rhode Island faltering at a time of national growth. Figure 211-01(1) indicates that 11 reports done after the Harbridge House study made a similar observation and recommended fostering target industries in order to expand the economy. Definitions may vary for “growth” or “target” industries. In Rhode Island, projections have indicated that significant growth is expected in “high tech” industries such as medical electronics, dental equipment, and scientific instruments.

The Strategic Development Commission sought to promote “high tech” jobs in Rhode Island in 1983 through the establishment of a number of “greenhouses” that would provide the necessary resources to nurture growing technologies. However, they also recognized the limitations of this type of approach in addressing the state’s entire job need. Therefore, they also proposed a number of programs to assist existing but competitive traded industries, which would bring income into the state by exporting products or services to out-of-state customers. The Commission recommended developing industry clusters, defined as portfolios of competitive, export-oriented, technology-driven industry groups dependent on collaborative actions among themselves and with public institutions to improve competitiveness.

Twelve years later, the Economic Policy Council also investigated the feasibility of clustering target industries such as jewelry, precision metalworking, boat building and related marine industries, seafood products, electronics and instruments, and biomedical industries. ((6))

Whatever we call desirable industries, “growth,” “cluster,” or “target,” their expansion and attraction should not be the state’s entire economic development strategy but one prong of it. Moreover, our discussion of these industries should not stop with the high technology sector but should be broadened to include other areas, traditional and innovative, such as health industries, financial services, electronics, software, fishing, and boat building. Industries receiving attention should demonstrate growth potential, build on native skills, and be environmentally friendly.

01-02-03: Business Climate

The business climate influences the decisions of expanding or relocating firms, making it an important variable in the state’s economic development. Many business leaders perceive Rhode Island’s business climate as poor, due to high energy costs and unemployment taxes, decaying and inadequate physical infrastructure, slow progress in economic development, and relatively low investments in higher education. ((7)) Tempering this perception, however, is a recent index appearing in the *Regional Financial Review* showing that in the relative cost of doing business, Rhode Island ranks lowest among the six New England states. (See Table 211-01(1).) This ranking is mainly due to the state’s low labor cost (rank 44), which comprises 75 percent of the cost of doing business index. Energy captures only 15 percent of the index, and state and local taxes the remaining 10 percent. Thus while the state’s energy and tax cost indices are high, they are offset by the labor cost index. ((8))

Through the years, the many reports on economic development in the state have also recommended remedies to improve its business climate. Figure 211-01(1) on page 2 illustrates that since 1968 recommendations to reduce taxes, improve access to capital, and encourage public/private partnerships have been made in at least nine of those reports. Recommendations to improve energy pricing and reliability, promote innovation and business ownership, and reform unemployment and workers’ compensation have also been popular, with at least eight reports mentioning them. Recent legislation has been approved that will facilitate the implementing of several of these recommendations; they are discussed below.

**Table 211-01(1)
THE RELATIVE COST OF DOING BUSINESS**

State	Cost of Doing Business Index	Rank	Unit Labor Cost Index	Rank	Energy Index	Rank	State & Local Tax Index*	Rank
Connecticut	112.9	3	107.1	5	146.1	7	106.7	15
Maine	106.3	9	99.2	17	136.3	10	115.0	6
Massachusetts	114.7	2	109.4	1	149.7	3	102.3	21
New Hampshire	101.7	12	91.5	35	168.1	2	78.8	50
Rhode Island	99.1	16	87.6	44	149.5	5	109.6	10
Vermont	105.8	10	96.7	22	149.6	4	108.5	12

*Compares total taxes paid to total income earned. Total taxes paid is the addition of total taxes less severance taxes, which are dependent upon region-specific land conditions, plus total charges less education and hospital charges, which are the result of government owned operations not paid by business. Summing the state and local taxes and dividing by total personal income creates the effective tax burden.

Source: *Regional Financial Review*, November 1999

01-02-04: Physical Infrastructure

Infrastructure support systems, adequate water supplies, wastewater treatment facilities, and highway and rail access are primary concerns of firms when they are relocating or expanding. Most companies look for sites with good support systems and the ability to move goods in and out at low cost.

Infrastructure at Industrial Sites

Although there is currently a total of 32,455 acres zoned industrial, not all the acreage is conducive to industry. Vacant parcels may be shaped oddly or be too small to be viable as an industrial site; others may not be accessible by highway or airport; still others may lack public utilities, or may have unfavorable physiographic features. Some may be unremediated brownfields.

Table 211-01(2) presents the industrial site suitability acreage between 1988 and 1999. There is clearly some double counting, with some sites showing both natural constraints and the absence of utilities. (Brownfields are not considered an environmental constraint in this comparison, on the presumption that liability and cleanup can be properly handled prior to development.)

	1988		1999	
	Acres	%	Acres	%
All land zoned industrial	35,186	100	32,455	100
All vacant land zoned industrial	17,582	50	15,224	47
All vacant industrial land with no public water or sewers	5,649	16	3,485	11
All vacant industrial land with public water but no sewers	11,933	34	11,929	36
All vacant industrial land with public water and sewers	5,134	14	7,727	23
All vacant industrial land with public water, sewers and no physiographic constraints	1,948	6	1,845	6

Source: Statewide Planning Program, *Industrial Land Use Plan* (1999; preliminary data)

The state has 1,845 prime vacant industrial-zoned acres— six percent of total industrial acreage – having public water, sewers, and no environmental constraints to construction (i.e., physiographic or flood hazard concerns).

This level of analysis can present only a broad overview of the capabilities of Rhode Island's industrial land. Setting the criteria for "construction-ready" sites in a way that eliminates in total sites that lack either public water or sewers, or that exhibit physical limitations, is an intentionally conservative approach. A more detailed analysis might consider a site's suitability to the type of development that is expected over the planning horizon in the market area. (For example, would we expect high or low employment densities? Would a buffer zone be required between the industry and the surrounding community? Would the level of infrastructure be adequate, even if a significant amenity were absent?) It would also consider the potential to expand services such as public water and sewers to sites that are currently deemed marginal, and the potential to use vacant acreage for something more than just an expansion of existing activities.

01-02-05: Transportation Infrastructure

The Northeast Corridor is arguably the greatest market in the world, making transportation linkages throughout the region of paramount importance to economic development. Transportation access to Rhode Island is from land, sea, or air. Interstate highways traverse the state; bands of arterial highways link urban and rural communities, and provide connections to the state's airports, seaports, rail lines, and commuter bus lines. Adequate transportation access to industrial and commercial sites is essential for continued economic expansion.

Transportation planning is an important part of the Statewide Planning Program. Rhode Island's transportation investment consists mainly of the federal-aid program (matched with state bonds), and federal law requires that planning support it.

The State Planning Council, which coordinates planning and development activities in the state, has been designated as the single, statewide Metropolitan Planning Organization (MPO) for transportation planning. The basic requirements are to prepare a 20-year transportation plan, to approve a two-year *Transportation Improvement Program (TIP)*, and to maintain a continuing transportation planning process, with public involvement.

Ports and Marine Transportation

Marine transportation is the oldest form of transportation in the state. Waterborne transportation of goods is still the cheapest mode of goods movement, making Rhode Island's ports important to its economy.

Narragansett Bay provides one of the best deep-water ocean ports on the East Coast. The Bay has over 10 miles of commercial waterfront with piers and wharves to accommodate deep and medium draft vessels. Terminals are located in Providence, East Providence, and North Kingstown (Quonset/Davisville).



Quonset/Davisville, North Kingstown, Rhode Island
Photo courtesy of Rhode Island Economic Development Corporation

The strategic location of the Quonset Davisville Port and Commerce Park, situated between New York and Boston and at the entrance of Narragansett Bay, provides one of the best deep-water ocean ports on the East Coast. Major cargo arriving at the port includes automobiles, quarried stone, and general cargo. The port has three major piers with rail track and over 6,800 lineal feet of deep-water dockage. Low cost dockage is available at \$0.20 per net registered ton and wharfage is \$1 per ton of general cargo. ((17))

The Port of Providence handled liquid, dry and breakbulk cargoes totaling 8,814 thousand short tons in 1997. ((9)) However, dredging of the Providence River shipping channel must take place in order to accommodate larger vessels that have been prevented from docking upriver because the channel, with shoaling, is no longer deep enough to allow them to pass safely. Restriction of these vessels has required trucking to Rhode Island of some materials, such as petroleum products, a procedure resulting in higher transportation costs (and higher energy costs as well).

Recognizing the potential value of the Quonset Davisville Port and Commerce Park (QPD) to the state's economy, a developer recently proposed expanding the port to accommodate the latest generation of container cargo ships used by international shipping lines. According to projections by the Economic Development Corporation, such development would have created about 3,800 jobs at the port and thousands of jobs off-site. However, the proposal was opposed by environmental and community groups who feared the port would damage the ecosystem of Narragansett Bay and the quality of life in the neighboring communities. These groups favor a more moderate expansion of the port, capitalizing on existing uses. At present, the port handles new automobiles, quarried stone, and general cargo that arrive there for shipment throughout New England.

Marine transportation involves passengers as well. Commuter ferry service operates year round between Point Judith and Block Island, and seasonal service is provided for tourists between Providence, Newport, and Block Island. Several water transit projects are underway; they include a hub for water transportation in Newport's Perotti Park and a high-speed Providence to Newport ferry. A Providence to Pawtucket commuter ferry is already in operation. These projects are part of an intermodal transportation strategy designed to reduce reliability on the automobile in the state.



Block Island Ferry

Energy Costs

New England has historically been a “net consumer” of energy, as opposed to a “net producer” in the sense of Texas, Louisiana, or Alaska. Therefore, the cost of energy for this region has been, as a rule, consistently higher than in the rest of the nation. Rhode Island depends on energy sources from outside the state and is literally at the “end of the pipeline,” which adds to the cost of energy.

High energy costs put businesses at a competitive disadvantage. Rhode Island, with energy intensive industries such as textiles, was particularly hard hit with the loss of these industries to places having lower energy costs. As recently as June 1997, according to the *Regional Financial Review* (RFR), the New England region was experiencing double-digit increases in relative electricity prices. It is anticipated that this trend will stabilize or reverse with the implementation of the electric industry's restructuring following deregulation.

The *Rhode Island Energy Plan*, State Guide Plan Element 781, recognizes that affordable and reliable energy is essential to Rhode Island's business and industry. The plan calls for:

A strengthened competitive posture for Rhode Island commerce and industry through access to adequate affordable and reliable supplies of all sectors of use, including transportation.

The *Energy Plan*, however, cautions users regarding the restructuring of the supply end of the electric industry, noting that they should be sensitive to the challenges of a free market vs. the old method of setting rates by regulation to guarantee supply. Consumers need to pursue energy conservation particularly in a free market to avoid spikes in demand that will drive up cost and may even interrupt supply.

Highways

The state road network includes three interstate highways. They are I-95, I-195, and I-295, totaling 72 miles. State maintained arterial and collector roads total 1,200 miles. A much larger network of collector and local streets, totaling more than 4,700 miles, is maintained by the 39 cities and towns. ((10))

Road maintenance is quite costly and is paid for out of tax supported annual budgets that often cannot cover the costs of all necessary repairs. Consequently, some roads have suffered significantly under a strategy of deferred maintenance. Many are in need of resurfacing. With 589,500 automobiles and 158,500 other types of vehicles registered in the state, traveling about 19,500,000 miles in a typical day, deterioration of the roads is inevitable. Continuous maintenance of the state's roads is therefore extremely important to ensure safe and efficient access to the state's commercial, industrial, and shopping centers.

The Rhode Island Department of Transportation (RIDOT) maintains 598 bridges, and cities and towns maintain another 200. The Rhode Island Turnpike and Bridge Authority operates the Newport and Mount Hope bridges. Recent examination of the state's bridges has revealed deteriorating support structures. ((11))

Repairs are presently underway on several bridges throughout the state. The state pays for road and bridge construction and maintenance with a portion of the gasoline tax receipts, state bonds, state appropriations, federal funds, and bridge tolls. The gasoline tax is the most important single source of financial support for transportation in the state, with 16 cents of the 28-cent per gallon tax earmarked for bridge and roadwork. However, most of these funds have gone to paying the debt on bonds. Federal dollars have been spent on new projects, at the expense of basic road repairs. Recently, state officials have shifted RIDOT's financing to rely more on its share of the gasoline tax, with funds going directly to specific repair programs for roads and bridges throughout the state.

The Need for Mass Transit

As cities began to decentralize in the 1950s and '60s, the automobile, became the transportation mode of choice for many people. Federal funding policies favored highway construction. These policies and preferences for suburban lifestyles have contributed to the proliferation of industrial parks and malls that provided employment opportunities outside the central cities, with varying accessibility via public transit.

Today, many lower-income workers who are urban dwellers depend upon public transit to get to work. If they are looking to change jobs, they may find that that public transportation does not go to their potential work sites.

Adequate transportation access to industrial and commercial sites, whether located in the old central cities or in suburban parts of the state, is essential for continued economic expansion. This applies to the movement of both goods and people. The dispersion of population and employment away from the urban centers has created a need for better mass transit, particularly for those who cannot afford a car or who seek a non-automobile alternative. However, the state's small population and size - i.e., a relatively small demand for public transit - have made the expansion of public transit difficult.

In 1994, Congress enacted what is broadly characterized as "welfare reform." The new program - Temporary Assistance for Needy Families (TANF) - set a 5-year lifetime limit on benefits and emphasized transitioning people to work rather than continued public assistance. More than 18,000 Rhode Island welfare households will eventually be faced with work responsibilities.

Moving welfare recipients into the workforce is not a simple matter. Most have young children who will need child care, and many need skills training. But a major consideration for people to get and hold jobs is a dependable means of getting to and from work. A variety of "reverse commute" services is needed to connect welfare recipients to the places where the jobs are.

In recognition of the keen interest in welfare reform and the many organizations with responsibilities in this area, the Statewide Planning Program has stimulated a joint planning process of interested parties. By bringing together the many diverse agencies and organizations with responsibilities related to welfare reform, coordinated approaches to transportation service delivery could be negotiated and agreed to. To this end, a series of meetings with representatives of the R.I. Department of Labor and Training, the R.I. Department of Human Services, the State Association of Public Housing Agency Directors, and the Private Industry Councils culminated in a comprehensive \$1,000,000 Job Access and Reverse Commute proposal. This was submitted to the Federal Transportation Administration by the R.I. Public Transit Authority (RIPTA), which manages the state fleet of commuter buses. This proposal has been approved. The proposal addresses the major concerns of all participants and may ultimately serve as a prototype for a realignment of public transit services in the state of Rhode Island.



Kennedy Plaza, Providence, Rhode Island

Bus

The RIPTA fleet includes 221 buses, 195 full-size transit vehicles, and 26 smaller buses. Fixed routes, totaling 450 miles, serve 36 of the 39 cities and towns and connect Providence with Woonsocket, Newport, Westerly, and the University of Rhode Island in Kingston. About 65,000 passengers are carried on a typical weekday. ((12))

With the suburbanization of Rhode Island, the places where people live and work have become dispersed and therefore are difficult to serve by transit. Although 64 percent of the state's population lives within mile of a RIPTA route, that route frequently does not lead to places of employment. The route system developed with Providence as the center. According to the U.S. Census, Providence has fallen from having 35 percent of the state's employment to having 25 percent in 1990.

The current emphasis on "welfare to work" transitioning is having an impact. Before welfare reform, RIPTA could not attract enough passengers to warrant putting additional buses to outlying suburban areas. Existing public transit patterns, were designed for the days when workers had to be transported to the urban core for work and returned to bedroom community suburbs at night. This has proved unsuitable for transporting workers who reside in the inner cities from home to suburban job sites and back. The mismatch between work sites and residence sites radically changes ("reverses") commuting patterns for many workers. For urban residents without autos who are presently on public assistance, it has made work an impractical alternative to welfare. Add to this phenomenon a growing incidence of non-standard workweeks and irregular shift hours, and it becomes clear that public transit routes as presently configured are inadequate to serve this new need.

Anticipated increases in ridership due to work transitioning notwithstanding, RIPTA has for years experienced funding shortfalls due to decreases in state and federal funding patterns as well as decreases in riders. For the future, RIPTA faces many challenges:

- To streamline operations by re-routing existing lines that carry few passengers to routes going by current employment and educational facilities. Recently RIPTA developed a new bus route from Providence, Pawtucket, and Central Falls to a manufacturer in South Kingstown.
- To provide intrastate transportation linkages for commuters to Boston and Connecticut (Foxwoods). Fidelity is financing a RIPTA route from Attleboro to its new facility in Smithfield. This is the first time in its history that RIPTA is going to Massachusetts.
- To upgrade the fleet to save energy/downsize buses.
- To increase ridership across the board.
- To control costs by eliminating unnecessary operations.

Privately operated (i.e., non-RIPTA), intercity buses link Providence with Boston, New York City, Albany, N.Y., and Cape Cod.

Rail

The Northeast Corridor rail line (the Amtrak Shore Line) runs through Rhode Island, and there are a number of active and inactive lines for passengers and freight branching from it. Amtrak is fully electrifying its passenger line. This poses a conflict with the freight transport capacity of the state's largest industrial park, QPD. Freight trains may be too slow to remain on the upgraded tracks, and clearances will be too low and narrow in some areas to accommodate the freight cars used to transport automobiles and other goods.

To remedy conflicts with passenger service, Rhode Island is constructing a new freight line, the so-called "Third Track," to run parallel to the Northeast Corridor rail line for 17_ miles of the 22-mile line, from Quonset Point Davisville to the Boston Switch in Central Falls, with 4_ miles between East Greenwich and Warwick being shared with Amtrak. The project includes lowering the rail beds and raising the clearance of bridges crossing the track to enable it to accommodate double- and triple-stacked freight cars. Development of the Third Track is considered critical to the further development of QPD as an intermodal port with rail access to the major cities in the Northeast.

Amtrak's passenger rail service in the Northeast Corridor provides eight trains operating each day in each direction, either toward Boston or toward Washington, D.C. All trains stop in Providence, and six trains stop in West Kingston and Westerly.

Passengers for the three Rhode Island stations total about 425,000. High-speed rail service will begin soon and a new train station will be built in Warwick near T. F. Green Airport, which will use a moving sidewalk to move passengers between the airport and the trains.

Commuter rail service, operated by the Massachusetts Bay Transportation Authority (MBTA), also connects Providence and Boston, carrying about 425 inbound passengers each weekday. In addition, Rhode Islanders board in Attleboro and South Attleboro, Mass. Recently, an agreement was reached between Rhode Island and Massachusetts to add three daily commuter runs between Boston and Providence. The agreement also provides for service to T. F. Green Airport as soon as the proposed train station is constructed there.

Air

Air carrier services are provided at the newly expanded T. F. Green Airport. In addition, there are four general aviation airports, and the Quonset State Airport at QPD, which are owned by the state and are operated by the Rhode Island Airport Corporation. Cargo is brought into Green. The Rhode Island Army and Air National Guard operate from Quonset State Airport.

The total air system served 4,615,309 passengers and carried 45,581,728 pounds of total cargo in 1998. A new terminal was constructed at T. F. Green Airport in 1996 and an additional airline began service there. The number of passengers using the airport in 1998 represented a 13.8 percent increase over the previous year. ((13))

Although service at Green has increased dramatically, there is still a need for the airport to upgrade its service area to provide permanent facilities for international air travel, which will be important to the state's emerging global economy. Presently, the airport can provide customs services on a case-by-case basis for charter international flights. A new customs facility is in the planning stages, with a new inspection area that will be used to collect tariffs, check immigration papers and passports, and inspect luggage and cargo unloaded from international flights. Eventually international charter service will evolve into scheduled service, which, officials believe, will encourage tourism.

01-02-06: Taxes

Rhode Island is perceived as having high taxes. The state ranks eleventh highest in the nation on the *Regional Financial Review's* state and local tax indices (Table 211-01(1)). In *Meeting the Challenge of the New Economy*, the Economic Policy Council noted that, in 1995, Rhode Island employers paid the highest average unemployment tax, 2.1 times the national average, and its top weekly benefit was the second highest in the country.

New or Revised Tax Credits

Under pressure from the business community, the General Assembly passed several bills for "tax relief." Most of the resulting programs are specifically targeted.

The Jobs Training Tax Credit Act, passed in 1996, allows companies to take a tax credit up to \$5,000 per employee over any three year period against their state business tax. The tax credit is equal to 50 percent of approved worker training expenses up to \$5,000 per individual employee over any three-year period. Up to \$1,000 of the \$5,000 may be for employee wages.

Meanwhile, the costs of workers' compensation declined by 5 percent between 1995 and 1996 because of legislation enacted to reform the system in 1992. However, workers' compensation taxes remain high (50 percent above the national average).

In 1997 the state reduced the rate new businesses must pay for unemployment insurance from 4.2 percent to 2.3 percent, and raised the rate for companies with the most layoffs from 8.25 percent to 9.85 percent. Various options are being studied to reduce rates without reducing benefits.

On January 1, 1998, Rhode Island became the state with the highest investment tax credit, the highest research and development credit, and the highest training credit in the country.

The Investment Tax Credit has increased from 4 to 10 percent for new machinery and equipment acquired after January 1, 1998. Manufacturers or traded service firms paying above average wages or investing significantly in worker training are eligible. The Research and Development Tax Credit has increased more than four-fold, from 5 percent to 22.5 percent, for manufacturers and traded service firms. Experts expect

these initiatives to have an immediate impact toward improving the business climate in the state, particularly for the knowledge-based businesses in the new economy.

Other notable new or revised tax credits include:

- The Rhode Island Adult Education Tax Credit, which allows both a work site and non-work site tax credit for vocational training or basic education of 50 percent of the costs incurred, up to a maximum of \$300 per employee and \$5,000 per employer per calendar year.
- The Rhode Island Employer's Apprenticeship Tax Credit which amounts to 50 percent of the actual wages paid to the qualifying apprentice or \$4,800, whichever is less. This credit covers the following trades in the metal and plastic industries: machinist, toolmaker, modelmaker, gage maker, patternmaker, plastic process technician, tool and machine setter, diesinker, moldmaker, tool and die maker, and machine tool repair person.
- The gross Rhode Island income of businesses and individuals that employ and retrain Rhode Island residents may be reduced up to \$2,400 from wages paid in the first year to each new, previously unemployed employee.
- The Child and Adult Day Care Tax Credit, which equals 30 percent of the services purchased and 30 percent of the total amount expended for the operation of a day care center. This credit is available to taxpayers who purchase or provide these services for employees with adult family members or dependent children. The maximum credit allowed is \$30,000.
- A Disabled Access Credit for Small Business – to enable the small business to comply with federal or state laws protecting the rights of persons with disabilities. The credit is equal to 10% of the total amount expended during the tax year in Rhode Island up to a maximum of \$1,000 for removing architectural, communication, physical, or transportation barriers; providing qualified interpreters or other effective methods of delivering aurally delivered materials to persons with hearing impairments; providing readers, tapes, or other effective means of making visually delivered materials available to persons with visual impairments; providing job coaches or other effective means of supporting workers with severe impairments in competitive employment; providing specialized transportation services to employees or customers with mobility impairments; buying or modifying equipment for persons with disabilities; and providing similar services, modifications, material or equipment for persons with disabilities.
- Enterprise Zone credits, including a business tax credit, a donation credit, an interest credit, and a resident business owner tax modification for being located in one of the state's ten designated Enterprise Zones or the Federal Empowerment Zone in Providence. In addition, there are rehabilitation credits, including wage credits, interest credits, and investment credits, for renovating, reoccupying, and reusing under-utilized or abandoned mill buildings.

The state's "piggy-back" income tax has also been reduced from 27.5 percent to 27 percent of a taxpayer's federal tax liability as an across-the-board measure for tax relief.

Property Taxes

Property taxes in Rhode Island rank among the highest in the nation. The Rhode Island Public Expenditure Council (RIPEC) noted in its report, *Strengthening Cities*, that there is an over-reliance on property taxes as a revenue source, and this tends to limit the cities and towns from attracting new residents and businesses. Property tax relief, RIPEC concludes, is essential to promote economic growth in municipalities. RIPEC's research shows that other measures such as changing the financing of education, which is borne primarily by local property taxes, and more state contributions toward the financing of municipal services could replace lost revenues if property taxes are reduced. This issue has been debated in the General Assembly.

Tax relief in the form of a phased reduction in the automobile property tax to zero by the year 2005 was enacted in 1998. ((14))

The Office of Municipal Affairs in the R.I. Department of Administration commissioned a study of the state's current property tax assessment practices to identify its strengths and weaknesses and to recommend ways to improve it. This was intended to lead to both tax relief and property assessments that are more consistent from community to community. Among the recommendations being considered is to have revaluations more frequently than the current sequence, every ten years. Other suggestions are to repeal the tax on business inventories, to amend Rhode Island laws to require assessments to be made at a uniform 100 percent, and to adopt uniform standards for local option exemptions.

Sales Tax

Rhode Island also has the highest sales tax (7 percent) in New England. The primary impact of this tax falls on retail establishments near the Massachusetts (5 percent rate) and Connecticut (6 percent rate) borders. When the sales tax was implemented, it was touted as a "temporary" tax, but it is still in effect despite repeated attempts by legislators to reduce or eliminate it. Several items are exempt from sales taxes, however:

- Industrial fuels and raw materials sales of tangible personal property, computer software, and public utility services when the property or service becomes a component part of a manufactured product for resale, or when the property or service used in the process of manufacturing or processing products for resale.
- Scientific equipment used in research and development.
- Pollution control equipment.
- Boats.

- Professional services, such as those provided by physicians, attorneys, accountants, engineers, and others. However, the tax applies to any tangible personal property that may be sold at retail by such professionals.
- Occupational services, such as provided by barbers, beauty parlors, bootblacks, cleaning and pressing shops, laundries, and similar service establishments. However, the tax applies to any tangible personal property that may be sold at retail by such establishments.
- Intangible personal property, e.g., stocks, bonds, accounts receivable, money, or insurance policies.
- Sales of arts within Arts Districts.

In addition, firms using financing programs offered through the R.I. Economic Development Corporation might receive a tax rebate of the sales tax paid on construction materials.

01-02-07: Labor Force

Once a strong Northeast presence in manufacturing, Rhode Island, has become a service- and information-based economy. Over the years, as manufacturing jobs were lost, some workers left the state pursuing jobs in regions where their skills were still marketable. The structural change to the state's economy brought a demand for workers having different skills. The state's remaining labor force needs to upgrade and update its skills in order to secure and keep the jobs that are available in the new, technological job market.

Skills and Education

To make the transition into the new economy, the state needs to find a way to provide attractive employment opportunities for its college graduates, and to motivate blue collar workers to participate in jobs training and re-training programs.

As Figure 211-01(1) (page 1.3) illustrates, upgrading the state's labor force skills has been recommended by planners since 1968, when both the Special Commission to Study the Entire Field of Economic and Industrial Development in Rhode Island and *The Study To Develop an Action Plan for the Economic and Industrial Development of Rhode Island* recommended improving the state's workforce training and retraining programs. Ten subsequent plans have made the same recommendation.

In 1995, the Rhode Island labor force numbered approximately 484,900, with 51.5 percent being men and 48.5 percent women. Compared to both New England and the United States, Rhode Island's labor force has a relatively lower educational level. According to the 1990 Census, only 72 percent of Rhode Islanders 25 years and older have completed high school. (The national average is 77.6 percent.) More disturbingly, the Economic Policy Council estimates that 40 percent of the native Rhode Island blue-collar workforce is either functionally or totally illiterate. Employers report that many workers cannot read simple safety warnings. The illiteracy problem has been exacerbated by the influx of non-English speaking immigrants into the workforce.

The 1990 Census reports that the number of Rhode Island residents 25 years and older completing at least four years of college is only 21.3 percent. This figure is interesting, because Rhode Island has more college students per capita than any other state in the nation. They are apparently leaving the state upon graduation. One exception is Rhode Island College (RIC), which reports that a large portion of its students tends to stay in the state after graduating. While 93 percent of RIC's student body are state residents, the fact that graduates are staying in Rhode Island suggests that they are confident that RIC has adequately prepared them for employment here.

Working with Colleges and Universities

In 1994, RIC opened a Center for Management and Technology. Working closely with several businesses, the Center seeks to provide the resources necessary to help its students fill the needs of the state's business community. For example, the Center has an internship program to help students gain professional experience that can give them a competitive edge in the job market. A new business curriculum was designed for undergraduates, which included courses in computer information technology and finance, as well as the more traditional courses in economics, accounting, marketing, and management.

Another new job development initiative connected with institutions of higher learning is the Research Centers of Excellence Program, which began in 1997. Through this program, the state is trying to accelerate the flow of academic and laboratory research into commercial use. One Research Center of Excellence has established a partnership among Brown University, hospitals, and biomedical companies to catalyze the development of the cellular medicine industry. Another includes the University of Rhode Island's (URI) Graduate School of Oceanography, the Naval Undersea Warfare Center, and marine-related companies. The objective behind these partnerships is to develop innovative technologies, providing new jobs for Rhode Island companies and entrepreneurs.

Workforce training programs are available in most of the state's colleges and universities. According to the white paper *Rhode Island Education and the New Economy*, workforce training tailored to specific needs and industries, such as fire science, computer integrated manufacturing, and electronic publishing, are available at local institutions of higher learning. ((15))

The Rhode Island Higher Education Workforce Development Council provides workforce assistance, serves as a clearinghouse for workforce development services, and facilitates cooperative agreements with other organizations, consortia, and public agencies focusing on workforce development in Rhode Island. Outside this structure, the R.I. Department of Human Services and nonprofit community organizations are providing counseling and training programs for people who are returning to work from welfare.

01-02-08: Land Use

Rhode Island's beaches, quaint villages, sailing activities, and other recreational opportunities contribute to its high quality of life, which has been one of its important economic development attributes. However, with the state's limited land use resources, it is becoming harder to find prime parcels of land for industrial expansion while also conserving these resources. Growth and conservation are both essential to Rhode Island's economic development, and must be monitored in order to ensure that a balance is maintained between development and potentially competing land uses.

In 1999, approximately 32,450 acres were zoned for industry statewide (Table 211-01(2)) (see page 1.8). The inventory of industrial-zoned land showed that nearly 11,125 acres were in industrial use, the remainder being vacant or in other uses. Competition between industrial and non-industrial uses for industrial-zoned land has been keen at times, especially when the regional economy is good, and the demand for upscale housing, or retail space, is high.

Is there a shortage of prime industrial land in Rhode Island? *Land Use 2010* recommends reserving 8,000 acres to the prime industrial land currently occupied. Using the 8,000-acre reserve would yield nearly 21,000 acres for industrial development by the year 2020.

The *Industrial Land Use Plan* indicates that over 15,224 industrial acres in the state were vacant in 1999 but only 1,845 acres are considered prime, i.e., have public water, public sewers, and no environmental constraints. (See Table 211-01(3)). The plan projects that the state will need about 13,000 acres of industrial land by the year 2020. Although there are 32,455 acres zoned for industry, many cannot be developed due to environmental constraints, size, or configuration. In addition, many sites are occupied by other uses to the extent that more appropriate or efficient industrial uses are precluded.

Table 211-01(3)
VACANT SITE SUITABILITY ANALYSIS

	1977		1988		1999	
	Acres	%	Acres	%	Acres	%
All land zoned industrial	35,403	100	35,186	100	32,455	100
All vacant land zoned industrial ¹	20,669	58	17,582	50	15,224	47
Vacant industrial land w/public water ²	12,027	34	11,933	34	11,957	37
Vacant industrial land w/public water & sewer ²	6,852	19	5,134	15	7,727	24
Vacant industrial land w/public water & sewer, no physiographic constraints ("prime") ²	1,304	4	1,948	6	1,485	6
Prime vacant industrial land on active CERCLIS sites ²	n/a		n/a		676	2

¹ Where "vacant" is defined as *undeveloped* or *cleared*, as opposed to *abandoned*.

² Double counting occurs among these categories, yielding a sum greater than the total.

Source: Statewide Planning Program Industrial Land Inventory (1997-99); RIGIS (1999)

The challenge facing economic development planners in Rhode Island is to revitalize central cities where the infrastructure already exists and to encourage more efficient industrial and commercial development, adhering to the sound land use policies espoused in *Land Use 2010*. Given the environmental legacy of some of the sites (i.e., chemical contamination), obsolete configurations for modern manufacturing processes, or surrounding non-industrial uses, this challenge may seem daunting.

The *Industrial Land Use Plan* suggests that, using a current inventory of industrial-zoned land, planners should work with local communities to “match the development to the land,” rehabilitate and reuse underutilized or vacant industrial properties, track changes in employment densities, and prevent sprawl or conversion of greenfields (undeveloped areas best left for open space). Business partnerships should be encouraged to promote sustainable development along these lines and to address legitimate concerns regarding cleanup liability, rehab financing, and better use of industrial properties.



Kaiser Tower, Portsmouth, Rhode Island

01-02-09: Hazard Mitigation

Rhode Island, a coastal state, is vulnerable to flooding, high winds, ice storms, and coastal erosion. These are known as *natural hazards*. Under extreme conditions, they can become natural *disasters* with severe impacts.

Natural disasters are costly. For example, in 1938 the City of Providence suffered \$16.3 million in damages due to hurricanes. In 1954, that figure was \$25.1 million. Considering the recent and planned redevelopment of downtown Providence, the cost of flooding and wind damage could be much higher today. Throughout Rhode Island, more than \$83 billion worth of residential and commercial coastal property would be at risk if a repeat of these two hurricanes, or some other natural disaster, were to occur. ((63))

According to the Institute for Business and Home Safety (IBHS), an insurance industry advocacy group, when businesses are forced to close as a result of a natural disaster more than 43 percent never re-open and another 29 percent close within two years. ((64)) Small businesses are more vulnerable to disasters than large businesses. These are sobering statistics, as more than 97 percent of Rhode Island's businesses have 500 or fewer employees. ((65))

Proper planning for natural disasters can help reduce the loss of jobs and taxes caused by business closings as well as limiting their environmental impacts. Recognizing this, in 1998 Governor Almond signed an Executive Order designating Rhode Island as the first "Showcase State for Natural Disaster Resistance and Resilience" in the country. ((66))

The goal of the Showcase State program is to reduce losses due to natural disasters by careful planning and decision making that in effect create a disaster-ready and disaster-resilient statewide economy. This involves identifying areas prone to natural and other hazards in the community (such as floodplains and areas of coastal erosion), assessing economic vulnerability (in terms of businesses and impacted populations) in the event of a storm or other event, business recovery planning, and fine-tuning once a disaster strikes and is handled.

The Showcase State program is a mitigation strategy. The U.S. Economic Development Administration defines mitigation as "sustained action that reduces or eliminates long-term risk to people and property from natural hazards and their effects." It is an ongoing effort by government, business and industry, associations, and individuals to lessen the impact of natural disasters on families, homes, businesses, and the community. ((67))

The Showcase State program is being implemented on several fronts, community by community and statewide. Working with the University of Rhode Island, Sea Grant, and the R.I. Emergency Management Agency (RIEMA), several municipalities — including Charlestown, Narragansett, Providence, and Pawtucket — have identified risks in their respective communities and written strategies for their reduction. A statewide Showcase State Coordinating Committee has been in place since 1998, offering the opportunity for Statewide Planning to work with RIEMA and the

IBHS to incorporate the principles of hazard mitigation into the State Guide Plan. A statewide hazard mitigation plan is under development by RIEMA while appropriate policies within the various elements of the State Guide Plan are being drafted.

In the *Economic Development Policies and Plan*, mitigation language has been written into Policies B-2, B-5, B-8, B-9, and B-17 under “Objective B, Facilities.”

211-02 RHODE ISLAND ECONOMIC PROFILE

02-01 Introduction

This part provides a summary of Rhode Island's important economic and demographic characteristics that, at first glance, may seem more negative than positive. There may be some truth to this assessment, but a closer, more balanced appraisal reveals several strong elements within the state's economic structure. The following discussion will look first at the weaker elements.

Rhode Island has often been unable to sustain economic growth on a level with the rest of New England. A concentration of jobs in defense and manufacturing industries is a major reason for the state's lackluster growth. Some of the state's leading products such as costume jewelry and textiles are experiencing increasing competition from foreign imports and have suffered steady declines. The state's industrial base is not sufficiently diverse to compensate for the employment lost in these industries, or to provide alternative employment at comparable skill levels.

Moreover, limited land has constrained industrial location, and the education and skill levels of much of the labor force have not kept pace with an increasingly technological global economy. Incomes are low, relatively speaking, in an otherwise high-income region, depressing our standard of living.

Low wage rates limit the state's level of earned income. The state is too dependent upon transfer of payments as a source of income, and growth in Gross State Product, the measurement of a state's local output of goods and services inside its borders, lags behind both the nation and the New England region. (See Table 211-02(1))

Table 211-02(1)
PERCENT CHANGE IN GROSS US, NEW ENGLAND, AND STATE PRODUCT
1990-1997

Locale	1990	1997	Percent Change
	Billion \$	Billion \$	
US	6,136	7,182	17
NE	1,578.6	1,725.8	9
CT	105.5	110.7	4.9
ME	24.8	25.4	2.4
MA	170.5	194.7	14.2
NH	25.4	30.9	21.6
RI	23.1	23.2	>1.0
VT	12.2	13.7	12.3

Source: Regional Financial Associates, *Precis*, State Edition, 1997

The combination of low value added, non-durable manufacturing industries, many of which are characterized by low capital investment, and a largely unskilled or semi-skilled labor force makes Rhode Island a relatively low value added state. Value added, the difference between the cost of producing goods and the value of the goods shipped, "is considered to be the best value measure for comparing the relative economic importance of manufacturing among industries and geographic areas," according to the 1992 Census of Manufacturers.

Despite these less than ideal conditions, Rhode Island does have a number of strengths that are beginning to buttress the weaker elements of its economy. Some of the state's attributes include the Quonset Point/Davisville complex, which has added prime industrial land to the state's meager inventory. Quality programs are being developed to train the state's labor force at levels necessary to expand into the next millennium. The state appears to be actively participating in the national economic recovery and wage rates and income are improving. Some sectors of the state's economy such as boat building and financial services are growing as a result of incentive programs and government action. As capital investments in these and other growing industries increase, so will the state's value added figures.



Quonset/Davisville. Photo courtesy of Rhode Island Economic Development Corporation

Other positive elements are the state's small size, which provides a sense of community that facilitates information sharing through networking and clustering among the state's growing number of small businesses. These firms are recognized by many in the state's business community as strong economic engines. Although an overreliance on defense spending is detrimental to the economy, Rhode Island's traditional connection with the U.S. Navy has proved to be an asset. Its contribution is seen particularly in places such as the Naval Undersea Warfare Center, employing 2,900.

The state is also home to several of the region's finest colleges and universities and is surrounded by the fine schools in the Boston area. These have the potential to give the state a pool of well-educated and highly skilled people from which to recruit new employees for an evolving, growth-oriented economy.

Commonly used indicators of an economy's health are changes in employment and unemployment, population, per capita personal income, gross state product, manufacturing wages, value added, housing prices, the poverty rate, and major employment sectors. The R.I. Economic Policy Council recently did an in-depth analysis of the state's economic performance indicators. This discussion will refer often to that work.

02-02 Demographics

02-02-01 Population Changes

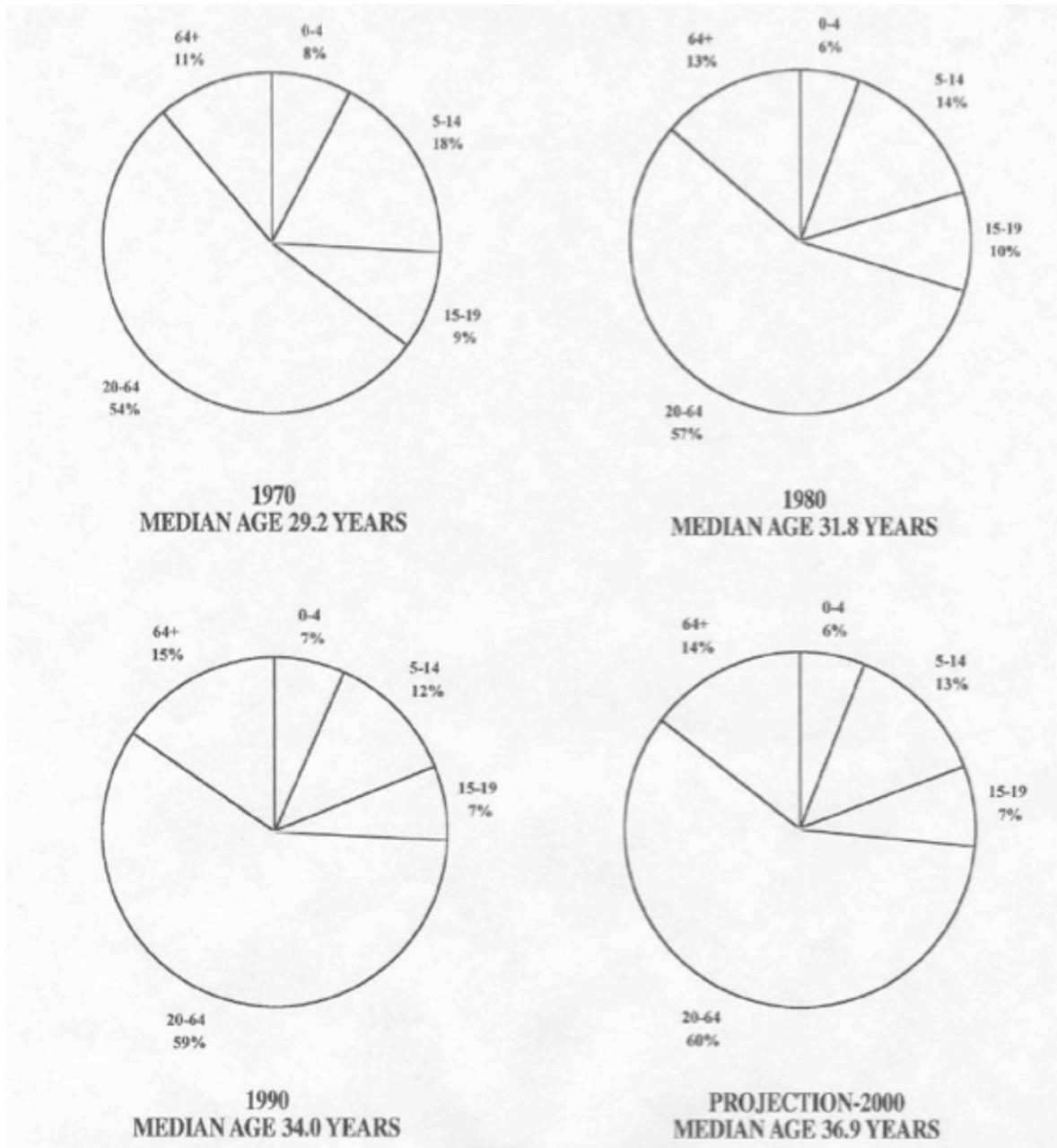
The state's population increased from 947,154 in 1980 to 1,003,464 in 1990. By 1998, however, according to the U.S. Census Bureau, the population had declined to 988,500.

While the population is stabilizing, the age profile is shifting dramatically. The median age rose from 31.8 years to 34 years between 1980 and 1990. The median age figure reflects a growing population of elderly residents.(See Figure 211-02(1)). In 1990 Rhode Island ranked fourth nationally in the percentage of population age 65 and over; by 1994 it ranked third, according to the Economic Policy Council. Nearly 16 percent of the population is over 65, compared to 12.7 percent nationwide. People in the older age groups will mean more Rhode Islanders relying on Social Security pensions and savings (transfer of payments) for their livelihood. The larger number of aged will also continue to exert substantial impact on the state's health care system. This statistic will affect Rhode Island families in very personal ways, and create a challenge to society to be able to give older people who are still active meaningful roles to play.

At the same time there will be a greater number of working age people who will likely be paying into the retirement systems. Those in the 20 to 64 year age group increased a critical 3.5 percent between 1985 and 1995. There were 55,000 fewer children and teenagers in 1980 than in 1970, and there were 21,083 fewer in 1990 than in 1980. While this creates a favorable situation in the short term as the baby-boom generation expands, and as pressure to absorb a huge teenage population into the workforce subsides, the smaller youth segment will create sharp changes in the population profile of the state as it ages.

As a result of the increase in Rhode Island's immigrant population, the state's minority population grew by 72 percent between 1980 and 1990. According to the Statewide Planning Program's population projections, the minority population is expected to increase by 16.5 percent between 1990 and 2000. The state's minority population is heavily concentrated in the state's larger urban areas.

Figure 211-02(1)
RHODE ISLAND POPULATION BY AGE
1970-2000



Sources: U.S. Bureau of Census, Statewide Planning Program

Projections indicate that growth of the non-white population will be concentrated in the younger age groups in which the white population will be experiencing decline. Thus the proportion of non-whites in some age sectors will increase significantly, particularly in the 15 to 19 year age range that is associated with workforce entry. Non-white teens have generally experienced higher unemployment than the corresponding white cohorts.

Historically, the state's largest ethnic groups have been Italian, French and French-Canadian, Irish, English, and Portuguese. The 1990 U.S. census revealed these groups comprised 16.4, 15.7, 14.0, 10.4, and 7.7 percent respectively of the Rhode Island population. The state's most recent immigrants have largely come from the countries of Latin America and Southeast Asia (Institute for Labor Studies and Research, 1992). In the period 1980-1990, the Asian/Pacific Islander population grew by 245 percent, and the Hispanic population by 132 percent (see Figure 211-02-(2)). Asians now account for 1.7 percent of the total population, Puerto Ricans for 1.3 percent, Dominicans for 0.9 percent, and Colombians for 0.5 percent.

Figure 211-02(3) shows that Rhode Island has been losing population since 1991. Net migration in 1997 alone was -4,145, with 20,499 people coming into Rhode Island, and 24,644 leaving for other states. However, the gap between in-and out-migration is closing, as the economy continues to expand. ((16))

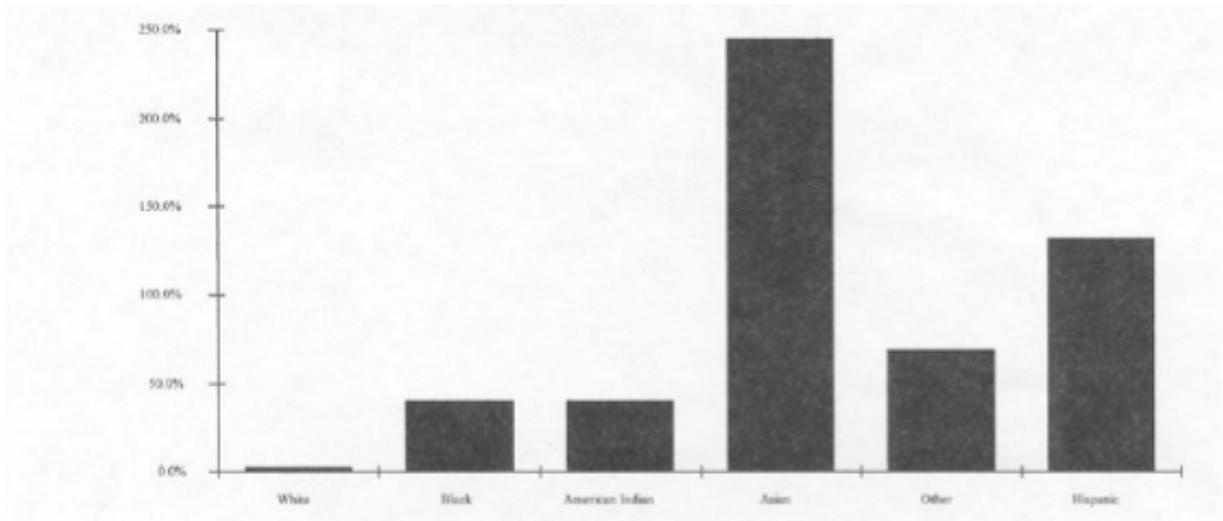
Suburbanization

Rhode Island's industrialization in the 18th, 19th and early 20th century paid little heed to the problems of air and water pollution, sprawl and other aspects of urban ecology. Those conditions exhausted our natural resources. This was exacerbated by population shifts that suburbanized formerly rural areas. There was significant migration from the older central cities particularly from 1960 to 1990, and continuing through 1995 (Figure 211-02(4)). This exodus gave rise to "urban sprawl," a term used to denote land use that results in scattered development that necessitates increased reliance on the automobile.

Some byproducts of sprawl are traffic congestion, squandered resources, and higher taxes to pay for infrastructure improvements. This problem is our environmental legacy, and may be addressed by a focus on sustainable development.

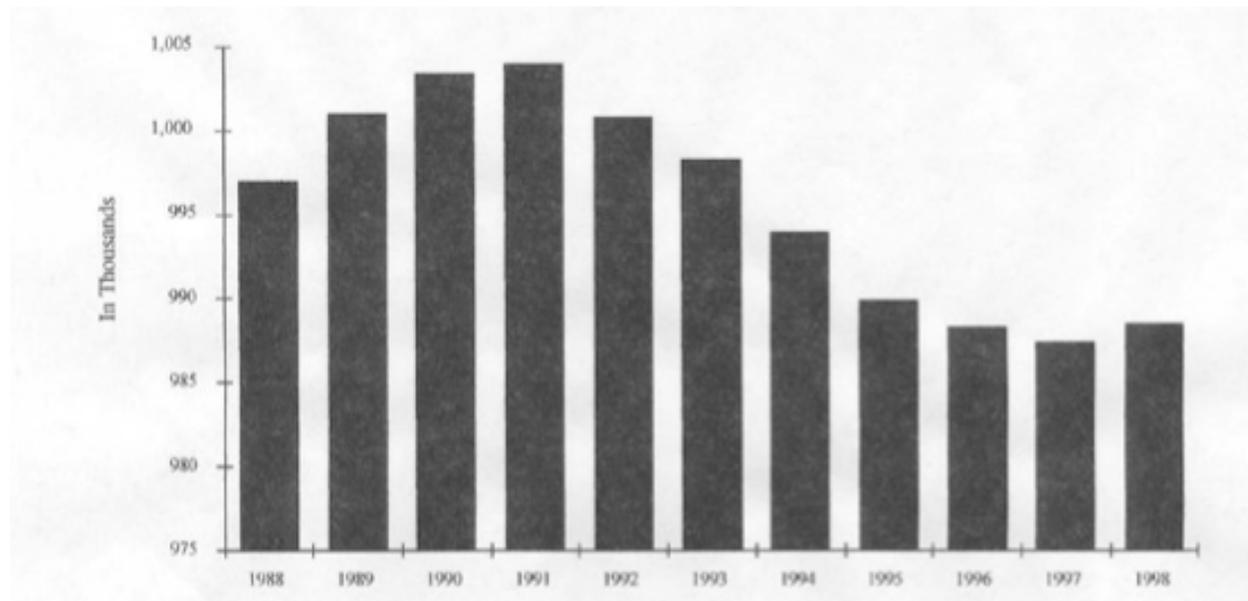
Analysis of Rhode Island's population, its characteristics, and trends reveals a state in a mature stage of development. These changes indicate that the composition and characteristics of the future population will be older and have a greater share of minorities. Such information provides us a basis from which to plan for the future. Moreover, periods of minimal population growth provide an opportunity to develop and refine programs that enable social and economic opportunities to expand in concert with the population.

Figure 211-02(2)
POPULATION PERCENT INCREASE BY RACE 1980-1990



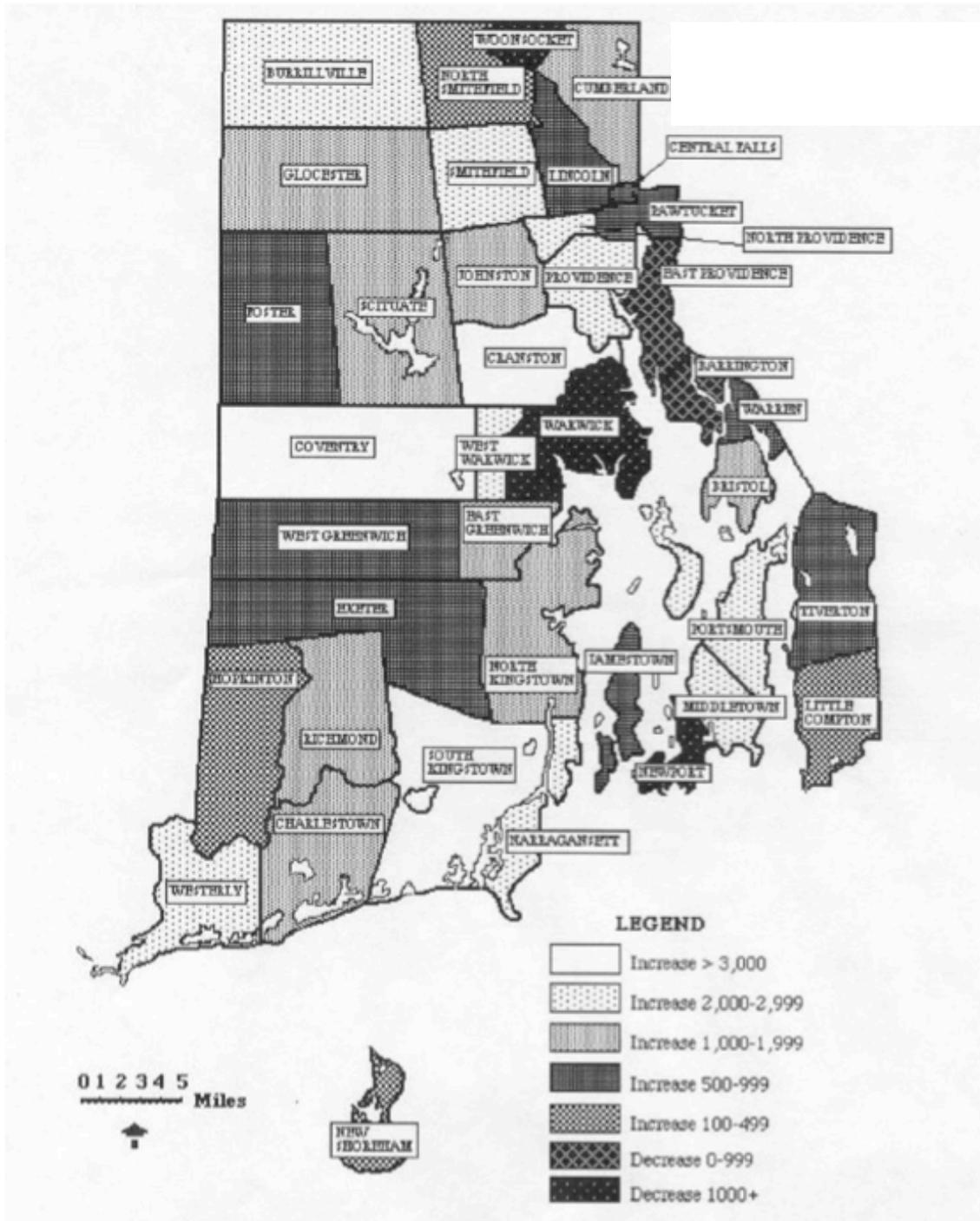
Source: U.S. Bureau of the Census

Figure 211-02(3)
RHODE ISLAND POPULATION 1988-1998



Source: RI Department of Labor and Training

Figure 211-02(4)
 POPULATION CHANGE IN RHODE ISLAND 1980-1995



Source: RI Statewide Planning Program

02-01-02 Labor Force

The Rhode Island labor force was estimated to be 498,000 in 1998, a decrease of 3.1 percent compared to 1990(see Figure 211-02(5)). These figures suggest that the state's labor force is decreasing at a slightly faster rate than the state's population. ((17)) The labor force is composed primarily of men (52 percent), although there has been a slight increase over the five-year period in labor force participation by women. The overall labor force participation rate for men in 1996 was 73.3 percent, and for women 58.9 percent. This is slightly below the national average for that year of 74.9 percent for men and 59.3 percent for women. ((18))

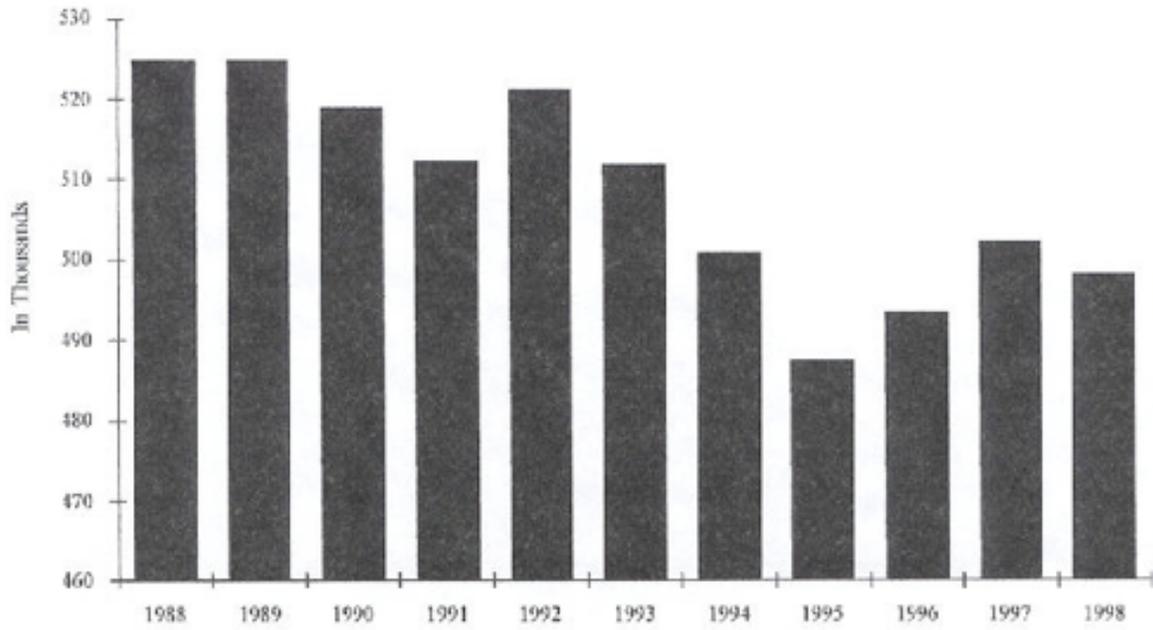
Rhode Island's labor force in the past has been characterized by a lower educational level relative to both New England and the United States. However, more people seem to be completing high school and college than in years previous. The percentage of people 25 years and older who have completed high school stood at 72 percent in 1990. In 1980, this figure was only 61.1 percent, which does indicate a significant improvement. However, it is still lower than the average for the United States (77.6 percent). Those residents completing at least four years of college accounted for 21.3 percent of the 25-years-plus population, which is identical to the national average (Table 211-02-2).

Table 211-02(2)		
EDUCATIONAL ATTAINMENT		
Population 25 Years and Older		
(1990; in percent)		
	<i>Completing High School</i>	<i>Completing at Least 4 years of College</i>
<i>U.S.</i>	77.6	21.3
<i>Rhode Island</i>	72.0	21.3

Source: US Bureau of the Census (1996)

The characteristics of Rhode Island's present and future labor force suggest a slow growth which will permit the development of quality programs aimed at improving skills and workplace environments for existing and incoming workers. For example, these might include increases in child care services to permit the continued growth of labor force participation by women, investments in public education that will equip new workers with the skills necessary in the new economy, retraining programs for those displaced by new technology or other market forces, and basic education programs, such as adult literacy and communication skills, for our immigrant population.

Figure 211-02(5)
RHODE ISLAND RESIDENT LABOR FORCE
1988-1998



Source: RI Department of Labor and Training

02-03 Employment

The occupations of Rhode Island's labor force correlate to both available skill levels and industry mix. The service sector eclipsed the manufacturing sector in 1988, and has led ever since (Figure 211-02(6)), though the proportion of workers in the manufacturing sector is higher than the national average (18.6 percent in Rhode Island, compared to 15.3 percent in the U.S). The manner in which wage and salary employment is apportioned among different industries and government is depicted in Figure 211-02(7). The occupations of Rhode Island's labor force correlate to both available skill levels and industry mix. The predominance of service sector employment becomes more evident when traded industries alone are considered, cutting construction and government from the pie (Figure 211-02(8)).

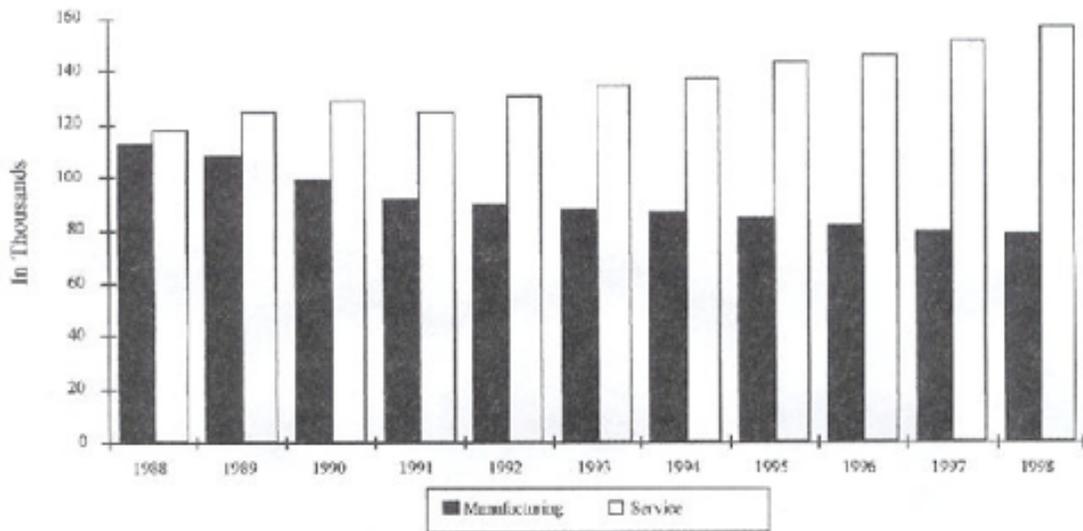
The top ten industrial groups by two-digit SIC classification in 1996 were - in descending order - health services, business services, jewelry/silverware, wholesale trade/durable goods, textiles, engineering, accounting and research, banking, wholesale trade/nondurable goods, fabricated metals, and insurance. The top ten industrial groups by contribution to the Rhode Island economy (in terms of payroll and wage multipliers), shown in Figure 211-02(9), were health services, business services, wholesale trade/durable goods, insurance, jewelry/silverware, engineering, accounting and research, banking, wholesale trade/nondurable goods, textiles, and plastic products. ((19))

Looking to the top private-sector employers in 1996, Lifespan (a hospital management group) led with 14, 500 employees, Brown University, and the Diocese of Providence placed second and third respectively. (Table 211-02(3))

Employer	Employees
Lifespan	14,500
Brown University	6,044
Diocese of Providence	5,406
Care New England	5,245
Southcoast Hospitals Group	4,775
Stop & Shop Co., Inc.	3,905
CVS Stores	3,380
Fleet Financial Group	3,250
Metropolitan Property & Casualty Ins.	3,000
Naval Undersea Warfare Center (NUWC)	2,903
Citizens Financial Group	2,880
Jan Co. (restaurant franchises)	2,800
University of Rhode Island	2,489
Kent County Memorial Hospital	2,200
St. Joseph Health Services of R.I.	1,914
Memorial Hospital of R.I.	1,760
Roger Williams Medical Center	1,500
American Power Conversion	1,500
Raytheon Systems Co.	1,500

Source: *Providence Business News* (1999). Excludes units of government, such as the state of Rhode Island or the city of Providence, which are major employers.

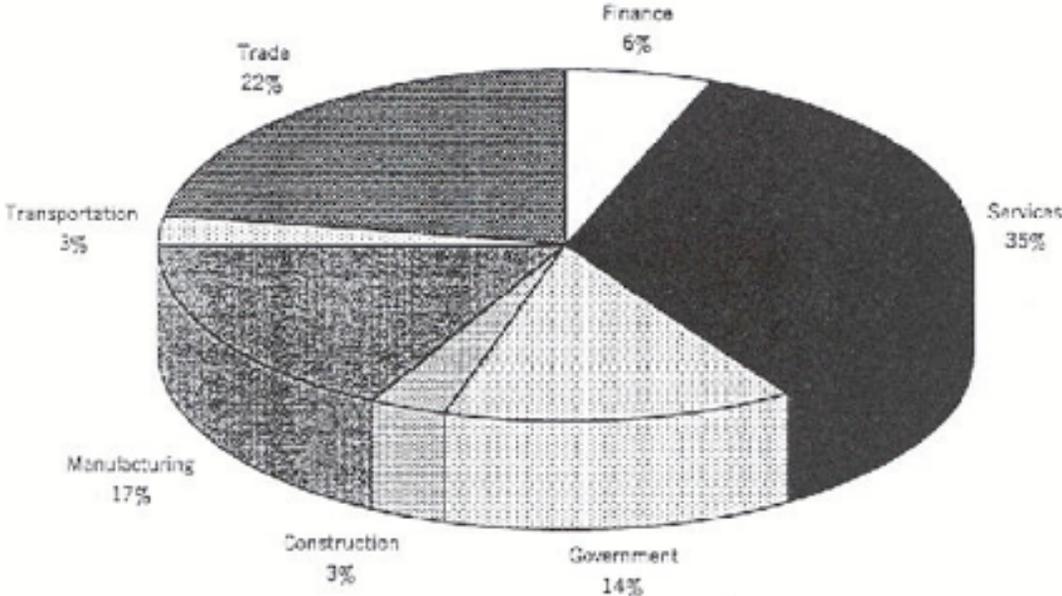
Figure 211-02(6)
RHODE ISLAND
SERVICES* vs. MANUFACTURING EMPLOYMENT



* Services only; does not include other divisions of service-producing sector, i.e., transportation and public utilities, wholesale and retail, or finance, insurance and real estate.

Source: RI Economic Development Corporation

Figure 211-02(7)
RHODE ISLAND
1998 WAGE AND SALARY EMPLOYMENT BY DIVISION



Source: RI Department of Labor and Training

Figure 211-02(8)
RHODE ISLAND
PRIVATE SECTOR EMPLOYMENT: TOP 10 INDUSTRIES, 1998

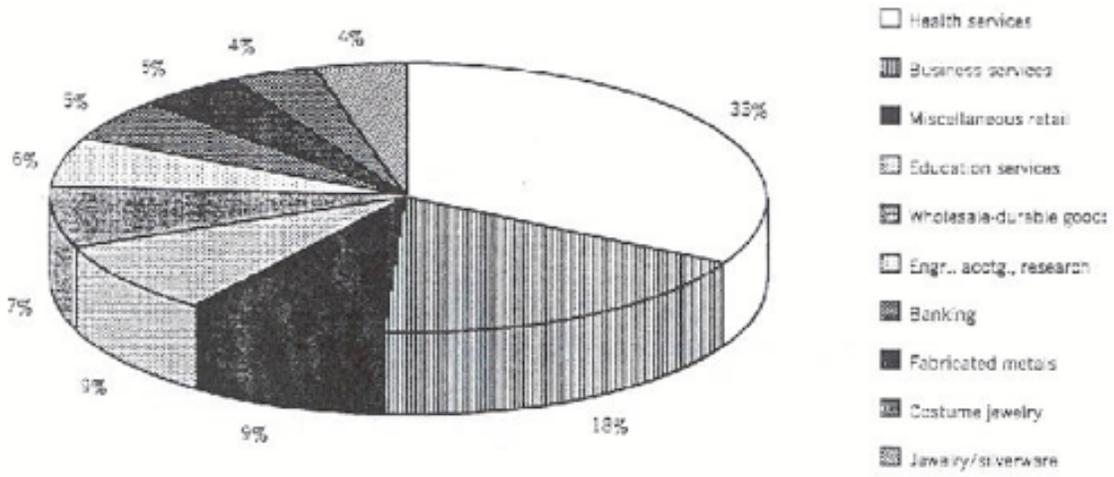
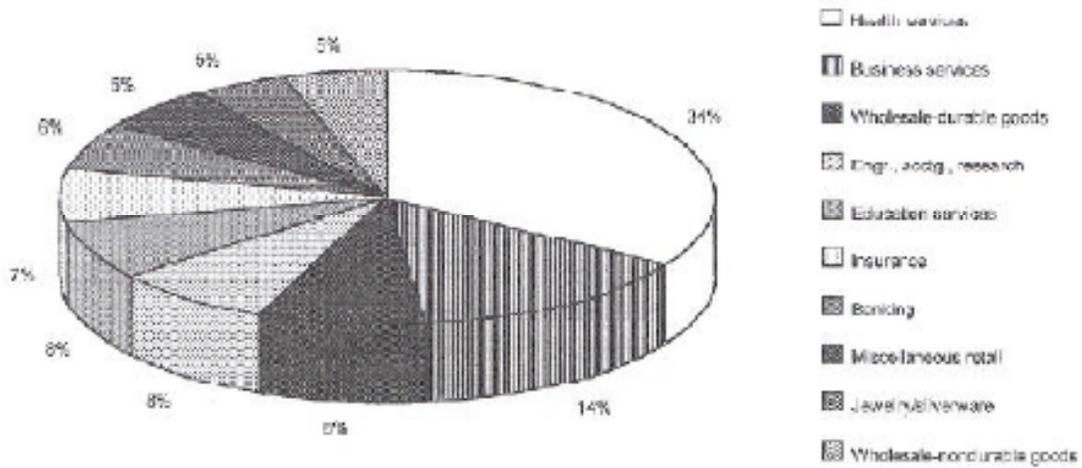


Figure 211-02(9)
CONTRIBUTION TO RI ECONOMY: TOP 10 INDUSTRIES, 1998



Source: RI Department of Labor and Training

While Rhode Island is reducing its dependence on factories as employment generators, another change that is occurring is the location of employment. Between 1985 and 1989, growth in both employment and number of businesses was fastest in rural/suburban Washington County and Kent County. These two areas accounted for 85 percent of total employment growth in the state during that period. However, then as now, Providence County remained the primary employment location, with 65 percent of all jobs and 60 percent of all business establishments (although this proportion appears to be declining). This reflects the dominance of the capital and largest city, Providence.

Certain areas of the state stand out for specialized employment. Newport County, for example, accounts for a high percentage of Rhode Island's employment in engineering and architectural services. The Naval Undersea Warfare Center (NUWC) employs many of them. Bristol County is famous for its boat building industry, the largest in the field being TPI Composites in Warren. The Blackstone Valley, in northern Rhode Island, once famous for textiles, is now known for its electronic components and metal products industries. ((20))

Rhode Island is increasingly seeing its residents commute to out-of-state locations to work. Approximately 4 percent of the state's residents are employed elsewhere. ((21)) Demand for outside labor is especially high in Boston (essentially a one-hour commute from Providence) and in southeastern Connecticut. In the New London, Conn., area for example, huge expansion projects related to two Indian casinos located just across the state border have created thousands of new jobs. Some 2,000 Rhode Islanders are employed there.

Strong growth in the technology-related and financial services industries in both Connecticut and Massachusetts has attracted Rhode Islanders. Income from Rhode Island residents who work out of state is growing at near double-digit rates, compared with only a 2.5 percent gain in wages and salaries of resident workers. One recent analysis characterized the implications for the state's economy of this situation as generally, but not completely, negative because income growth, and thus household demand, would be much slower in Rhode Island if its residents could not find any jobs. Indeed, just a few years ago (1995), when labor markets contiguous to Rhode Island were more relaxed, the state's unemployment rate was 7 percent, and income growth was barely 2 percent. On the negative side, Rhode Island residents working out of state may eventually choose to relocate (Rhode Island loses about 2,000 residents to Massachusetts each year). In addition, Rhode Island loses both tax revenue, and the spending done by workers near their workplace. ((22))

In 1998, employment in Rhode Island establishments rose by only 0.6 percent, placing the state among the nation's slowest growing. The state's unemployment rate has been fluctuating below or slightly above the U.S. rate, effectively masking the impact of a growth rate slower than that of our neighbors.

Rhode Island is thus among the slowest growing states in the nation. Some reasons for this sluggish growth are the state's low-value-added manufacturing industries, relatively high business costs (taxes and fuel costs), and an aging and often unskilled labor force. Manufacturing jobs have been lost to other regions of the country or overseas, or simply to automation and productivity improvements.

The new leading industrial sector, however – services – has been able to provide some high-paying jobs, depending on the industry (e.g., financial services). Some degree of success is attributed to recruitment from the area's colleges and universities. The Northeast-Midwest Institute has commented on this transition, viewing it as a change for the better for the entire New England region. One benefit is the increase in per capita income; another is that the services sector, generally speaking, is less affected by economic cycles or government spending than, for example, nondurable goods manufacturing or the defense industry.

To keep pace with the economic growth, the Economic Policy Council has recommended that the businesses remaining in the state modernize their equipment in order to keep pace with the technological advances in their respective industries, thus remaining competitive, and the labor force upgrade its skills accordingly. Otherwise, anticipated job openings will go unfilled due to a lack of skilled personnel, and the industries (and the jobs they support) will migrate.

02-04 Personal Income

Rhode Island's per capita personal income for 1985 was higher than the national average, but has lagged significantly behind the rest of New England, one of the most expensive areas of the country in which to live. Per capita income in 1997 continued that trend (see Table 211-02(4)). Data from the Bureau of Economic Analysis of the U.S. Department of Commerce show that the gap widened between regional and Rhode Island per capita income from 1985 to 1997.

**Table 211-02(4)
PER CAPITA INCOME 1985-1997**

	Per Capita Personal Income		Rank in US		Average Annual Growth Rate
	1985	1997	1985	1997	
Rhode Island	\$14,395	\$25,760	19	18	6.0%
Connecticut	\$18,513	\$36,263	2	1	7.0%
Massachusetts	\$16,829	\$29,808	5	4	6.0%
Maine	\$12,295	\$22,078	37	37	6.0%
New Hampshire	\$15,827	\$26,772	9	9	5.0%
Vermont	\$12,800	\$22,545	35	31	6.0%
Regional Average	\$15,109	\$27,204	1	1	6.0%
US	\$12,569	\$25,598			8.0%

Source: US Bureau of Economic Analysis

Average annual pay comparisons show that earnings of Rhode Islanders have remained substantially below that of the New England region and the nation. Rhode Island's average hourly earnings of production workers continues to be the *lowest* in New England and one of the lowest in the United States. Figure 211-02(10) shows that the disparity between U.S. and Rhode Island wages has been consistent at least since 1987. Table 211-02-5 compares wages and hours in the six New England states, the region as a whole, and the United States.

Table 211-02(5)
NEW ENGLAND ANNUAL AVERAGE
HOURS AND EARNINGS (1998)

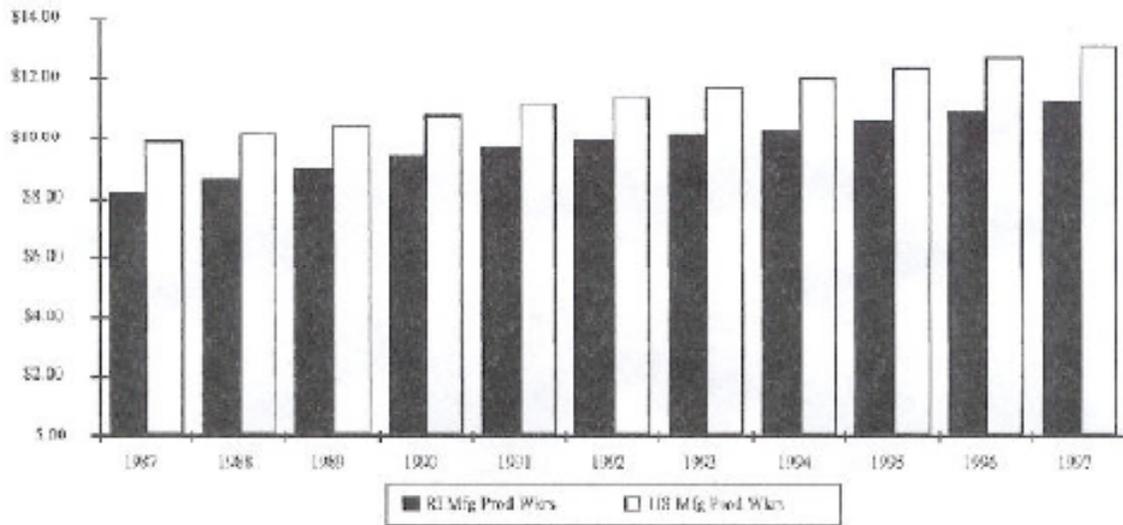
State	Average Hourly Mfg. Wages	Average Hours/Week	Average Weekly Earnings
Connecticut	\$14.83	42.7	\$633.24
Maine	\$13.51	40.6	\$548.50
Massachusetts	\$13.79	42.0	\$579.18
New Hampshire	\$12.78	41.3	\$527.81
Rhode Island	\$11.59	40.6	\$470.55
Vermont	\$13.02	39.6	\$514.80
New England	\$13.74	41.8	\$574.33
United States	\$13.49	41.8	\$563.88

Source: Federal Reserve Bank of Boston (1999)

Having a “mature” manufacturing sector dominated by low-wage industries such as textiles and jewelry, has contributed to depressed production wage trends in Rhode Island. Higher paying manufacturing firms, such as Electric Boat, are either highly cyclical or dependent on outside forces. In the 1980s, Electric Boat – builder of the Trident and Seawolf submarines – was the largest private sector employer in the state, providing thousands of skilled, high-pay white collar and blue collar jobs. Today Electric Boat employs about 1,000 people and does not even appear on a list of the top 20 employers in Rhode Island as depicted in Table 211-02(3).

The state's problems in this area were compounded by the recession of the early 1990s. Income growth in the previous decade, fueled by increases in defense spending and in construction and related employment sectors such as finance, insurance, and real estate, lost momentum as the Cold War ended, the computer hardware and software industries “shook out” and downsized, and the real estate market deflated. The economic engine that was capable of offsetting the decline in the traditional manufacturing sector ran out of steam so remarkably that by 1991, Rhode Island had the distinction of having the lowest income growth rate in the United States.

Figure 211-02(10)
US and RI AVERAGE HOURLY EARNINGS OF PRODUCTION WORKERS
1987-1997



Source: RI Department of Labor and Training

In 1990, 9.6 percent of families in Rhode Island were living below the poverty level. That figure was in the double digits in six communities: Central Falls, 22.3 percent; Narragansett, 13.0 percent; Newport, 12.5 percent; Pawtucket, 10.6 percent; Providence, 23.0 percent; and Woonsocket, 13.9 percent (Statewide Planning, 1992). The poverty rate worsened with the worsening state economy, reaching 12.4 percent in 1992. Recently released Census data show that in 1993, the percent of children living in poverty was 18.3 percent – the highest rate in New England. ((24))

Poverty falls disproportionately in Rhode Island, as elsewhere in the country, on women and minorities. In 1989, a year of peak economic performance for Rhode Island, the poverty rate among Rhode Island women was 11.4 percent, compared to 7.6 percent for men. However minorities have a larger percentage of people in poverty, with 25.8 percent for blacks, 27.5 percent for Asians, and 30.9 percent for “other races” compared to 8.0 percent for whites. The median per capita income for blacks in Rhode Island was 58.0 percent that of whites; for Asians the corresponding figure was 60 percent, and for “other races,” 46 percent. (25))

02-04-01 Transfer Payments and Personal Income

In 1993, the Rhode Island economy generated in excess of \$20 billion in personal income. Sixty-three percent of this was derived from earnings (i.e., wages, salaries, pensions, proprietors’ income and other labor income); 21.3 percent came from dividends and interest, and 15.6 percent from transfer payments. ((26)) This followed a pattern of *decreasing* contributions to total personal income from earnings, and *increasing* contributions from transfer payments, that is expected to continue well into the next century (Table 211-02(6)).

Table 211-02(6)
RHODE ISLAND TOTAL PERSONAL INCOME BY SOURCE

Source	Actual				Projected	
	1978	1983	1993	2000	2005	2010
Earnings	69.1%	63.9%	63.1	64%	63.8%	63.2%
Transfer	17.3%	18.5%	21.3	19.9%	19.8%	20.2%
Dividends, interest, rent	16.8%	17.6%	15.6%	16.1	16.4%	16.6%
	100%	100%	100%	100%	100%	100%

Source: US Bureau of Economic Analysis (1995)

Dr. Robert Atkinson, formerly Executive Director of the R.I. Economic Policy Council, observed recently that Rhode Island’s current per capita income level (102 percent the national level) is a consequence of higher than average transfer payments: “Historically,” he wrote, “Rhode Island earnings per capita have been around 50 to 100 percent of the U.S. figure, while transfer payments per capita have been 120 percent or more of the U.S. figure.” ((27)) In 1995, the key components of the state’s transfer payments were:

- Retirement and disability (e.g., Social Security, military and government worker retirement, worker's compensation), 46 percent;
- Medical payments (e.g., Medicare, Medicaid), 35 percent;
- Income maintenance (e.g., SSI, AFDC, food stamps), 8 percent;
- Unemployment insurance, 4 percent; and
- Veterans' benefits, federal training benefits, business bad debts, auto liability payments, and other sources, 6 percent.

The major reason for the increase in transfer payments in Rhode Island is a large jump in government medical payments, from 4.6 percent of *all* income in 1989 to 7.2 percent today. In addition, Rhode Island's share of income from Social Security is 15 percent higher than the national average. Both are a function of the larger proportion of older people in Rhode Island than in most other states. ((28))

Rhode Island has seen some modest increases in personal income in recent years but its growth is lagging behind that of Massachusetts, Connecticut and New Hampshire. The ongoing loss of jobs in manufacturing has resulted in the filling of some of the available jobs by temporary workers who earn less than the already low average hourly manufacturing wage. (These workers, when employed by "temp" employment services, are actually counted among "business service" providers rather than as manufacturing employees.) Although total personal income increased by 5.4 percent between 1996-97, Rhode Island's total personal income ranked 42nd in the nation during that period. The per capita income rose 5.5 percent, from 1996. The per capita personal income of \$25,689 in 1997 ranked 16th in the nation. ((29))

02-05 Production of Goods and Services

The major divisions in employment in Rhode Island are represented in Figure 211-02(7). In 1998, 94,400 were employed in Rhode Island's goods-producing sector, and 363,600 in the service-producing sector. ((30)). The accuracy of these numbers may be affected by how temporary employees in manufacturing are classified, but Rhode Island's economy is as predominantly service-based as the numbers suggest.

The goods-producing sector yielded \$3.8 billion in earnings in 1999, accounting for 16.5 percent of the state's total personal income. This sector is represented by three broad divisions: agriculture and fisheries, construction and mining, and manufacturing. In the first division, agricultural services, forestry, fisheries and farms produced less than 1 percent of Rhode Island's total personal income in 1996. The second, combined division, construction and mining, contributed 3.1 percent of the total personal income (entirely construction). The third, manufacturing, contributed 10.9 percent of the total, and over 19 percent of the portion of personal income derived from earnings.

The service-producing sector is composed of four broad divisions: transportation, communication, and utilities, wholesale and retail trade, finance, insurance, and real estate (FIRE), and services. Earnings from the service-producing sector topped \$11.4 billion in 1997. This accounted for 47.8 percent of Rhode Island's total personal income. The transportation division contributed 3.3 percent of Rhode Island's total personal income in 1997; wholesale and retail trade accounted for 9.1 percent of the total personal income, FIRE 4.7 percent, and services 20.3 percent.

Employment in the transportation division and the trade division each grew by 2.6 percent from 1988 to 1998. The FIRE division grew by 4.8 percent, and services, by more than 32 percent. ((31))

02-05-01 Goods-Producing Industries

From 1988 to 1998, manufacturing employment in Rhode Island declined by 29.8 percent, to 78,900 in 1998. This compares to a decline of only 4 percent nationwide. On the other hand, personal income derived from manufacturing increased 19 percent from 1987 to 1997. ((32))

The state's early start in industrial development has resulted in an aging industrial base employing primarily unskilled and semi-skilled labor. Manufacturing jobs have been lost to other regions of the country or overseas, or simply to automation and productivity improvements.

Rhode Island manufacturing is characterized primarily by smaller businesses (i.e., less than 100 employees). Also, a higher percentage of these businesses are in the "industries of yesterday," rather than the "industries of tomorrow." Relative to its size, the Rhode Island economy has between 25 and 40 percent fewer growth-oriented, so-called New Economy industries (e.g., electronics, software, and biomedical products) than the national average. These factors have contributed to lower investment in research and development, and in plant and equipment per worker, than in other parts of the country. ((33))

Rhode Island has been called the "Jewelry Capital of the World." Precious metal jewelry, fashion jewelry, crystal boutique and novelty items, recognition insignia such as key chains and pens, awards, and military insignia are manufactured and assembled in Rhode Island and exported worldwide by hundreds of manufacturers. Although jewelry and silverware manufacturing accounts for slightly fewer than 15,000 jobs, more than 35,000 Rhode Islanders are employed in total when manufacturing, distribution, and related services are combined. ((34))



American Tourister, Warren, RI (background); Striper Marina, Barrington, RI (foreground)

Other products important to the Rhode Island economy include textiles, such as lace, narrow fabrics, thread, yarn, screen printing, and fashion dyed cloth; fabricated metal products, which become parts of other products produced all over the world; transportation equipment, recreational boats in particular; instruments and related products, including meteorology equipment, navigation equipment, and medical equipment and supplies; electronic and other electrical equipment, including circuit boards, uninterruptible computer power supplies, and wire and cable assemblies; printed and published products, such as advertising brochures and magazines; rubber and miscellaneous plastic products; industrial machinery and equipment, such as machined parts, tools, dies, and molds; wire and wiring products; chemicals, drugs, and biomedical products; food and kindred products, including Rhode Island's famous coffee syrup; paper and allied products; furniture and fixtures; leather and leather products; boat sails; stone, clay, and glass products; toys; and lumber and wood products, specifically wooden pallets, cabinets, and millwork.

Some of these industry groups would seem to lend themselves naturally to the formation of clusters that could work collaboratively to develop and promote their products. The R.I. Economic Policy Council has already investigated the feasibility of clustering in jewelry, precision metalworking, boatbuilding and related marine industries, seafood products, electronics and instruments, and biomedical industries. ((35)) This included extensive consultation with cluster "working groups" composed of industry leaders, following a model that has produced excellent results in Europe. In this endeavor the Policy Council has worked closely with the Statewide Planning Program and the Rhode Island Economic Development Corporation.

02-05-02 Services

Following national trends, service industry jobs now constitute the largest segment of the state's total employment. Health services, business services, education services, and engineering and management services, taken together, are the largest component of the service economy. Engineering and management services are particularly important to the success of the Naval Undersea Warfare Center (NUWC) in Newport.

Health services now constitute the major employment group in Rhode Island, and are expected to continue to dominate the economy into the next century, following the state's demographics – a higher proportion of persons over 65 than in 47 other states. There are presently 14 general hospitals and two voluntary psychiatric hospitals in Rhode Island. All acute care general hospitals are eligible providers under the Medicare programs. In addition, the state is home to 110 nursing and personal care facilities. ((36))

02-06 Defense Employment and the Rhode Island Economy

In the years following World War II, significant expansion of the U.S. Navy in Newport and at the "Seabee" base at Quonset Point/Davisville helped the Rhode Island economy weather a postwar decline in textiles and other traditional Rhode Island industries. Defense-related economic activity has continued to be quite significant in the state, involving both the private sector and government, and the goods-producing and service industries. Much of this activity revolves around two employers: Electric Boat, a division of General Dynamics responsible for the manufacture of submarines, and NUWC.



Raytheon Electronic Systems, Portsmouth, Rhode Island

In the last two decades, the character of defense employment in Rhode Island has undergone substantial change. In 1972, nearly 45,000 Rhode Islanders worked in a defense-related field – more than 11 percent of the state’s workforce. That year, the U.S. Navy announced it was cutting back operations in Rhode Island, closing the Quonset Point Naval Air Station and relocating the North Atlantic destroyer squadron. Defense employment subsequently dropped to about 10,000. It began growing steadily after the mid-1970s, however, reaching almost 27,000 jobs by 1987, due to the defense buildup during the Reagan Administration. By 1995, it had shrunken again, and had returned to mid-1970s levels (Fig. 211-02(11)).

What was different about defense employment in the mid-1980s was that its growth was concentrated in the private sector rather than in the Defense Department (Figure 211-02(12)). It was also organized into two distinct yet integrated economies. The first focused on shipbuilding and metalworking in Rhode Island’s West Bay region and nearby Connecticut, while the second served the Navy’s research and development needs on Aquidneck Island. Prime contractors included Electric Boat, which became the state’s largest employer, and Raytheon’s Submarine Signal Division. Much of Washington County’s labor force became tied to Electric Boat’s facilities at Quonset Point and in Groton, Conn., while Aquidneck Island’s economy revolved around support services for Raytheon and NUWC. An unrelated but significant group of firms developed in the northern and central parts of the state as well, providing a variety of products and services to the military.

In 1991, upward of one-third of the state’s labor force derived some portion of their wages from defense-related work. The typical employer was a private, for-profit venture, established after 1953, operating out of a single facility with sales primarily in Rhode Island, with about 50 full-time employees, primarily in the professional, operator, and precision production occupations. Private industry defense-related employment topped 12,000 then; that figure is approximately 7,000 today. ((37)) Between 1990 and 1994, Defense Department prime contracts fell 24 percent in Rhode Island, compared to 9 percent nationally; more than half (52 percent) of the state’s defense industry employment was lost from 1988 to 1994, accounting for one third of all jobs lost in Rhode Island during that period. ((38))

Rhode Island has attempted to tackle the problem of “defense conversion.” In 1990, the Office of Strategic Planning in the former R.I. Division of Planning began investigating the current and projected job losses associated with converting to a post-Cold War economy. This resulted in an in-depth *Rhode Island Defense Economic Adjustment Study*. This report, a cooperative effort of the public and private sectors and the University of Rhode Island, helped identify the nature and scope of the state’s dependency on defense-related employment, as well as the options for responding to the problem. Also assessed was the feasibility of experimental diversification programs and the identification of target industries.

Figure 211-02(11)
TOTAL DEFENSE-RELATED EMPLOYMENT
1970-1995

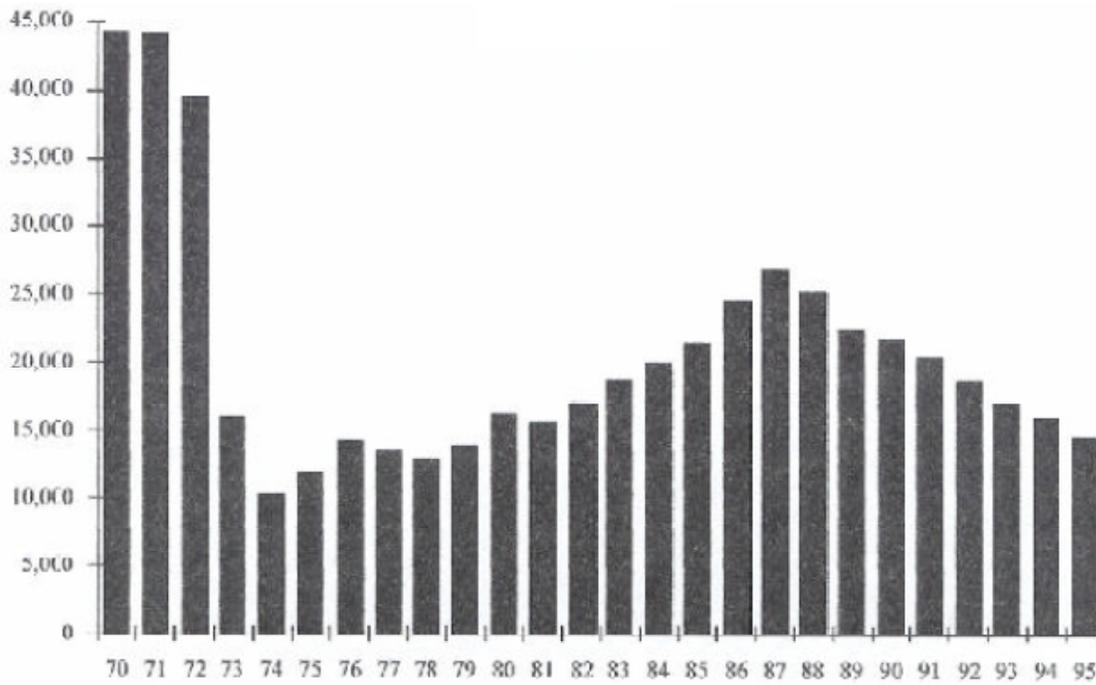
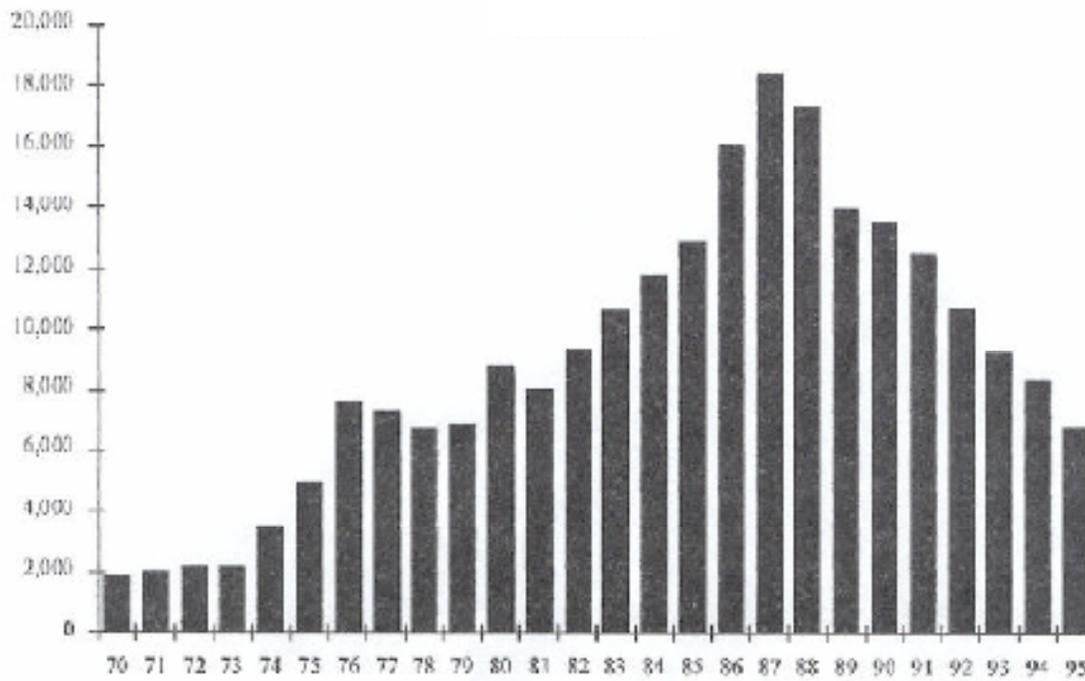


Figure 211-02(12)
PRIVATE INDUSTRY DEFENSE-RELATED EMPLOYMENT
1970-1995



Source: RI Economic Development Corporation

The solution to “defense conversion” remains sadly elusive. First, the loss of military contracts has been disastrous to some small firms that had relied 50 percent or more on them for meeting payroll, buying tools and equipment, and simply surviving in a highly competitive business environment. The manufacture of certain products for the military may not readily lend itself to the manufacture of a similar product for the commercial market. Years of what can only be termed *dependence* on military contracts has effectively brought some firms out of the commercial market entirely, making them captive suppliers to the Defense Department. They have found themselves without the capital to re-market themselves, let alone the capital to retool and retrain their workers.

Technology transfer from the defense to commercial applications is not occurring readily. For example, while the Naval Undersea Warfare Center has over 700 active patents, only one has been licensed commercially. While NUWC has signed over 22 cooperative research and development agreements with industry, almost all have been with companies outside Rhode Island, and most of NUWC’s work with industry has been with defense contractors. ((39))

02-07 Job Loss and Gain

The recession of the early 1990s hit New England the hardest, with the region losing a greater proportion of jobs than any other region in the country. ((40)) Where other states in New England and elsewhere appear to be recovering, Rhode Island is lagging. This is particularly evident in the manufacturing sector, where losses nationwide in mid-size and larger firms have been offset by gains in employment in smaller ones. Rhode Island was one of only three states (Delaware and Hawaii being the others) that lost jobs even in small manufacturers from 1990 to 1994.

These losses become all the more sobering when the numbers are put to them. In 1978, Rhode Island reached its peak in manufacturing employment, with 136,200 jobs. Then came a recession, after which an interim peak has hit in 1984 – 124,200 jobs in manufacturing. In the period 1984-1995, however, even during the supposed “boom times,” manufacturing fell every year but one – an average loss of 3,500 jobs in this sector alone each year. By 1995, there were only 86,100 wage and salary jobs in manufacturing. This figure was 37 percent below the 1978 peak, and 31 percent below the 1984 peak, accounting for losses that have been termed “enormous” and comparable only to the flight of the textile industry in the mid-1950s. ((41))

These trends in manufacturing are expected to continue. Recent upticks in employment have been due to an expanding services sector, particularly health services and business services. The growth in services has even been called “explosive,” adding between 2,000 to 8,000 jobs each year since 1969. Total service jobs increased from 74,700 in 1969 to a record 363,000 in 1998 – a jump of 288,300 jobs. ((42))

Atkinson concluded in his recent review of the Rhode Island economy that “the patterns of growth in the services division appear to reflect a range of recent social and economic dynamics.” Most of these “dynamics” are symptomatic of a declining economy, including:

- Economic stagnation, with no employment growth in many sectors and subsectors;
- Economic restructuring, with growth in personnel supply agencies, job training, and engineering and management proprietorships;
- Changes in demographics (increase in nursing homes, residential care, home health care and child care); and
- Social dysfunction (growth in outpatient services, and individual and family services). ((43))

Overall expansion aside, downsizing has also reached the service sector. Figure 211-02(13) shows that workers in transportation, wholesale and retail trade, FIRE and other services accounted for nearly half (49 percent) of workers on unemployment insurance (UI) benefits in 1995. Among the most affected occupations were professional, technical, and managerial positions (21 percent of the insured unemployed), clerical and sales (24 percent), and other service positions (11 percent); these were all significant increases from 1991. ((44))

These figures do not represent workers in these occupations who have exhausted their unemployment benefits or did not qualify in the first place. In April, 1997, the R.I. Department of Labor and Training estimated that the insured unemployed represented 71 percent of the 23,600 individuals classified as the “total unemployed.” The year previous, 89 percent of the total unemployed collected benefits.

The sex and age of workers on UI has shifted slightly since 1991, when 43 percent of the insured unemployed were males under 45 years of age. In 1995, the figure for this group had decreased to 37 percent (Figure 211-02(14)). Females under 45 accounted for 28 percent of the insured unemployed in 1995, up from less than 25 percent in 1991. ((45))

A comparison of Rhode Island unemployment rates with those of the U.S. and New England is given in Figure 211-02(15). While unemployment in Rhode Island has dipped below the national rate for the first time in many years, it still is higher than the New England average.

The recent loss of high paying jobs in the manufacturing and defense sectors has resulted in lower per capita incomes for Rhode Islanders. According to the Economic Council, per capita income declined in the state from 7 percent above the national average in 1988 to 2.3 percent above in 1997. Compared to the national average, each Rhode Island worker has \$3,000 less per year to spend. Job growth has been in service sector jobs that are lower paying than the manufacturing jobs being lost, and in self-employment and part-time work. ((45))

Figure 211-02(13)
RHODE ISLAND
INSURED UNEMPLOYED BY INDUSTRY ATTACHMENT 1998

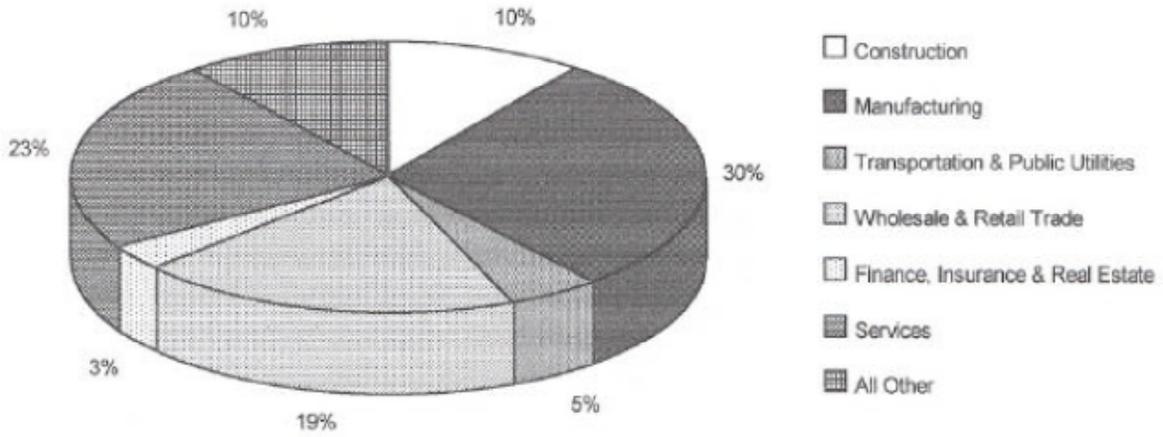
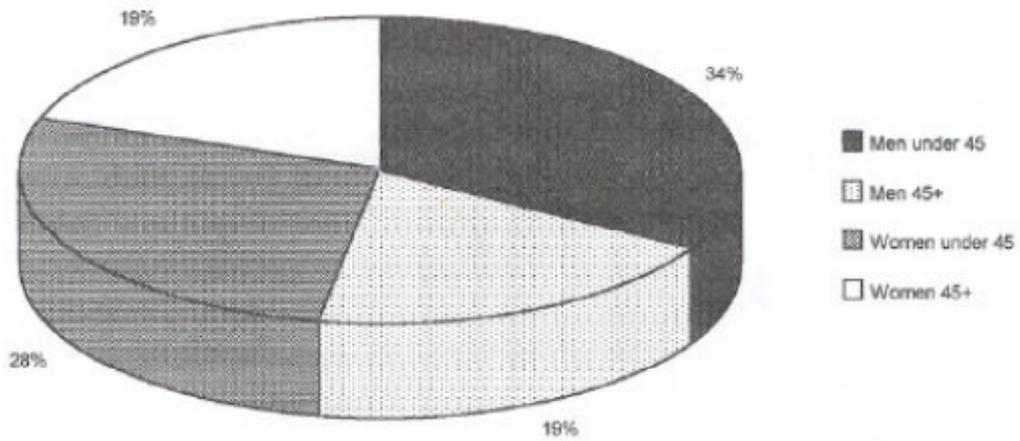
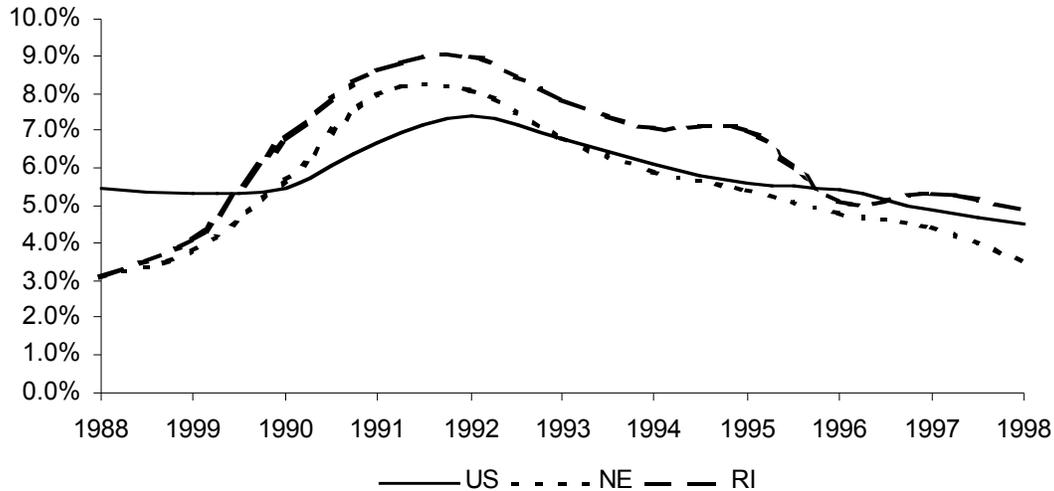


Figure 211-02(14)
RHODE ISLAND
INSURED UNEMPLOYED BY SEX AND AGE 1998



Source: RI Department of Labor and Training

Figure 211-02 (15)
COMPARISON OF US, NE, RI UNEMPLOYMENT
RATES
1988-1998



Source: Rhode Island Department of Labor and Training

There does, however, appear to be a change in some types of service jobs entering the state. A report by the Northeast-Midwest Institute released in the summer of 1999 claims that Rhode Island has “successfully” transitioned into a service sector economy, offering “highly paid, highly skilled jobs.” While this may be true in the growing financial services sector, comparisons of the growth of service employment to the decline in per capita income suggest this is not the case overall.

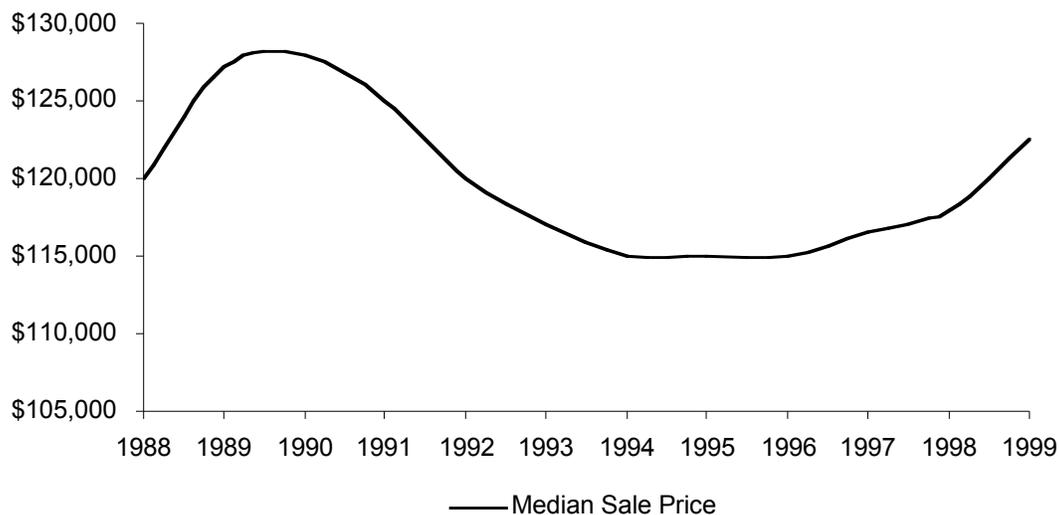
02-08 Housing Prices

Cost of Living, and Taxes

When the recession of the early 1980’s ended in 1983, housing prices in Rhode Island were driven up by high demand and little new construction to meet it. In the early 1990’s housing prices declined due to a nationwide recession, the state’s banking crisis, and decreasing population. What attracts people to Rhode Island, in addition to its fine quality of life, are its relatively low housing costs. It is estimated that Boston’s housing prices are 64 percent higher than Rhode Island’s.

After seven years of fluctuating housing prices, from a low median of \$88,000 in 1986 to a high of \$128,000 in 1989, prices have been stable since 1994. (See Figure 211-02(16).) Realtors attribute this leveling of prices to people’s increasing confidence in the state’s economy, lower interest rates and more people working. ((46))

Figure 211-02 (16)
MEDIAN SALE PRICE OF SINGLE FAMILY
HOMES
IN RHODE ISLAND
1988-1998



Source: Providence Business News

Fluctuations in oil prices, increasing taxes on gasoline and personal property, and high costs for electricity have been major contributors to the region’s overall high cost of living. With high demand for electricity, extremes in temperature, and no indigenous supplies of fossil fuels, New Englanders have had to pay high energy costs. It is hoped that the restructuring of the electric industry will lead to cost savings through increased competition that will ultimately be passed along to the consumer. Rhode Island is the first state to have implemented legislation allowing for restructuring of its electric industry.

According to the *Tax and Spending Data Book* published by R.I. Public Expenditure Council (RIPEC) in 1999, Rhode Island’s state and local tax burden fell from 14th to 20th in the nation from 1995 to 1996. The state’s property taxes, however, remained among the highest in the nation. Property tax collections relative to personal income were the fifth highest in the country. Tax relief in the form of a phased reduction in the automobile property tax to zero by the year 2005 was enacted in 1998. This followed phased reduction in the “piggy-back” income tax from 27 percent to a proposed 25 percent of federal tax liability.

The tax burden in Rhode Island is par with the rest of New England (see Table 211-02(7)). The state’s sales tax at 7 percent, is the highest in the region and the gasoline is second highest at 28 cents per gallon behind Connecticut’s 32 cents. However, New Hampshire, Vermont, and Maine recorded higher property tax collections, per \$1000 of personal income, than Rhode Island.

Table 211-02(7)
STATE AND LOCAL PROPERTY TAX COLLECTIONS PER \$1,000 OF PERSONAL
INCOME FISCAL YEAR 1996 SELECTED STATES

State	Amount	Rank
United States	\$34.35	
New Hampshire	60.10	1
Vermont	54.80	2
Maine	54.18	3
New Jersey	54.04	4
Rhode Island	48.75	5
Montana	48.33	6
Alaska	46.95	8
New York	46.34	9
Nebraska	44.90	10
Connecticut	44.76	11
Massachusetts	38.05	17

Source: RIPEC, *How Rhode Island Compares* (1999)

02-09 Land Use and Zoning

Rhode Island, the state having the smallest land area, measures 1,050 square miles. The state's greatest length, is 48 miles; its greatest width, 37 miles. Rhode Island's size is often cited as a factor contributing to its economic malaise. In the nation's smallest state, land suitable for developing industrial facilities is scarce. Industry requires good transportation access, the availability of utilities, and limited physiographic constraints. Some of this type of land has been converted to uses other than industrial.

From 1977 to 1997, the total number of industrial-zoned sites increased from 283 to 341, or 20 percent. However, total industrial acreage decreased from 35,403 to 32,455 acres, a loss of about 7 percent. Although industrial acreage has decreased, in general it has not been lost to other uses, residential or commercial. Once vacant industrial zoned land has mostly been absorbed into industrial use, and some acreage presumably has been rezoned. The amount of acreage that is actually in industrial use increased from 19 to 34 percent. It appears that industrial-zoned land is decreasing in quantity but improving in quality.

As of 1999, 32,455 acres were zoned industrial. The inventory of industrial-zoned land shows that 11,116 acres were in industrial use, the remainder being vacant (undeveloped) or in other uses. The state *Industrial Land Use Plan* estimates that 13,067 acres of industrial land will be needed in the year 2020. The plan also indicates that 15,224 industrial acres in the state were vacant, but only 1845 acres have public water, public sewers, and no physiographic constraints. These vacant acres include relatively small, scattered parcels with poor access to interstate highways and some are in the middle of residential neighborhoods. Many sites lack basic infrastructure. These conditions are indicated in the breakdown of vacant industrial sites given in Table 211-02(8).

The *Industrial Land Use Plan* derived estimates of the amount of industrial acreage required in the year 2020 for six categories of Rhode Island industries, based on the number of individuals employed and the employment densities (the number of employees per acre) expected in each category. The number of employees multiplied by the relevant employment density yielded the required industrial acreage. In this way, the *Industrial Land Use Plan* concluded that a total of 13,067 acres of industrial land would be required in 2020. ((47))

02-09-01 Agricultural Land

A century ago farming accounted for more than three-quarters of Rhode Island's land use. Today farmland totals approximately 11 percent of the state's total land area. According to the U.S. Department of Agriculture, Rhode Island had 700 farms totaling 63,000 acres in 1997, which is approximately a 14 percent decrease in acreage from 1987. As Table 211-02(8) illustrates, the number of farms and acreage have remained the same since 1991.

Table 211-02(8)
RI FARMS: NUMBER, SIZE AND LAND IN FARMS 1987-1996

Year	Farms	Average Acres	Acres (Thousand)	Value Added & Net Farm Income (Million)
1987	770	95	500	62.5
1988	770	95	490	64.5
1989	770	95	460	59.2
1990	740	95	440	56.0
1991	700	94	440	57.0
1992	700	90	440	62.1
1993	700	90	440	65.9
1994	700	90	440	68.6
1995	700	90	440	69.7
1996	700	90	430	72.1
Percent change 1987-1996	-9.1	-5.3	-14.0	15.2

Source: US Department of Agriculture, *New England Agricultural Statistics*

Table 211-02(8) also shows that despite the decline in farms and farmland, the value added to the state's economy by the agricultural sector has increased by 15.2% between 1987 and 1996. Much formerly prime farmland has become shopping centers or housing subdivisions. However, since abandonment of farmland in Rhode Island has been more prevalent than its conversion to other uses, some of the land lost over the last 140 years could be brought back into agricultural production.

02-10 Natural Resources

02-10-01 Sustainable Development

Rhode Island's industrialization in the 18th, 19th and early 20th century paid little heed to the problems of air and water pollution, sprawl and other aspects of urban ecology. Those conditions exhausted our natural resources. The problem – our environmental legacy – is being addressed by a focus on sustainable development. Sustainable development is a process whose goal is to mitigate or eliminate the environmental problems facing society while simultaneously creating economic opportunities; it is a process to enhance the quality of life and save the environment. It recognizes that economic development and environmental quality are not mutually exclusive.

In order to begin the process of sustainability, several indicators need to be identified that help evaluate a community's economic, environmental, and social sustainability, among which are distribution of jobs and income, percentage of wages earned and spent within a community, and percentage of development occurring annually within an urban area. ((48)) Over the course of several years, Rhode Island urban policy has used similar indicators to determine the feasibility of programs such as enterprise zones and brownfields development, and where these programs might best be targeted.

There are now ten enterprise zones in Rhode Island, concentrated in the older commercial and industrial areas of the state: downtown Providence; the Port of Providence; Central Falls/Valley Falls; the Moshassuck Valley (Lincoln and Pawtucket); Woonsocket/Cumberland; West Warwick; Mount Hope (Bristol and Warren); East Providence; Portsmouth/Tiverton, and Arlington (Cranston).

The enterprise zone program is designed to provide an aggressive and comprehensive tax incentive package to businesses willing to relocate or expand in an enterprise zone. The increased economic activity from such relocation or expansion is expected to revitalize the old manufacturing centers. To qualify for the incentives, a company must increase its workforce by 5 percent per year and increase its total Rhode Island wages from the previous year. The program also offers financing, job training, and permit expediting on the state and local level.

Regarding brownfields, the state has established two related programs for Industrial Property Remediation and Reuse (coordinated by the R.I. Department of Environmental Management) and Mill Building Revitalization (coordinated by the R.I. Economic Development Corporation and local officials). The first is intended to address environmental liabilities on contaminated properties and speed their cleanup, facilitating reuse. The second provides tax credits for renovating vacant industrial buildings and operating businesses within them. These programs are intended to promote the expansion of industrial development in urban areas by encouraging industry to work with existing local and regional resources.

The Rhode Island Comprehensive Economic Development Strategy (CEDS) program, undertaken in conjunction with the U.S. Economic Development Administration (EDA), is one vehicle the state uses to promote sustainable development. Communities, academic institutions, government agencies, and private non-profit development corporations are invited to submit projects for EDA funding that addresses economic development objectives. Proposals that can revitalize brownfields, deteriorating downtown areas, or other underutilized portions of the “built environment” receive high scores in the screening process that selects a “priority project” list. Extra points are also received for locating a project in an enterprise zone.

Renewable Energy Resources

To ensure that future generations are not left a legacy of vanished or depleted resources, *The Rhode Island Energy Plan* (Element 781 of the State Guide Plan) recommends the development of permanently sustainable energy resources that are environmentally benign and economically feasible. Even from a purely economic standpoint, this policy is key. Failure to exploit even modest opportunities for indigenous and renewable sources of energy that fit these criteria increases reliance on costly alternatives that could be avoided, postponed, or replaced – such as the construction of a new power plant, or continued dependence on fossil fuels produced outside the region that are subject to pricing policies beyond our control. ((62))

Renewable energy resources may include active and passive solar systems, wind energy, hydropower, and wood energy. They are not without their own engineering and environmental costs, but do have the advantage of being indigenous and renewable. Some systems can pay for themselves to the extent that, over the years, they replace the non-renewable fossil fuels used for the same purpose (heat, light, or power generation).

A complete substitution of fossil fuels by renewable resources is unlikely in the foreseeable future. However, fossil fuels will continue to play a role in the production of acid rain and ozone, with impacts on air quality and quality of life in Rhode Island. These are environmental costs that the state has an interest in avoiding.

Wider use of renewable energy can improve the business climate. It can help satisfy environmental objectives while addressing what has always been a disincentive to business location in New England – high energy costs owing to our position, literally, at the end of the pipeline. The phase-in of renewables can be complemented by a re-dedication to energy conservation, in recognition and appreciation of the fact that energy is too valuable a resource to waste or squander.

02-10-02 Narragansett Bay

Narragansett Bay is the state's most valuable natural resource, providing food, passage for ships and barges, recreational activities, and thousands of jobs. The Bay is the source of excellent shellfish, and many Rhode Islanders supplement their incomes by shellfishing. In 1989, Bay shellfishing revenues exceeded \$70 million. The R.I. Department of Environmental Management has undertaken shellfish "transplant" operations, where clams from polluted parts of the Bay are transported to cleaner waters to depurate and thus increase the harvestable shellfish population.



Narragansett Bay, Bristol Harbor, Bristol, Rhode Island

The U.S. Army Corps of Engineers is preparing an environmental impact statement for maintenance dredging in the Upper Bay, facilitating tanker and freighter traffic into Providence. Dredging in the Quonset Point/Davisville area has also been discussed.

No one can discount the Bay's impact on the Rhode Island tourism industry. Bay activities generate approximately \$1.4 billion annually in travel, tourism, and recreation-related sales. The Bay is home to manufacturers of top-shelf pleasure boats, yachts, sails, and other boating equipment, who together contributed more than \$53 million to the state's economy in 1995. ((49))

Narragansett Bay is also one of the most extensively studied estuaries in the country, and is part of the U.S. Environmental Protection Agency's National Estuary Program. A *Comprehensive Conservation and Management Plan* for the Bay was adopted as an element of the State Guide Plan in December 1992. This represented a commitment to over 500 specific actions to improve the water quality of the Bay, to protect diminishing high quality resource areas along the Bay, and to manage more effectively the Bay's living resources. Involved in the implementation of the Plan are

the R.I. Departments of Environmental Management, Administration, and Transportation, the R.I. Coastal Resources Management Council, the Mass. Departments of Environmental Protection and Environmental Management, and Mass. Coastal Zone Management. The necessary investment in the Bay is estimated to exceed \$392 million. ((50))

Table 211-03(9), developed by the Narragansett Bay Project, represents categories of critical resources for the ecological health and public benefit of Narragansett Bay and its drainage basin. ((51))

Table 211-03(9)
ECOLOGICALLY CRITICAL RESOURCES FOR THE
HEALTH OF NARRAGANSETT BAY

- *Estuarine wetlands:* Salt marshes, tidal flats, eelgrass beds.
- *Freshwater wetlands:* Open water wetlands, emergent wetlands, scrub-shrub wetlands, forested wetlands.
- *Fishery habitat:* Anadromous fish runs, spawning and nursery areas, current and historic shellfish beds.
- *Habitat resources:* Habitat for rare species or exemplary natural communities, subtidal and intertidal areas of high biotic diversity.
- *Nutrient sensitive resources:* Threatened embayments, threatened salt ponds, threatened freshwater ponds, threatened bogs and fens.
- *Coastal features:* Natural dunes, barrier or coastal beaches, rocky intertidal shores.
- *Outstanding resource waters.*

Critical Resources for Public Health or Recreational Needs

- *High priority surface water identified through the Rhode Island Clean Water Strategy Prioritization Process.*
 - *Water supply areas:* Surface water reservoirs and groundwater aquifers.
 - *Special use areas:* Significant scenic sites, public recreational areas.
 - *Natural hazard areas:* Floodplains, erosion areas, areas potentially affected by predicted sea level rise. ((51))
-

Shipping and Related Industries

Today, most shipping in Rhode Island traverses Narragansett Bay, and includes of petroleum, automobile, and lumber imports. Marinas, marine cargo handling, towing and tugboat services, and miscellaneous water transportation services, with their respective economic multiplier effects, contributed \$23 million to the state's economy from wages in 1998; boat building and ship building (primarily submarines for the Defense Department at Electric Boat in Quonset), added \$174 million.

The Port of Providence, at the head of Narragansett Bay, has a 40-ft. channel, ranging from 600 to 1,300 feet wide. Maintenance dredging of the Providence Harbor and River may begin in 2002. Bulk and general cargo is handled at 27 private and public docks in Providence and East Providence. The Port is a distribution center for petroleum products, and terminal for such cargoes as scrap iron, lumber, chemicals, cement, asphalt, and steel. Municipal Wharf in Providence has 4,750 ft. of berthing space, 35- to 40-ft. depth at mean low water, rail spurs, 265,000 sq. ft. of transit and storage space, and more than 45 acres of open storage areas.

The R.I. Economic Development Corporation operates fully-developed piers at former naval facilities at Davisville. These piers handle automobiles and bulk and general cargo. Quonset Point/Davisville (QPD) also has a railhead and an air terminal with an 8,000-ft. runway for intermodal cargo handling.

Areas of the Port of Providence and QPD have been designated Rhode Island Foreign Trade Zones by the Federal Trade Commission. United States Customs District Five is located in Providence, and there are five custom house brokers in the city. ((52))

Narragansett Bay and the U.S. Navy

The Navy's Construction Battalion ("Seabee") station at Quonset Point has been decommissioned, bringing an important part of military history in Rhode Island to a close. However, the Navy remains a significant presence on Aquidneck Island. The Naval War College as viewed from the Newport Bridge is an easily recognizable symbol of that presence. Including civilians, permanent active duty personnel and students, the Navy employs 7,756 people in Rhode Island. ((53))

Of particular importance is the Naval Undersea Warfare Center in Newport, employing over 2,000 people. The Center is responsible for a large part of research and development in Rhode Island in terms of expenditures, scientists employed, and patents received. The total 1995 budget of the Newport Division was \$860 million, with \$350 million dedicated to research, development, testing, and evaluation of underwater military equipment, with \$210 million of that being immediately outsourced to industry (not all of which was located in Rhode Island, among companies such as Bendix, Electric Boat, Magnavox, Martin Marietta, and Raytheon).

In 1995, NUWC was credited for 37 percent of all patents issued to Rhode Islanders; the Center's portfolio includes over 700 patents available for licensing. The Center currently employs 66 percent of the electrical engineers in Rhode Island, and 53 percent of the state's mechanical engineers. Much of NUWC technology, however, is mission-specific to the Navy and has few commercial applications ((54)), limiting it as a vehicle for "defense conversion."

Narragansett Bay Fisheries

Today, the quahog, or hard clam, represents Narragansett Bay's primary commercial fishery. Other commercial fisheries include lobster, long-finned squid, winter flounder, scup, silver hake, squirrel hake, summer flounder, ocean pout, butterfish, cod, and menhaden. There are also significant recreational fisheries for bluefish, winter flounder, and tautog.

The Statewide Planning Program identified commercial fishing as a "target industry" in the state's *Economic Development Strategy* (1986). The amount of fish landed in the Port of Galilee/Point Judith area – where Block Island Sound, Rhode Island Sound and Narragansett Bay converge – ranks the port second in New England by value (\$43.6 million) and first by weight. ((55))

In recent years fishing effort among the boats of Point Judith has turned to so-called "underutilized species," including mackerel, butterfish, and squid. This has helped Rhode Island fishermen weather the collapse of the North Atlantic groundfish stocks better than their counterparts in Gloucester and New Bedford, Mass., who traditionally have concentrated on cod, haddock, and flounder. However, there is some potential – though it has not been widely practiced – that Massachusetts fishermen would shift their effort to the underutilized species worked by fleets from Rhode Island. Displacement of Rhode Island fishing boats or reductions in catch and income would each have a direct impact on the state's economy. Fishing boat crew are not eligible for unemployment compensation, and fishing families typically function on a single income from fishing. ((56))

As of 1998, commercial fishing accounted for \$5.4 million in wages and a contribution to the Rhode Island economy, with multiplier effects from wages, of \$11.8 million. Fish and shellfish landings totaled 135.6 million pounds and were valued at \$75.8 million. ((57))

There are 14 seafood processors in the Port of Galilee. Most of the fish processed in Galilee is sold in national and international markets with a minor portion sold locally. Much of the processing capacity is for the underutilized species, which is unmatched anywhere else in the region. Some of these businesses also import and export harvested product that was not landed in Galilee. ((58))

The *Port of Galilee Master Development Plan* done by the RI Economic Development Corporation in 1999 outlines a 10-year investment program for port infrastructure and recommends an improved port management plan, tourism facilities development, a parking plan and an effort to pinpoint new amenities and attractions for the area. This master plan draws upon studies over the years by the R.I. Departments of Environmental Management and Transportation, the Statewide Planning Program, and the Graduate Curriculum in Community Planning and Area Development at the University of Rhode Island.

02-10-03 Parks and Recreational Areas

There are 9,000 acres of state parks and recreational areas in Rhode Island that accommodated 3,423,000 day and overnight visitors and generated \$2,584,000,000 in revenues in 1992. ((59)) There are 40 public salt water beaches and several freshwater beaches. The East Bay Bike Path enables walkers and cyclists to enjoy 14.5 miles of scenic beauty between Providence and Bristol. Rhode Island's recreation and cultural resources collectively contribute to the state's billion-dollar tourist industry.



Colt State Park, Bristol, Rhode Island

Cultural activities are enjoyed throughout Rhode Island in theaters such as the Trinity Repertory Company and the Providence Performing Arts Center; museums, art galleries and libraries house details of the state's colorful history and culture.

211-03 ECONOMIC DEVELOPMENT GOAL, OBJECTIVES, AND POLICIES

03-01 Introduction

The *Economic Development Strategy*, which this document replaces, sets forth an overall economic development goal as clear and relevant today as it was when proposed in 1986. That goal is:

To foster and maintain a vigorous economy able to provide an adequate number and variety of activities that generates wealth for the people of the state.

In arriving at that one goal, the Statewide Planning Program analyzed many studies of and statements about the area's economy from diverse sources. These include the New England Regional Commission, Rhode Island Governors, the Rhode Island General Assembly, the Strategic Development Commission, the land use element of the State Guide Plan, and citizen input from 1,300 questionnaires. Economic development objectives were identified that for the most part were broad in nature and designed to establish public investment priorities that were economically and socially cost-effective in the long term. These objectives and policies reflected a consensus among economic development practitioners in both the public and private sectors.

For this update, staff reviewed the issues in all of the economic development plans written since 1968 and found, for the most part, that the same issues exist today. Drafts of the "Issues" section of this document were sent to economic development practitioners outside of state government for their comments. Senior staff from the Statewide Planning Program participated in several brainstorming sessions to revise the original objectives and policies. The modified policies and objectives then were sent to the Rhode Island Economic Policy Council and the Rhode Island Economic Development Corporation for their review, and further changes were made based on the comments that they returned.

From the staff's own research and the reaction of others, it appears that the consensus reached in 1986 has, with very minor variation, held today. The objectives and policies have been revised, but still address the same shortcomings that were recognized nearly 15 years ago.

The objectives and policies outlined here are intended to guide public investment toward the fulfillment of the overall economic development goal. They provide a foundation for action that encompasses related social, physical, and environmental factors to be considered in setting directions for economic development. Within this broad context, they must be used in conjunction with the goals, objectives, and policies set forth in all State Guide Plan elements in order to achieve balanced development.

03-02 Objectives and Policies

03-02-01 OBJECTIVE A: EMPLOYMENT

*Provide at least 34,200 new employment opportunities for Rhode Island residents, by the year 2020, achieving and maintaining full employment and reducing underemployment.**

Policies to Achieve Objective A:

1. Improve opportunities for productive employment with highest priority given to those economic development activities that have the potential to upgrade the skill and wage levels of the state's resident labor force. Target public economic development assistance of any type to those applicants that can increase the average wage rate in their industrial sectors.
2. Promote expansion and recruitment of industries that offer career opportunities for both our secondary and post-secondary school graduates.
3. Encourage and expand those social services, both in the public and private sector, that are necessary to facilitate the broadest labor force participation, including training, job placement, child care, health care, and transportation services.
4. Promote and develop the use of mass transit in order to eliminate spatial barriers to employment opportunities. Encourage development in densities high enough to facilitate the economical provision of mass transit.
5. Emphasize diversity of industry toward those sectors that demonstrate a steady employment pattern, avoid seasonal layoffs, and withstand cyclical downturns of the economy.
6. Expand educational and job-training opportunities that have as their primary objective providing the state's labor force with those marketable skills sought by employers that provide above average wage rates. Provide lifelong training and education opportunities that make the labor force competitive.
7. Eliminate barriers to employment based on race, gender, disability, sexual orientation, or ethnic origin through education and training as well as consistent enforcement of applicable laws.
8. Encourage communities to plan for and accommodate the socioeconomic impacts of industrial and commercial development, such as by providing a variety of housing options to meet the needs of the local labor force.
9. Encourage industry, particularly those that employ urban populations, to locate in urban areas and to take advantage of public and alternative transportation modes where feasible.

*See note ((61))

03-02-02 OBJECTIVE B: FACILITIES

Work with economic development practitioners to encourage sustainable industrial and commercial development that advances the long-term economic and environmental well-being of the state, and is consistent with the State Land Use Policies and Plan, the Industrial Land Use Plan, and other applicable elements of the State Guide Plan.

Policies to Achieve Objective B:

1. Reclaim brownfields by environmental remediation and encourage use of the “built environment.”
2. Conserve and enhance desirable existing industrial areas, office complexes, and concentrations of service activities to maximize the investment and utilization of existing infrastructure. New or expanded public sewer and water services and highways should be provided to industrial and commercial development only where such development is appropriate in terms of the natural constraints imposed by the land, air, and water in the immediate vicinity of such development, and vulnerability to natural hazards; and where the area is being developed at an intensity that is consistent with state land use policy, and when such development will not promote wasteful use of resources. When possible, an industry’s needs should be matched with the appropriate site in order to maximize the return on the infrastructure investment.
3. Ensure adequate investment to maintain and improve a balanced, intermodal transportation system that meets the needs of the state’s commerce and labor force. Make the transit system and intermodal connections user-friendly for all members of the riding public. Maintain shipping channels and recognize the economic potential of T. F. Green Airport and other state airports.
4. Encourage higher densities, mixed uses, careful design, transit and pedestrian-friendly land use and development patterns, and location near existing hubs and corridors to avoid “sprawl.” Maximize the use of alternative modes of transportation, such as bicycling, walking, and mass transit.
5. Relate industrial and commercial development to overall land use by promoting the use of development controls and performance standards that mitigate natural hazards and conflicts with other land uses and activities.
6. Encourage investment by the public and private sectors that will stabilize and improve housing and commerce in deteriorating urban areas.

7. Promote the control of land development along arterial highways in order to preserve their functional integrity, capacity, safety, and appearance.
8. Contribute to the stabilization and redevelopment of central business districts through the provision of supporting services such as transportation access, parking, utilities, and police and fire protection, as well as the adaptive reuse of historic buildings that contribute to the commercial and cultural economic base of these areas. Public subsidy enticements to industries other than traded industries should only be considered where they contribute to the stabilization and redevelopment of such areas. Viable economic reuses should be found for historic buildings that can contribute to the economy. Ensure that all reconstruction and redevelopment meet current natural hazard mitigation criteria.
9. Designate sites in developing communities and in or near smaller urban centers in rural communities for industrial or commercial development as needed to meet state and municipal economic objectives. Select locations with natural characteristics favorable for economic development that have or can be supplied with the public facilities and services necessary to support the type of economic activity planned, and that are readily accessible to a labor force. These locations must also be consistent with the general development patterns set forth in the state land use policies and plan element and with all other applicable elements or provisions of the State Guide Plan. Sites selected, and the economic activities that use these sites, should be compatible with the scale, historic character, disaster preparedness, and other aspects of the surrounding community.
10. Locate industrial development causing other than domestic waste discharges in areas served either by public sewerage systems or by appropriately permitted and maintained private systems.
11. Support agricultural base to include turf, ornamentals, vineyards, forestry, field crops, dairy and livestock. Seek alternative niche markets to support smaller, more diverse farms. Promote the preservation of prime farmland and provide the technical support to keep agriculture environmentally and economically sustainable.
12. Encourage development of sport and commercial fisheries both inshore and offshore up to levels of maximum sustainable yield by supporting the provision of appropriate infrastructure, research and training facilities, aquaculture, management activities, and enforcement of water quality standards. Reserve suitable port access areas for commercial fishing vessels.
13. Encourage new industrial development in the coastal zone that places a priority on the maximum efficient and appropriate utilization of existing marine infrastructure, such as the Port of Providence and Quonset Davisville.
14. Encourage areas used for commercial development to be selected and configured to make the most efficient use of scarce shoreline locations.
15. Promote tourism as a major industry, and encourage and support the use of the wide range of facilities that make up the industry's infrastructure.

16. Encourage the reuse of industrial land as industrial land to the maximum extent feasible.
17. Note areas most vulnerable to natural hazards and locate development away from these areas whenever possible. Provide appropriate mitigating measures wherever such hazards exist.



Barrington Yacht Club (foreground); Warren waterfront (background)

03-02-03 OBJECTIVE C: CLIMATE

Maintain a business environment conducive to the birth, sustenance, and growth of suitable industry and commerce.

Policies to Achieve Objective C:

1. Promote the implementation of a growth development strategy giving priority to economic development programs directed at the promotion, maintenance, and expansion of existing firms.
2. Encourage and promote locally and regionally initiated economic development efforts as set forth in the economic development elements of local comprehensive plans.
3. Attract and give assistance to those types of industry that best capitalize on Rhode Island's strengths, and are potentially most beneficial to the state's employment, the needs of firms, resources, fiscal soundness, and related development goals.
4. Expand all markets, in state, national, and international, for the state's products and services, through improved communications and promotion.

5. Encourage reservation of prime industrial sites through protective regulation or acquisition, recognizing the importance of factors such as topography and soil characteristics, availability of water and sewer service, access to transportation facilities, proximity to water bodies, and availability of labor.
6. Maintain public infrastructure, both structural (physical) and non-structural (social). Provide additional infrastructure where it is clearly demonstrated as necessary and in a manner that will protect the long-term health of the state's natural and fiscal resources.
7. Recognize Rhode Island's quality of life as an asset that improves the state's "business climate." Protect and enhance the quality of life by promoting sustainable development.
8. Recognize cultural diversity and heritage as major assets to be protected and promoted.
9. Recognize Narragansett Bay as a major economic resource.
10. Encourage initiatives to ensure a competitive and fair tax environment for all Rhode Island residents and businesses.
11. Work with local government officials to study and better understand the relationship between land use and property tax.
12. Recognize education as an essential component of economic development.
13. Encourage and promote initiatives aimed at creating competitive utility rates.
14. Enhance the affordability and reliability of the state's energy supplies by pursuing energy conservation and supporting wider use of indigenous renewable energy resources where environmentally benign and economically feasible.

03-03 Implementation

A centralized planning process has been deemed necessary by the state legislature to ensure the orderly development of the state. A State Guide Plan is mandated as a means for centralizing and integrating long-range goals, policies and plans with short-range project plans and for implementing programs prepared on a decentralized basis by the agency or agencies responsible in each functional area.

The State Guide Plan's goals for the physical, economic, and social development of the state are implemented through the review of all projects and comprehensive plans for consistency with Guide Plan elements. In economic development, these include:

- EDC Conformance Reviews – applied to projects at Quonset Davisville and other industrial parks owned and operated by the R. I. Economic Development Corporation, and to projects financed by the EDC.

- Comprehensive Economic Development Strategy (CEDS) – the annual process by which project proposals are solicited from municipalities, agencies, educational institutions, and nonprofit development organizations for inclusion in the CEDS on a “Priority Project List.” Successful proposals have been keyed to specific objectives and policies in the former *Economic Development Strategy*. That process will continue with the *Economic Policies and Plan*, and presents one of the most effective means of implementing the plan.
- Economic Development elements of Local Comprehensive Plans – to ensure that local efforts proceed with a sensitivity to possible impacts to neighboring communities and the state as a whole.

There is no timetable set for implementation, but the objectives and policies of the *Economic Development Policies and Plan* are expected to remain relevant through the year 2020. Implementation of economic development policies will not take place in a vacuum, but consistent with other elements of the State Guide Plan, which emphasizes the importance of maintaining “quality of life” as something possible only if development is tempered with a preservation of our environment.



Succotash Salt Marsh Management Area, South Kingstown, Rhode Island

NOTES AND REFERENCES

1. Rhode Island Economic Policy Council, *Meeting the Challenge of the New Economy: Annual Review 1997* (Providence, R I: Rhode Island Economic Policy Council, 1997).
2. Ibid., p. 51.
3. Ibid., p. 19.
4. Progressive Policy Institute, *The State New Economy Index* (Washington, DC: Progressive Policy Institute, 1999).
5. Rhode Island Economic Policy Council, p. 23.
6. Ibid., p. 23.
7. Ibid., p. 42.
8. Francis X. Markey and Michael Burt, "Cost of Doing Business," *Regional Financial Review*, November 1999 pp. 15-29.
9. Waterborne Commerce Statistics Center, U.S. Army Corps of Engineers Navigation Data Center, New Orleans, LA, 1997.
10. Rhode Island Statewide Planning Program, *What the Public Thinks About Transportation*. Report Number 90 (Providence, RI: Statewide Planning Program, 1997).
11. Ibid., p. B-1.
12. Ibid., p. B-1.
13. "T. F. Green's Passenger Total Sets Another Record," *Providence Business News*, January 28, 1999.
14. Rhode Island Public Expenditure Council, *Strengthening Cities: A Report of the Urban Strategy Project* (Providence, RI: Rhode Island Expenditure Council, 1998).
15. Rhode Island Higher Education Council, *Rhode Island Higher Education and the New Economy: A White Paper* (Providence, RI: Rhode Island Higher Education Council, 1998).

16. McIntyre, K. H., "Rhode Island," *Precis: Northeast Edition* (West Chester, PA: Regional Financial Associates, Inc., May, 1999).
17. Rhode Island Economic Development Corporation, *The Rhode Island Economy* (Providence, RI: Rhode Island Economic Development Corporation, 1999).
18. U.S. Bureau of the Census, *Statistical Abstract of the United States 1996* (Washington, DC: U.S. Bureau of the Census, 1996).
19. Rhode Island Department of Labor and Training, *Labor Market Information for Rhode Island Planners: 1996* (Providence, RI, Rhode Island Department of Labor and Training, 1996).
20. Rhode Island Economic Policy Council, p. 50.
21. Bock, Mark J., Chen, Celia, Christofides, Dushel-Maring, Antonette C. and McIntyre, K.H., "State and Metropolitan Area Forecast Review: Northeast," *Regional Financial Review* (Westchester, PA: Regional Financial Associates, Inc., March 1999).
22. Getman, Paul, "Rhode Island." *Precis: State Edition* (West Chester, PA: Regional Financial Associates, Inc., 1997).
23. Rhode Island Division of Planning, *Census 90: Selected Characteristics for Rhode Island Counties, Cities and Towns* (Providence, RI: Rhode Island Division of Planning, 1992a).
24. Providence Business News, "R.I. Tops Region in Childhood Poverty," Providence Business News, April 7, 1997.
25. Rhode Island Economic Policy Council, p. 64.
26. U.S. Bureau of Economic Analysis, BEA Regional Projections to 2045 (Washington, D.C.: U.S. Government Printing Office, 1995).
27. Rhode Island Economic Policy Council, p. 62.
28. Ibid., p. 62.
29. U.S. Bureau of Economic Analysis, *BEA Regional Facts for 1987-97: Rhode Island* (Washington, DC Website-1999).
30. Rhode Island Department of Labor and Training, *Covered Employment and Wages - State Summary* (Providence, RI: Rhode Island Department of Labor and Training, 1998).

31. The Rhode Island Economic Development Corporation, p. 4.
32. Ibid., p. 3.
33. Rhode Island Economic Policy Council, p. 72.
34. Ibid., p. 92
35. Ibid., p. 4.
36. Ibid., p. 67.
37. Rhode Island Economic Development Corporation, p. 5.
38. Rhode Island Economic Policy Council, p. 70.
39. Ibid., p. 277.
40. Diamond, John (Associated Press), "New England Lost Most Jobs in Recession, Report Says," *The Providence Journal*, September 2, 1992.
41. Rhode Island Economic Policy Council, p. 68.
42. The Rhode Island Economic Development Corporation, p. 4.
43. Rhode Island Economic Policy Council, p. 77.
44. Rhode Island Department of Employment and Training, Labor Market Information for Rhode Island Planners: 1996 (Providence, RI: Rhode Island Department of Employment and Training, 1996).
45. Rhode Island Economic Policy Council, p. 75.
46. Hughes, Allan J., "House Prices Stabilize; May Lead to Increase," *Providence Business News*, September 30, 1996.
47. Rhode Island Statewide Planning Program, *Industrial Land Use Plan (Draft)* (Providence, RI: Statewide Planning Program, 1999).
48. Hart, Maureen, *Guide to Sustainable Community Indicators* (1997).
49. Rhode Island Economic Policy Council, p. 208.
50. Narragansett Bay Project, *Comprehensive Conservation and Management Plan: A Summary* (Providence, RI: Narragansett Bay Project, 1992).

51. Dixon, Ann, Jennie Myers, Clayton Penniman, and Richard Ribb, *Briefing Paper: Critical Resource Protection* (Providence, RI: Narragansett Bay Project, 1991).
52. Rhode Island Department of Economic Development, *Rhode Island's Economy* (Providence, RI: Rhode Island Department of Economic Development, 1992).
53. Abood, Don, "Again Navy Helps Drive Rhode Island Economy," *Providence Business News*, April 28-May 4, 1997.
54. Rhode Island Economic Policy Council, p. 277.
55. National Marine Fisheries Service, National Oceanic and Atmospheric Administration, *Fisheries of the United States; Current Fisheries Statistics No. 9500* (Washington, DC: U.S. Department of Commerce, 1996).
56. Rhode Island Division of Planning, *Census 90: Selected Characteristics for Rhode Island Counties, Cities and Towns* (Providence, RI: Rhode Island Division of Planning, 1992).
57. The Rhode Island Economic Development Corporation, p. 3.
58. University of Rhode Island, Graduate Curriculum in Community Planning and Area Development Advanced Planning Studio, *Galilee Project: Final Report* (Kingston, RI: University of Rhode Island, 1997).
59. U.S. Bureau of the Census, *Statistical Abstract of the United States 1996* (Washington, DC: U.S. Bureau of the Census, 1996).
60. There are promising technologies under study by the shipping industry that could replace conventional large container ships with smaller, high-speed vessels. These would shorten the time needed to ship and unload cargo using direct rail links on the pier rather than cranes. However, the feasibility of this alternative has yet to be demonstrated at Quonset/Davisville or the Port of Providence (White, Paul, personal communication).
61. This employment projection is based upon the *Rhode Island Population Projections by Age, Sex, and Race 1995-2020*, published by the Statewide Planning Program in May 1997. First, the non-institutional civilian population aged 16 and older is calculated using the population projections. Labor force participation rates then are applied to each age cohort to obtain the civilian labor force estimate. An unemployment rate of 4 percent was assumed for each year to obtain an estimate of future civilian employment. Finally, the number of employed in 1999 was subtracted from the projected number to be employed in the year 2020 to obtain the number of jobs needed to maintain or obtain full employment by the year 2020.
62. Rhode Island Statewide Planning Program, *Rhode Island Energy Plan* (Providence, RI: Rhode Island Statewide Planning Program, 1997).

63. Providence Emergency Management Agency, *Strategy for Reducing Risks from Natural Hazards in Providence, Rhode Island* (Providence, RI: Providence Emergency Management Agency, 2000). According to this source, damages from the 1938 hurricane would amount to approximately \$225 million in today's dollars, and those from Hurricane Carol would be \$134 million.
64. Firms with fewer than 500 employees are considered "small businesses" by the U.S. Small Business Administration.
65. Institute for Business & Home Safety, "What Does Rhode Island Have to Lose?" Media advisory, Feb. 8, 2000.
66. Governor Lincoln Almond, "Showcase State Initiative," Executive Order 98-13.
67. Federal Emergency Management Institute/Economic Development Administration, *Disaster Resistant Jobs Training*. Workbook for "Train the Trainer" course at National Emergency Training Center, Emergency Management Institute, Emmitsburg, MD, Oct. 31-Nov. 3, 2000 (FEMA/EDA, Washington, DC, 2000).