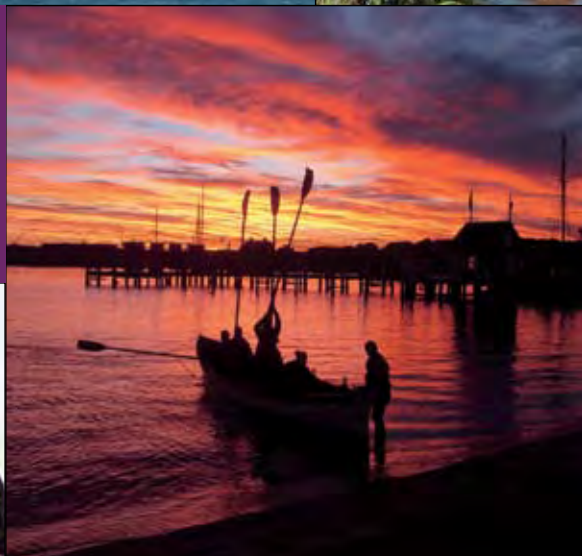




# ISLAND PLAN

CHARTING THE FUTURE OF THE VINEYARD



# The Plan





The Island Plan can be downloaded from [www.islandplan.org](http://www.islandplan.org). Copies are available for viewing at all town halls, libraries, and the MVC. A series of technical bulletins (related studies and technical reports) and resource materials (background data and model by-laws) is being made available on the website.

*The inclusion of names or images of people or institutions does not imply their endorsement of Island Plan recommendations.*

# ISLAND PLAN

## CHARTING THE FUTURE OF THE VINEYARD

**Island Plan Steering Committee:** James A. Athearn (Chair), John Abrams, Tom Chase, Ann Floyd, Ray Laporte, Ned Orleans, Kerry Scott, Linda Sibley, Elio Silva, Russell Smith, Bret Stearns, Henry Stephenson, Paul Strauss, Richard Toole, Woody Vanderhoop, Susan Wasserman.

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**The Island Plan is an initiative of, and is coordinated by, the Martha's Vineyard Commission.**

*Adopted by the Martha's Vineyard Commission on December 10, 2009*

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# SECTION 1

**Isolation and strong actions by the local community have kept the Island of Martha's Vineyard as a special and distinctive place in the world. But additional effort will be needed to prevent excessive or poorly managed growth from undermining the very qualities that make people want to live or visit here.**

Insulated by four miles of ocean, Martha's Vineyard was until the mid-20th century a community with its own manner of doing things. It was largely independent and self-reliant, with an economy based largely on fishing, farming, and increasingly on tourism. Most people lived in villages where they could walk to school, the post office, and shops. People supported each other in tough times. They could walk freely in the countryside, in woods, fields, and on beaches most likely owned by relatives or friends. Change was slow; new residents and buildings fit into the existing community without causing disruption. It was in many ways the model of what we would now call "sustainable development" or "smart growth."

Even today, visitors are amazed to find a place where the environment and lifestyle have been touched more lightly by modern life than in most of America. Though the Island has changed in the past generation, strong and conscious community action has done a much better job of maintaining the Island's distinct, high quality physical and social identity and character than in most other places. We retain many characteristics that other communities are now striving to create. Community life is still largely centered on main streets and rural general stores rather than suburban shopping



malls. People know and take care of their neighbors. A drive out of town means passing through woods and fields along curving, tree-canopied, two-lane roads rather than through strip malls.

In many ways, we are so far behind that we are way out ahead. However, in other ways, the Vineyard has gone off course. Ironically, the Vineyard's success in preserving its natural beauty and its small-town, New England charm has attracted unprecedented growth

that undermines those very features. As the quality of the environment in much of the rest of America has deteriorated, the Vineyard has become an ever more attractive tourist destination and place for seasonal homes. The result has been a massive rate of growth, far outpacing all other regions in Massachusetts except Nantucket.

While we have successfully managed this development to a large extent, we are not immune to what is happening on the mainland. Our economy and our way of living are increasingly part of national systems; we are almost completely dependent on imports of food, energy, and manufactured goods. The costs of housing and living are soaring faster than off-Island. Rapid growth, channeled by off-Island-style zoning regulations,

has led to suburban sprawl, to pollution of coastal ponds, and to fragmentation and destruction of vast swaths of globally rare habitat.

These changes are making the Island more and more like everywhere else, threatening to undermine our quality of life, our visitor-based economy, and all our livelihoods.

# INTRODUCTION



**The purpose of the Island Plan is to chart a course to the kind of future the Vineyard community wants, and to outline a series of actions to help us navigate that course.**

Since 2006, thousands of Island residents have participated through eight work groups, dozens of forums, and a series of surveys in defining what the Vineyard is and what it could be. Islanders have examined the challenges facing the Vineyard and set proposals to deal with those challenges.

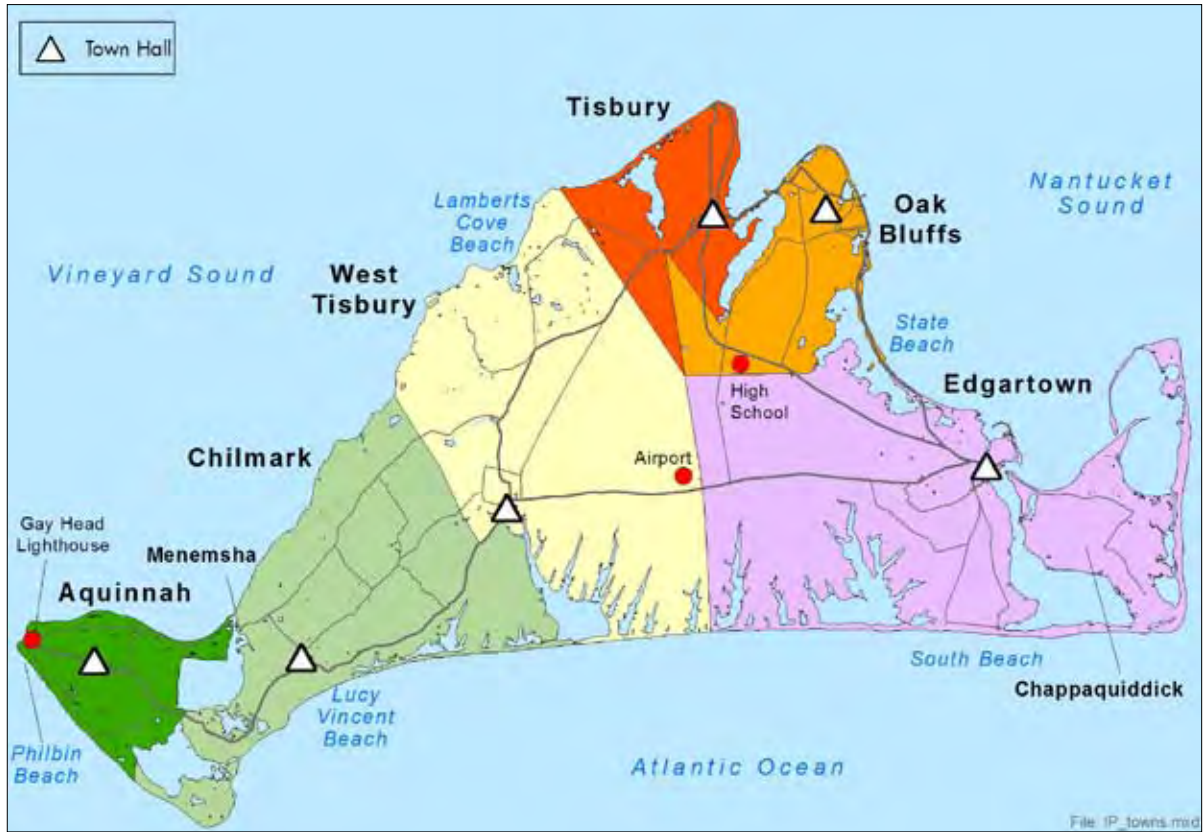
The Island Plan gives members of the community the opportunity to step back from daily routines, look at where the Vineyard is heading, and identify how to readjust our direction. (The planning process is detailed in Appendix 1.)

Although the challenges are clearly significant, the Island Plan describes a confident vision for the future that reasserts many of the traditional principles that have shaped the Vineyard's community, economy, environment, and land in the past. The Plan outlines how we can guide the ongoing evolution of Martha's Vineyard so it best meets the needs of the people and of the Island itself.

The Island Plan is both a blueprint and a call to action.

# introduction

<b>The Vineyard by the Numbers</b>							
	<i>AQ</i>	<i>CH</i>	<i>ED</i>	<i>OB</i>	<i>TI</i>	<i>WT</i>	<i>Total</i>
<b>Population Year-Round</b> (2008)	357	971	3,932	3,735	3,811	2,638	15,444
<b>All Housing Units</b> (2000)	463	1,409	4,360	3,820	2,720	1,849	14,621
<b>Seasonal Housing Units</b> (2000)	70%	73%	64%	58%	39%	44%	56%
<b>Annual New Home Starts</b> (2000-08)	6	17	75	35	27	30	192
<b>Affordable Housing Units %</b> (2008)	26.5%	0.7%	4.9%	8.4%	6.2%	2.1%	5.9%
<b>Affordable Housing Units</b> (2008)	41	3	84	141	108	23	400
<b>Businesses with employees</b> (2008)	6	67	355	214	373	134	1,162
<b>Jobs</b> (2008)	73	271	2,407	1,657	2,555	806	7,814
<b>Property Assessed Values - \$ millions</b> (2008)	778	3,166	7,559	3,130	3,129	2,985	21,027
<b>Total Area - acres (including ponds)</b>	3,960	13,553	18,184	4,680	4,142	16,878	61,127
<b>Total Area - square miles</b>	6.02	20.58	26.79	7.14	7.19	25.46	93.18
<b>Population Density - per sq mi</b> (2008)	62	47	147	523	530	104	166



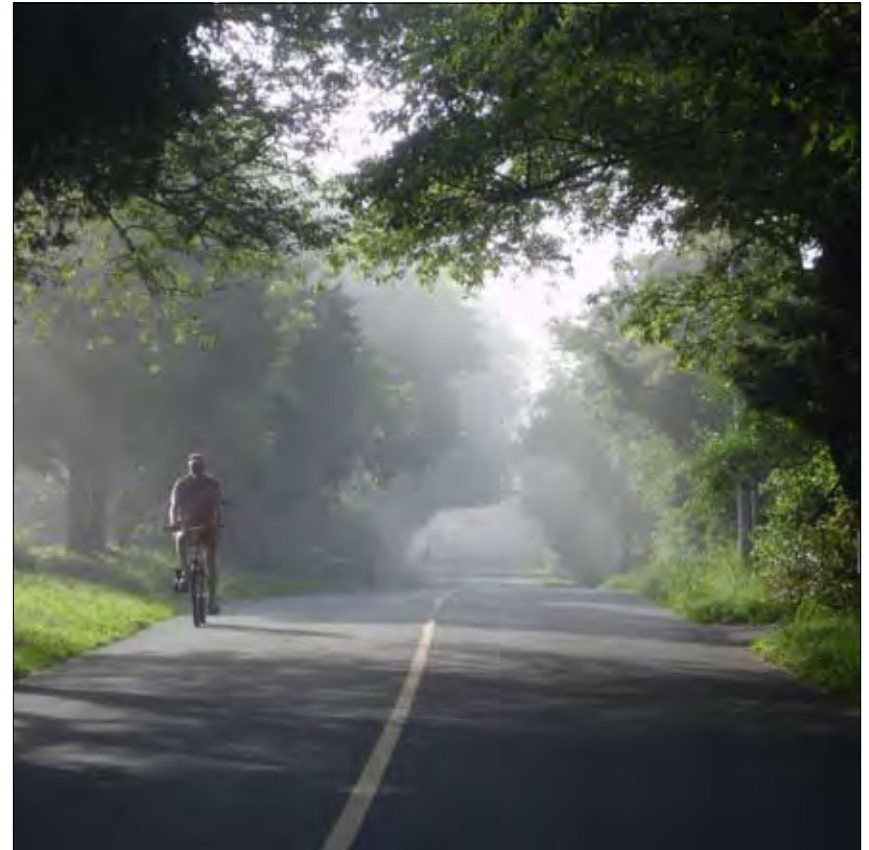
# introduction

## 1.1

### Successes

The Island has many strengths worth recognizing and holding onto.

- The Vineyard has maintained a strong sense of community, where people will pitch in to help a family facing sickness or fire, or to build an Agricultural Hall.
- The Vineyard has in many ways managed to keep the Island's rural character and a considerable amount of open space.
- The Vineyard has preserved the distinct character of each town, from the unique streetscape of each main street to the different way each town government works.
- The Vineyard has retained mostly small, locally-owned businesses and banks, with no big-box stores and almost no chain stores.
- The Vineyard still has farming and fishing which provide local, fresh food, and contribute to the Vineyard's character.
- The Vineyard remains a diverse community with year-round and seasonal residents, with a large range of income levels, and with a variety of ethnic groups.
- The Vineyard has good municipal services – schools, police, fire, EMT, libraries – as well as good hospital and medical/community services.
- The Vineyard Transit Authority carries a million passengers a year. If you think traffic is bad now, imagine if all those trips were being made by car.
- The Vineyard has significant wealth – property values of over \$18 billion and an “annual gross domestic product” of over \$800 million – which makes many good things possible (though it is not without



its negative impacts as discussed in the next section). Our good services are thanks in large part to the financial support of seasonal residents who pay a considerable portion of town taxes and are generous contributors to Island nonprofits.



## 1.2

# Challenges

**Martha's Vineyard is a wonderful place, but it is on a course that threatens many of the features we treasure most, unless we act.**

This section outlines the key challenges that the Vineyard faces today, or will face in the future, as a result of continuing trends and off-Island forces. Many are related to continued development and changing population.

The remainder of the Island Plan will describe how we can deal effectively with these challenges, by working together on a clear new course of action.

### **Challenge 1: Growth is unsustainable.**

Over the past forty years, the Vineyard has faced massive growth, with the population increasing from 6,034 in 1970 to about 15,444 today. Though we've managed this growth better than most places, it has significantly changed the Island and our way of life. This amount of development cannot be sustained, because it is the fundamental cause of many of our other challenges listed below, such as traffic congestion and pollution in ponds. Also, since the Island is of limited size, we have to face the fact that we simply cannot grow indefinitely.



# introduction

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## Land

### **Challenge 2: Character and scenic values are deteriorating.**

The Island's visual character – a combination of scenic roads, exquisitely beautiful natural areas, and small town New England architecture – is both at the core of our sense of ourselves and the key to attracting visitors. The addition of many small changes – a large new house here, a roadside stockade fence there – continues to undermine this character.

### **Challenge 3: Suburban sprawl is consuming the countryside.**

Development is taking large amounts of land, fragmenting habitat, and increasingly forcing residents to drive to get to work, store, or school. Commercial development on the outskirts of town – notably Upper State Road in Tisbury, Upper Main Street in Edgartown, and the North Tisbury business district – has allowed for larger-scale businesses without destroying historic downtowns. Yet these are essentially car-oriented, commercial strips that are poor environments for pedestrians and undermine the Vineyard's character. Downtowns are increasingly being turned over to seasonal shops, empty in winter.

### **Challenge 4: It is getting harder to get around.**

Traffic jams at key intersections are already problematic in the summertime. However, since we have reached the capacity of much of our road network, future growth threatens to lead



to serious gridlock for much of the year. We have successfully avoided widening roads (other than the widening of the Edgartown-Vineyard Haven and Edgartown-West Tisbury Roads) or putting in traffic lights that would undermine the Island's character.

However, increased traffic will increase pressure to make these types of road "improvements." Growth in the bus system is constrained by financial limitations. We have 37 miles of off-road bike paths, but there are gaps at critical places in the network and on-road bicycle accommodation is deficient in many locations.

### **Challenge 5: Public access is limited.**

Property owners are increasingly resistant to allowing public access to private lands, ending the traditional informal access to land and beaches. This is turning us into an island where we cannot get to the water, though public control of some large beaches, such as State and South Beaches, has been secured.

### **Challenge 6: Zoning is outdated.**

In an attempt to deal with increased development in the early 1970s, towns adopted zoning regulations using standard zoning formulas from off-Island (e.g. large single-use areas with uniform lot sizes and setbacks). In retrospect, much of our zoning has many important flaws, forcing development to sprawl into rural areas and prohibiting traditional settlement patterns by banning small lot sizes in town while allowing new buildings that are out of scale with their neighborhoods.

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# Environment

## **Challenge 7: Wastewater is polluting coastal ponds.**

Nitrogen, largely the result of wastewater coming from septic systems, is already polluting many of our coastal ponds. We have not yet seen the full effects from the existing buildings, let alone from future growth. This undermines our commercial and recreational fishing industries, limits recreational uses of ponds, hurts the quality of the environment, and diminishes property values. We also need to deal with other sources of excess nitrogen, such as landscaping.

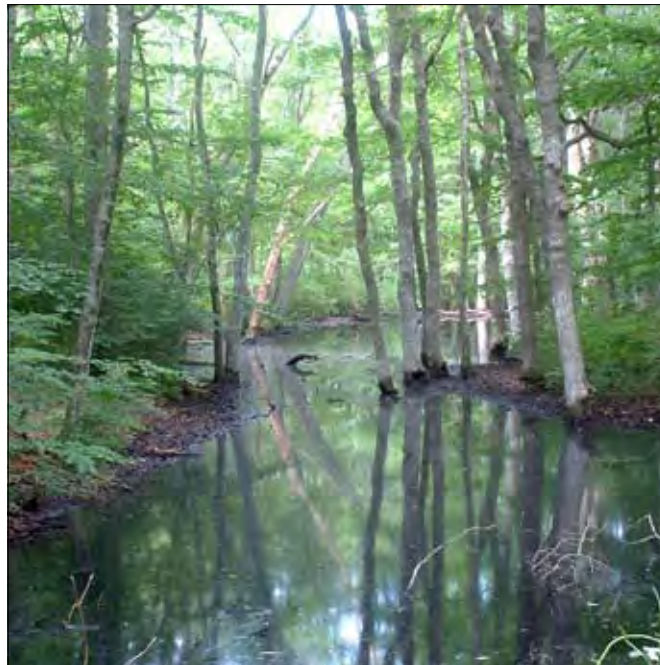
## **Challenge 8: Climate change threatens our climate, coastline, and habitats.**

It is now clear that the Earth has entered a period of considerable climate change, threatening our coastline, ponds, farmland, wildlife habitats, buildings, and economy. The Vineyard is projected to see a greater frequency of hurricanes and major storms, a rise in sea level that threatens low-lying areas (such as the Vineyard Haven waterfront and much of downtown Edgartown), and a warmer climate that translates into changing plant and animal species. Our warmer, dryer summers will likely lead to lower water levels in nontidal ponds, further concentrating nitrogen pollution.

## **Challenge 9: Energy will be more expensive and scarce.**

A growing shortage of oil and concerns about carbon emissions will make fossil fuel-based energy much more expensive in the

future. For the Vineyard, this will mean the cost of imported food and other products will go up (making local food and products more competitive). We are especially vulnerable to rising energy costs, since the Vineyard is inherently energy-inefficient, mainly because our detached, single-family houses are hard to heat and our spread-out settlement makes us car dependent. On the other hand, we have great potential for generating renewable energy, especially through wind resources.



## **Challenge 10: Globally rare habitat is being fragmented or destroyed.**

More than half of the Vineyard is habitat for rare and endangered species. While there are somewhat better controls than in previous decades, development and landscaping practices continue to fragment this habitat with buildings and roads or the replacement of native vegetation with large manicured lawns that have little ecological value.

## **Challenge 11: We're wasting our waste.**

Every year, we ship 40,000 tons of solid waste off-Island. We have basic recycling, but no community composting as is done on Nantucket. We are not equipped to reuse building materials. The fact that we are a small community makes it more difficult to set up sophisticated ways of dealing with solid waste. This is exacerbated by the fact that the Island's towns are split into two waste management districts, though there have been recent discussions about recombining them.

# introduction

## Economy

### Challenge 12: The economy is “leaking” off-Island.

A considerable portion of our spending, estimated at two-thirds of expenditures by year-round residents, is off-Island, meaning these funds are not available to support local businesses and jobs. We import almost all our food, energy, and manufactured goods.

A high proportion of our businesses are small and locally owned, but this is threatened from off-Island competition through the Internet, off-Island big-box stores, and the arrival of chain stores on-Island. Recent programs to “buy local” and promote “Island grown” indicate new interest in dealing with this.

### Challenge 13: Our economy lacks diversity.

We have a visitor-based economy (it has been said that our main export is happy visitors). Almost all activity is directly or indirectly related to servicing seasonal residents and visitors through shops and restaurants, real estate, construction, and landscaping. Many of these are service jobs at the low end of the pay spectrum, with wages somewhat better than off-Island (although this is often offset by the high cost of living). For the Vineyard, being so dependent on one cluster of industries means our economy is less resilient to economic ups and downs. The fact that this cluster

is so seasonal makes it difficult for our year-round businesses to remain viable. Compared to the rest of the Commonwealth, we have relatively few jobs in the most high-paying or fast-growing fields: professional, technical, health, or education.

### Challenge 14: Fishing and farming are threatened.

These traditional industries, once central to our economy and lifestyle, have seriously declined. In the 19th century, most of the Island was farmland. Now there are only about 1,000 acres left, only a third of which is permanently protected. This translates into a loss of jobs and availability of local foods. It also undermines the rural character of the Island represented, in part, by the presence of farms along roadsides, the Farmers’ Market and the Ag Fair. Similarly, fishing has substantially declined. Menemsha is the last vestige of a fishing industry once central to the Vineyard’s economy and community.



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# Community

## **Challenge 15: There is a shortage of affordable, year-round housing.**

The attractiveness of the Vineyard to wealthy seasonal residents has driven up the cost of housing dramatically in recent years. In the past decade, the median home price has more than tripled to \$650,000 (in 2008), which is considered affordable to an individual or family earning \$132,000 a year, more than double the Island's median household income of \$57,355. Ninety-one percent of dwellings are owner-occupied, detached, single-family homes, creating a shortage of rental housing and of multi-unit housing to serve other needs such as younger people starting out and older people who no longer want to maintain a home. The Island's year-round housing issues are now engaged by an array of organizations acting in collaboration with each other and all six towns to offer increased rental and ownership opportunities to Island residents. However, much more must be done to maintain a viable, year-round community.

## **Challenge 16: The cost of living is high.**

Due mainly to the cost of housing, the overall cost of living is approximately 57% higher than the national average and 12% higher than Boston. This is partly due to higher transportation costs, and the higher cost of doing business here because of the seasonal economy and the high cost of labor.

## **Challenge 17: There is a widening gap between groups.**

The Vineyard has a diverse population, but there is concern that we are increasingly becoming a collection of separate communities based on income, seasonality, and ethnicity. Seasonal residents are a vital part of the community. Many take an active role in Vineyard life, supporting local businesses and nonprofits and financially supporting the Island by paying a large portion of property taxes (though they make fewer demands on services, especially schools,

and have no vote). Most seasonal owners and even short-term visitors have a long-lasting relation with the Vineyard. Many have been coming for years and feel they are Islanders. Yet, although our community is largely defined by the relationship between the seasonal and year-round community, there is a sense of a widening gap between them. Additionally, there are new pressures from a recent influx of a large immigrant, mostly Brazilian, population, possibly as much as 20% of the year-round population and including a large number of undocumented immigrants. While this new population provides vital services on the Vineyard and adds to our cultural diversity, many of the immigrants have limited communication and involvement with the rest of community.

## **Challenge 18: The population is aging, and there is a loss of young families.**

The Vineyard's population is already considerably older than the average for the Commonwealth and is projected to get much older as Island baby-boomers reach their retirement years and seasonal residents move here to retire. The number of people over the age of 70 could more than triple in the next 10 years, greatly increasing the need for health and human services. On the other hand, we have a somewhat smaller proportion of young people. The Vineyard is a great place to raise a family, but many young people are finding there is not enough reason to remain or return here, given limited job opportunities and the high cost of housing and living.

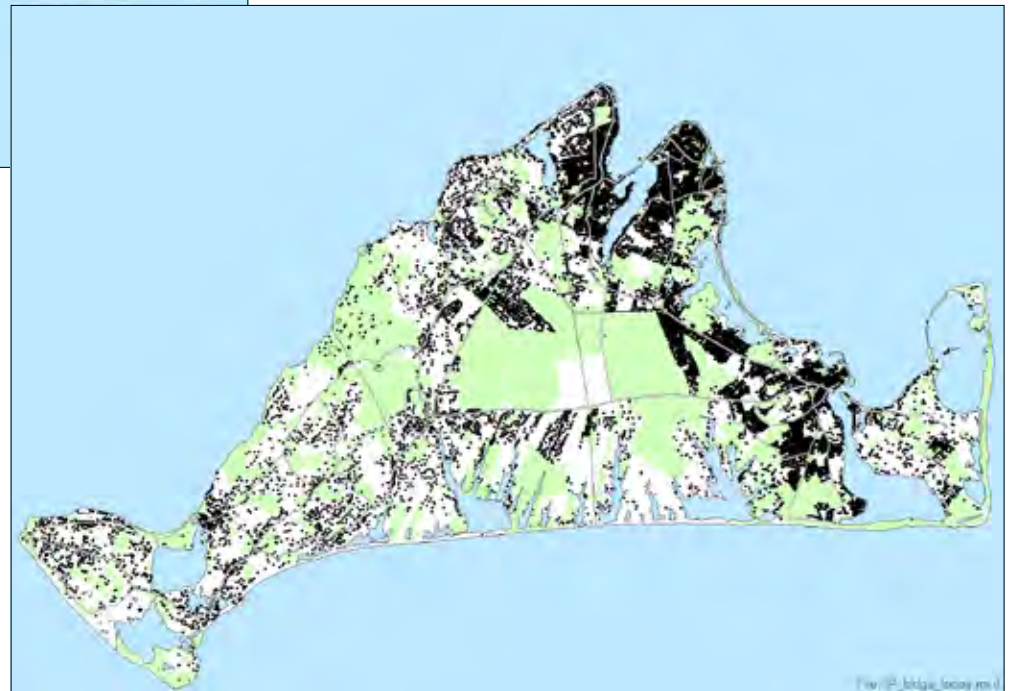
**In recent decades, there have been efforts to tackle many of these challenges. The past few years have seen significant new affordable housing projects and programs, "buy local" and "Island grown" campaigns, an expansion of the bus system's year-round operations, and creation of renewable energy cooperatives.**

**But there is so much more to be done.**

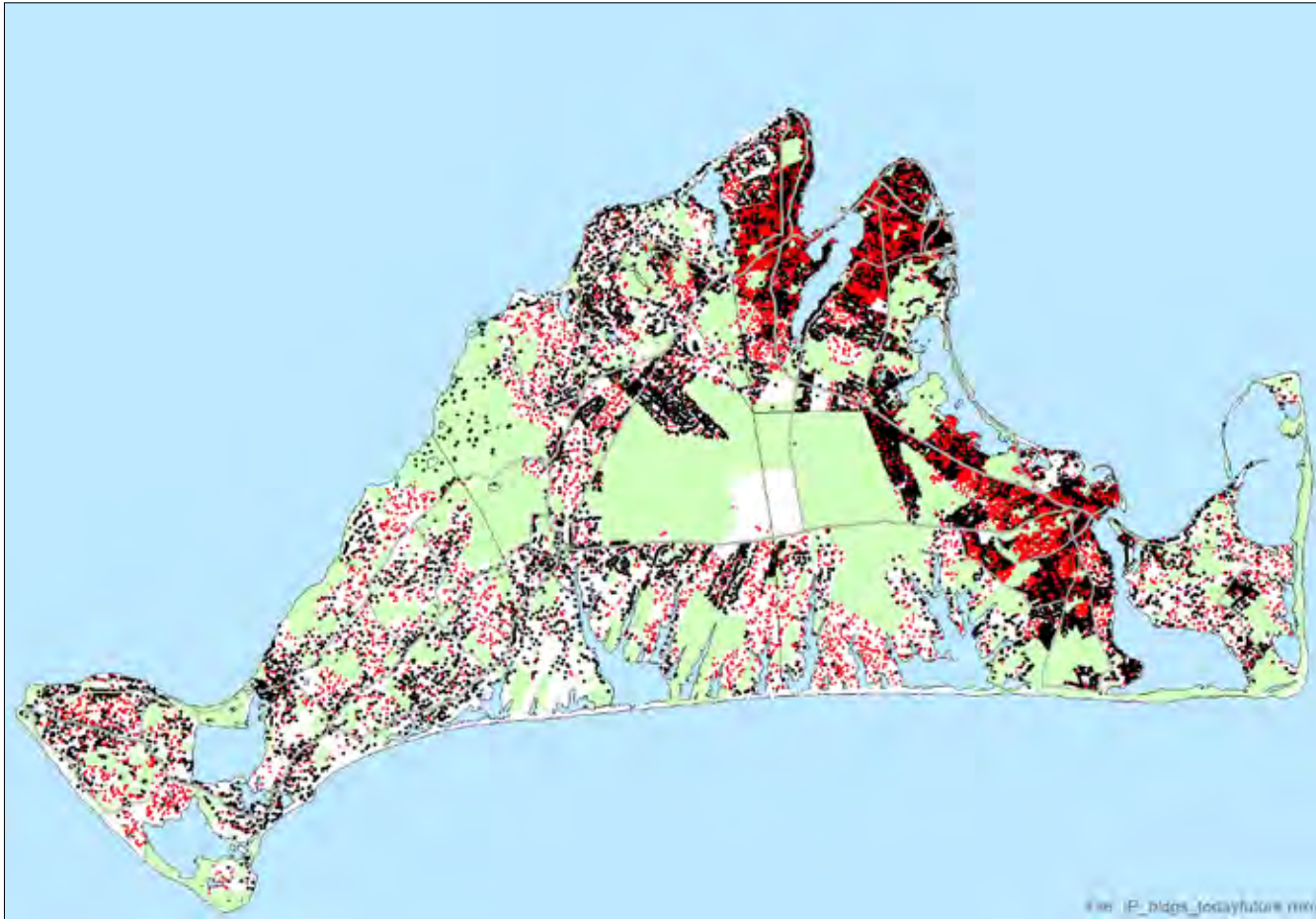
# introduction



**Buildings Fifty Years Ago** (of those standing today).



**Buildings Today (in 2005).**



**Buildings Fifty Years from Now?**  
Existing (black) and potential future (red) buildings.

**This set of three maps illustrates the past, present, and possible future development of the Vineyard.**

Each black dot represents a main house or other main building, out of those standing today. Guest houses and other secondary buildings are not shown. While the first map does not show the buildings that have been replaced with newer buildings or simply demolished, it still illustrates the pattern of development at that time.

The red dots on the map on this page indicate a computer simulation

of possible future main houses or other main buildings as permitted by existing zoning on currently "available" land, i.e land that is not presently developed or permanently protected open space. (It might be impossible to build some of these buildings because of private restrictions. It might also be possible to build other additional buildings based on special zoning provisions for affordable housing).

On all three maps, the green shows the open space as it exists today.

# introduction



## 1.3

### Goals

#### COMPREHENSIVE GOAL

**Make Martha's Vineyard a more sustainable, resilient, diverse, balanced, stable, and self-sufficient community, preserving the Island's unique natural, rural, and historical character and creating a better future for Vineyarders and the Island itself.**

**Use the Island and manage its development in ways that are compatible with the long-term sustainability and carrying capacities of our natural resources and community.**



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## OVERALL GOALS

1. Conserve enough of the Vineyard's distinct ecological regions to retain their biodiversity, to protect the Island's scenic character, and to support recreational uses.
2. Restore the ecological vibrancy of salt ponds and bays with healthy expanses of eelgrass, sustainable shellfish populations, and varied recreational opportunities.
3. Maintain a community that is economically, culturally, and ethnically diverse, remaining intimately connected to the traditional ways of the Vineyard.
4. Protect the distinct and diverse character of the Island's six towns, while forging a stronger regional perspective for dealing with Island-wide issues.
5. Stimulate a vital, balanced, local economy that is more self-reliant and more diverse.
6. Produce as much of our essentials, such as food and energy, as we can, and convert our waste into useful products.
7. Address climate change by reducing use of fossil fuels, harnessing renewable energy sources, and adapting to anticipated impacts on the Vineyard.
8. Sustain our year-round community by addressing housing affordability and the high cost of living.
9. Direct development to town and village areas and limit building in environmentally sensitive areas.
10. Reinforce compact, mixed-use, walkable town and village centers.
11. Ensure that new building is compatible in its scale, siting, and design with its surroundings.

## The rest of the Island Plan outlines more specific objectives in each of nine topic areas, as well as over two hundred specific strategies for achieving them.

Though at first glance it may seem that some of these goals, objectives, and strategies may be in conflict, for the most part they are mutually reinforcing. Achieving greater diversity and balance will make a stronger, more resilient community, economy, and natural environment, better able to withstand whatever surprises come our way, from a global financial crisis to global warming. Resolving apparent conflicts often comes down to making sure we do the right thing in the right place. Protecting more environmentally significant land as open space doesn't usually conflict with affordable housing, because that is not where these projects should be built.

An important and exciting principle underlying the Island Plan is that we can not only ensure that future development better responds to community needs, but we can repair many errors of the past, such as by bringing polluted coastal ponds back to health, by restoring fragmented habitat, and by reestablishing scenic beauty.

# introduction

## 1.4

### Making It Happen

In many ways, the Island Plan proposals for the next generation will help keep the Vineyard much as it is today with carefully protected open spaces, vistas, and historic neighborhoods, and with great services. It will still be a vital year-round community, partly because families can live here affordably.

But in many ways, the Island will be different, and much improved. Though tourism and construction will still be important parts of the economy, many people will have transitioned to well-paying, year-round “green” and knowledge-based jobs, attracting many young people to stay on the Island. Farming and fishing will be revived and will feed a good portion of the population. The equivalent of all our energy will come from a community-owned offshore wind farm. There will be an Island-wide greenway and trail network. New buildings will fit into their neighborhoods.

The Island Plan outlines how the Vineyard community can turn this vision into reality, utilizing 207 strategies: business initiatives, educational efforts, incentives, projects, and regulations. Many of these initiatives are already

underway; some have informed the Plan, others emerged from the planning process.

We are not alone in taking up this new direction. Recent and upcoming federal and state programs enable and support many of the efforts outlined in the Island Plan. Many other communities like us are creatively taking on similar challenges, and we can share solutions with them.

Though the Island Plan is not an ongoing entity able to implement any proposals itself, the committees that worked on the Plan can help initiate implementation by facilitating meetings of stakeholders and by assisting efforts as they get underway (with technical assistance by the MVC).

Towns and the MVC could change how they regulate development, using Island Plan policies and maps. The MVC should change its criteria for referring projects to the Commission to ensure that it reviews projects of regional impact, while eliminating the need to refer smaller, less problematic projects.

Periodic monitoring of the community’s progress in implementing the Island Plan will allow us to make the necessary adjustments to reach our objectives, or to revise objectives if they are no

longer relevant. The Island Plan website will be transformed to allow people to monitor progress.



## 1.5

# It's Our Choice

It could be tempting to feel that nothing can be done to overcome the challenges facing the Vineyard: economic forces are too powerful, Town Meeting won't support zoning or other changes, we're already too far gone to save.

But that's not the Vineyard way.

Our knowledgeable and highly engaged community has been tested many times in the past, often emerging with our own creative solutions.

We set up the Vineyard Transit Authority and overcame town rivalries to create the Regional High School. We created strong nonprofit organizations and the Land Bank, which preserved 40% of the Island as open space. We created hundreds of affordable homes that will be available for generations to come. We set up the Martha's Vineyard Commission, an innovative and effective way to help towns regulate development, later copied to create the Cape Cod Commission. We created grassroots organizations to take on the challenges of housing affordability and energy.

And we can do it again. Instead of letting the Vineyard drift off into a future that isn't what we want, we can take charge of the Island's future and change course.

**Implementing the recommendations of the Island Plan will lead to a better future for the Vineyard. You can support implementation by pursuing the new business and job opportunities, by participating in community organizations, with your vote at Town Meeting as various measures come up for approval, and in the individual choices you make in your homes and in your lives.**



# SECTION 2

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# DEVELOPMENT & GROWTH

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**GOAL: Preserve and reinforce the traditional settlement pattern of the Island; reduce the amount of future development, especially in environmentally sensitive areas; slow the rate of growth; and ensure that development and redevelopment projects are better planned and designed.**

**CURRENT ZONING AND GROWTH TRENDS** will create a Vineyard very different from the one we know today, and from the future that people say they want. We must manage future development and growth more effectively, in order to preserve the Martha's Vineyard that we all treasure.

This section looks at the following choices facing the community when it comes to future development and growth:

- **Amount and Location:** looks at how many additional buildings could and should be built, and where they would be located; it compares how much construction could take place with current regulations and available land, and compares this to two scenarios for lesser amounts of development;
- **Rate of Growth:** deals with how many new buildings are erected each year; and
- **Project Design:** deals with the layout of subdivisions and properties, with building and landscape design, and with other impacts of new development projects (issues also dealt with throughout the rest of the Island Plan).

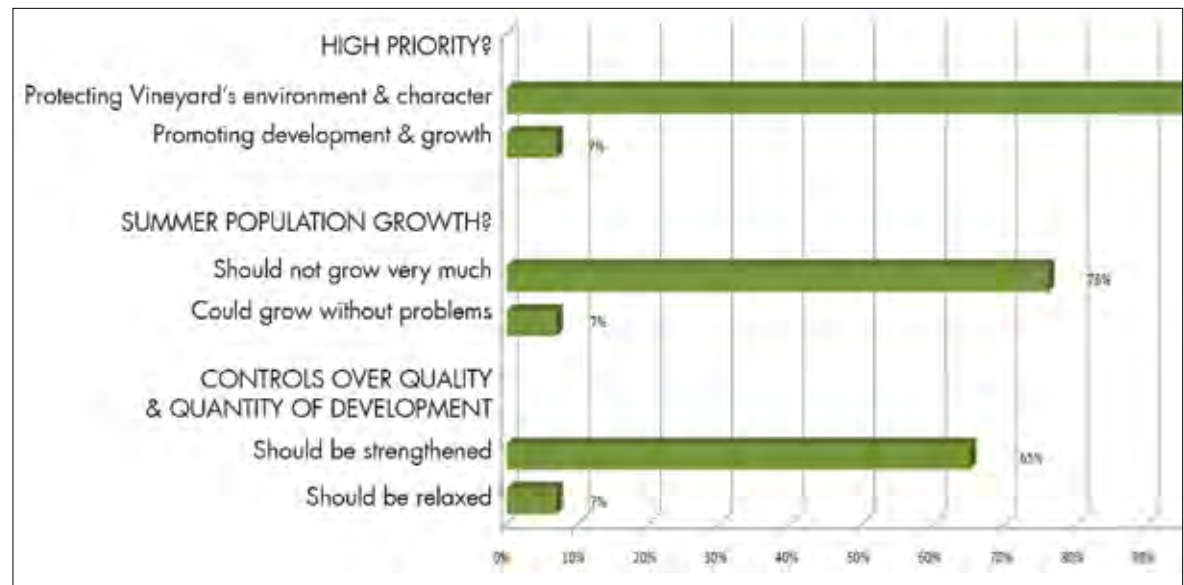
# development & growth

The current zoning across Martha's Vineyard reflects a series of decisions made over the past forty years. This was done with little or no comprehensive analysis of what kind of development could result on the Island, and what the implications of this development might be. The Island Plan provides our community the opportunity to step back and ask ourselves if this is what we really want.

Today the Island has about 17,100 homes and other principal buildings (about 15,600 main buildings and 1,500 guest houses). With current zoning and available land, as many as 12,000 more homes and main buildings could be added (7,400 main houses and more than 4,600 guest houses), an increase of 70%. This would translate into a year-round population that mushrooms from the current 15,444 to about 26,000 people, if the proportion of year-round homes remains at 44%. (The Island's population could theoretically go to about 60,000 if all allowed homes are built and all seasonal homes became year-round.)

Public input into this plan indicates that most of the Vineyard community wants the Vineyard to stay much as it is today, or go back to the way it was in the years when they were born or first moved here, if this were possible.

Most people are unhappy with the recent pace and type of development on the Island, or with the future that present growth trends would take us to. They feel that continuing growth is undermining the Island's character and environment – key to our visitor-based economy – and that excessive development could kill the goose that laid the golden egg. It was noted that growth for growth's sake is the philosophy of a cancer cell. In surveys, forums, and meetings, most people say that they want limited growth that



**Opinions About Development and Growth:** What Vineyarders and visitors said in surveys of almost 3,000 people conducted in 2003 and 2004.

is carefully managed as to amount, location, pace, and design. They want development that is especially restricted in critical natural areas, that doesn't exceed the carrying capacity of the Island, and that better serves the needs of the year-round population. Almost everyone who responded to surveys or participated in Island Plan forums said that the Vineyard should move to a more sustainable economy, less dependent on growth. Surveys going back to the 1980s consistently show that a clear majority across all groups and incomes favors preservation over development.

In surveys of almost 3,000 Vineyarders and visitors in 2003 and 2004:

- 95% said protecting the Vineyard's environment and character was a high priority; 7% said promoting development and growth was a high priority.

- 76% said the summer population should not grow very much; 7% said it could grow without problems.
- 65% said controls over the quantity and quality of development should be strengthened; 7% said they should be relaxed.

At the other end of the spectrum, some believe that growth is intrinsically good. They feel that continuing growth is vital to our economy, allowing business to expand and profits to rise, especially for the construction industry that accounts for 13% of Vineyard jobs and 17% of businesses.

It may well be impossible to get everyone in the community to agree which philosophy is correct. Fortunately, we don't need unanimity about this, as long as we can agree that certain kinds of development are inappropriate in certain

locations, and other kinds of development are desirable, or at least acceptable, in other places. The focus of the Island Plan, and especially this section, is to identify what kinds of development are appropriate, and where.

Several of the Island Plan's Overall Goals (page 1-16) reflect what people favored with respect to growth, namely concentrating future development in town and village areas and limiting building in environmentally sensitive areas; reinforcing compact, mixed-use, walkable town and village centers; ensuring that a significant portion of the development that does take place serves the real needs of the community, and ensuring that new building is compatible in its scale, siting, and design.



It should be noted that there is some reluctance to change the way we manage growth or run the community, for several reasons.

- There is strong pressure to build more houses to accommodate a continuing desire of people to live here. One survey indicated that over half the seasonal residents and even a fifth of one-week visitors anticipate living here in the future. Is it possible to accommodate everyone who wants to be here and still maintain those characteristics of the Vineyard that people want to preserve?
- There is inertia when it comes to changing zoning or other regulations, a reluctance to revise them even if existing regulations would lead the Vineyard to the very future that people say they don't want.

- Perhaps most important, enormous property values are at stake. Each possible future house or guest house is seen as potentially worth a great deal of money. This could translate into a difference between what people feel is best for the Island, and how willing they are to limit what they might do with their individual properties.

Shifting expectations also come into play. As new waves of people move here who are unfamiliar with the Vineyard of years before, the community becomes more accepting of a more developed place, more similar to suburban, off-Island America.

Note that this section mainly discusses residential development, because 98% of the Island is zoned residential; however, most of the recommendations also apply to land used for commercial and other uses. (See section 6.4 for a specific discussion of commercial and industrial development.) This section looks primarily at new buildings that increase the total number of buildings on the Island, though many proposals also affect modifications or replacements of existing buildings.

# development & growth



## 2.1

### Amount & Location of Development

Two issues are key to any discussion of development and growth:

- The desired amount of development.
- Where such growth should occur.

These issues bear on questions such as how many new houses could or should be built? How much of a population increase would that mean? How much of the currently undeveloped (“available”) land would end up being either developed or protected as open space?

Existing and Potential Land Use								
	AQ	CH	ED	OB	TI	WT	Total	
<b>Developed land</b> - acres	703	3,361	4,284	2,157	1,752	4,226	<b>16,483</b>	29%
<b>Protected open space</b> - acres	832	3,336	7,257	1,273	944	7,078	<b>20,720</b>	36%
<b>Wetland</b> - acres	389	520	710	119	163	269	<b>2,170</b>	4%
<b>Available land</b> - acres	1,494	4,406	4,965	1,131	1,340	4,479	<b>17,815</b>	31%
<b>Total Area</b> - acres	3,418	11,623	17,216	4,680	4,199	16,052	<b>57,188</b>	

**Number of Houses:** As noted above, present zoning and available land would allow construction of about 7,400 additional main houses and other primary buildings on Martha’s Vineyard.

In addition, construction of guest houses could have an increasing impact on the Vineyard. As the number of available building lots declines, there will likely be increasing desire to add guest houses. It is estimated that present zoning would allow close to 9,000 additional guest houses. Though limited in size, each could accommodate a family and thereby generate impacts similar to those of a main house. Even if only a portion of the possible guest houses were built, the total increase in the number of houses and the corresponding increase in population would significantly change the character of Martha’s Vineyard. (The projections in this section are based on construction of 4,600 guest houses, about half the theoretical maximum.)

**Present Land Use:** Currently, of the 57,188 acres of land on the Island:

- 29% is fully developed (16,483 acres, in 2008).
- 36% is protected open space (20,720 acres).
- 4% is wetlands (2,170 acres).
- 31% is “available” for future development or protection (17,815 acres), namely 19% on parcels with no development and 12% that is potentially available by being subdivided off from partially developed parcels.

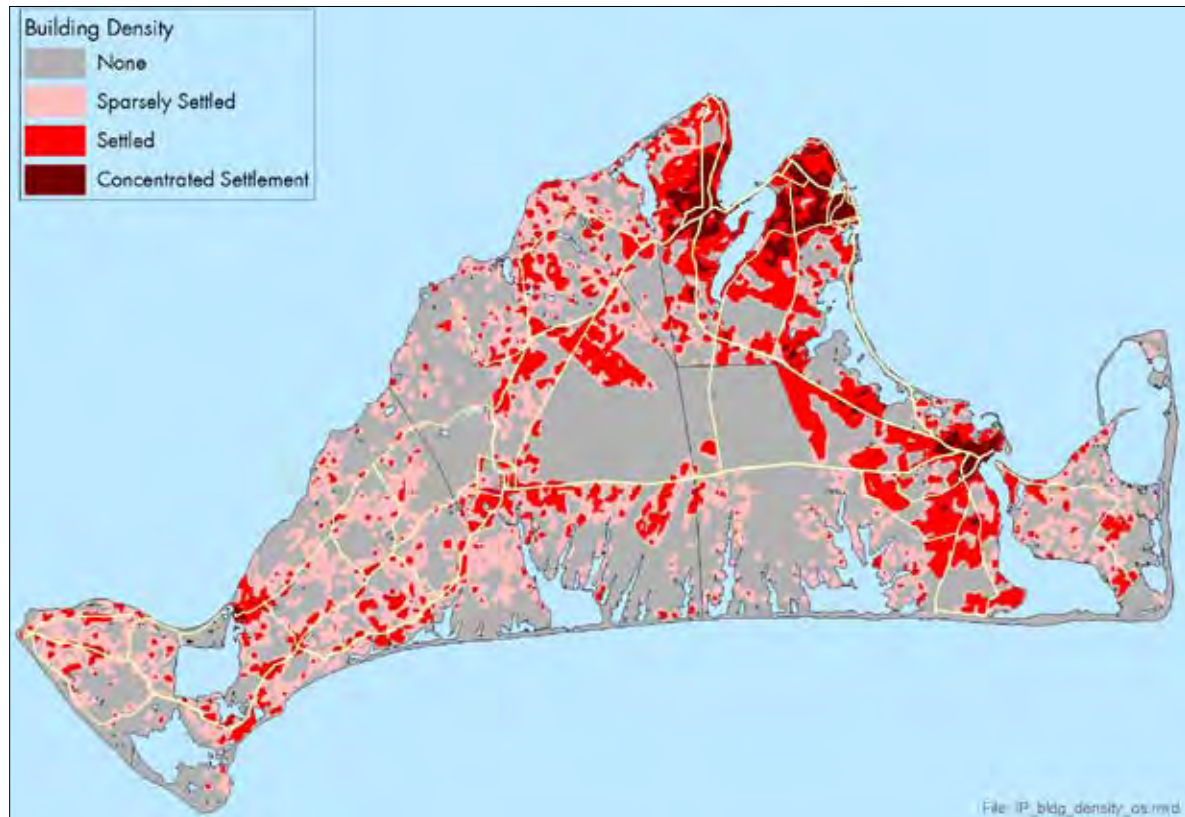
Each year, about 600 additional acres of land are developed and 150 acres are protected as open space. If this trend continues, about 80% of the “available” land – 18,000 acres of woods or fields that we now take for granted as part of the Island’s open space – would end up being developed.



**Location of Development:** Until the 1970s, most of the Island's settlement pattern was structured around three main town centers – Edgartown, Oak Bluffs, and Vineyard Haven – that were surrounded by dense, traditional neighborhoods. Elsewhere, there were a few small village centers – West Tisbury, North Tisbury, Menemsha, Beetlebung Corner – but most of the Island was rural, comprising farms and wooded areas sprinkled with housing.

In the 1970s, the pace of development surged and began moving increasingly to the countryside, where it has the greatest impact on the Island's natural resources. Since then, substantial growth resulted in newer, car-oriented subdivisions close to town or in rural areas, and a lot more housing in rural areas. The town centers of Edgartown and Vineyard Haven are now split between their historic downtown sections and their newer, car-oriented, uptown areas.

Based on available land and current zoning, this trend of spreading development will accelerate in the future, with almost half (48%) of new development scattered across the countryside, compared to 24% before 1970 and 34% from 1970 to 2005. Development in town would drop to 34%, compared to 70% before 1970 and 43% from 1970-2005.



**Building density on the Island (as of 2005).**

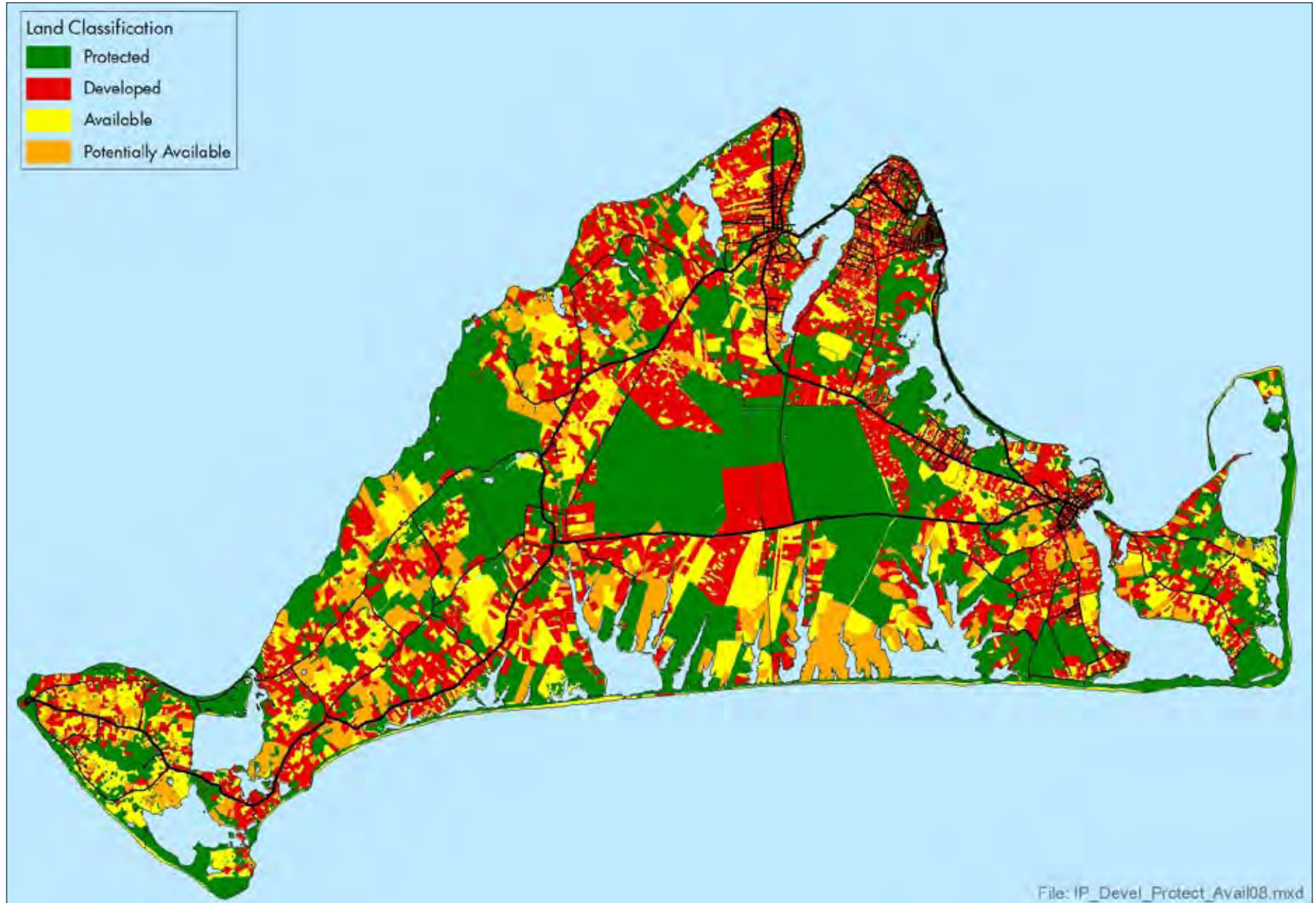
Development in or close to towns:

- Makes best use of existing infrastructure such as roads, sewer, and town water.
- Makes it easier for people to walk, bike, or take a bus to most destinations (increasing mobility for those with limited car access, and reducing car use and related congestion, energy use, and pollution).
- Makes it feasible to treat wastewater in plants that remove most of the damaging nitrogen in a cost-effective way.

Development in the countryside:

- Has the greatest impact on natural resources, destroying or fragmenting habitat.
- Forces most people into their cars for most trips, since it is not practical to provide good transit in low density areas, especially to houses up long rural drives.
- Means depending on individual, on-site septic systems that don't remove enough nitrogen from wastewater to avoid polluting coastal ponds.

# development & growth



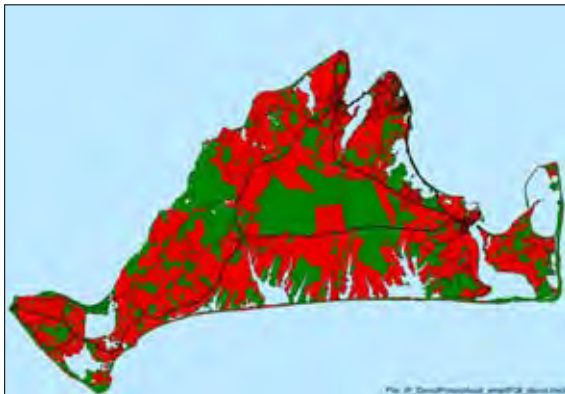
**The future of the Island** depends on what happens to the 31% of land that is presently "available", i.e. neither developed nor protected open space (as of 2005 and 2008).



**The Choice is Ours:** The future lies somewhere between these two extremes:

- Above: The Island at build-out if all available land is preserved as open space.
- Below: The Island at build-out if all available land is developed.

Based on present trends, about 4/5 of the available land would likely be developed.



The future of the Island depends on what happens to the 31% of land that is presently “available”, i.e. neither developed nor protected open space.

The fact that the Island is made up of six distinct towns means that developing the Island based on the soundest sustainable land use practices raises concerns about social equity, in that the down-Island towns shoulder much of the financial burden associated with development, such as the cost of education. We need to find ways to deal with this without instituting undesirable land-use practices such as shifting more development to environmentally sensitive areas.

**Growth Scenarios and their Impacts:** The Island Plan prepared three scenarios outlining a range of possibilities for future growth, with varying amounts and locations of development. It contrasts what would happen with a continuation of Present Trends (buildout based on present zoning on available land and limited open space protection), with a Modest Growth Scenario (based on a reduction in development and more open space protection, especially in environmentally sensitive areas), and a No Net Growth Scenario (with very little additional development, offset by “undevelopment” in other areas).

The table on page 2-9 describes these scenarios, and looks at their impacts using nine indicators. Comparing these impacts illustrates why continuing the trends of the past thirty years is not sustainable or desirable. Developing all available land as presently permitted under existing zoning would result

in excessive growth that would undermine those characteristics of Martha’s Vineyard that residents and visitors treasure the most.

By some measures, such as feeding ourselves, we have long passed a sustainable level. For other factors, we are at a tipping point. Two critical factors are traffic and wastewater, because of the inherent limits on the ability of the Island’s two-lane road network to absorb more traffic, and of the Island’s natural ecosystems to absorb more water-borne nitrogen.

- Since traffic congestion rises exponentially as we approach and exceed the capacity of our network of two-lane roads, excessive growth permitted by current zoning would put us into the untenable position of either accepting traffic congestion many times worse than we now experience, or facing significant, costly road widenings and installation of traffic lights in many locations; or both.
- Since the cost of wastewater treatment increases substantially as we exceed the capacity of natural ecosystems to treat nitrogen, excessive growth would force us either to allow our coastal ponds to become terribly polluted, or to spend hundreds of millions of dollars to deal with the excessive nitrogen.

The analysis of impacts demonstrates that, if we erect all the buildings that current zoning allows, we would see the character and environment of the Island, and our quality of life, deteriorate in many other tangible and intangible ways.

# development & growth

## Development and Growth Scenarios

The following scenarios show three possible approaches to the questions of how much additional development should we have, and where should it be located.<sup>1</sup>

These scenarios focus essentially on the construction of new houses that add to the present number on a property, and the Island. They do not directly address the rate of development and how development projects might be better designed, issues which are discussed in sections 2.2 and 2.3. Nor do they deal with the replacement of one house with another, which doesn't change the total number of people on the Island.

- **Existing Situation:** This describes the current buildings and impacts as of 2008.
- **Scenario 1 – No Net Growth:** This option would involve a radical change in order to keep the

<sup>1</sup> The Present Trends projection starts with a calculation of the total number of main buildings and main houses permitted on "available" land, based on one per property. From this is subtracted an estimate of those that would have been on future open space and on properties protected by association covenants and MVC decisions. To this is added an estimate of the additional dwellings beyond one per property, such as in multi-family buildings, accessory units, and 40B projects. This scenario is based on the assumption that half of the currently allowed approximately 9,000 additional guest houses would be built, bringing the proportion of residential properties with guest houses up from its current 11% to 25%. (In the past decade, the number of Vineyard residential parcels with guest houses went from 8% to 11%; Provincetown has 20% and Nantucket has 22%.) There is presently no inventory of accessory units, i.e. second dwelling units within houses. Maximum buildout would be at least 5,700 dwellings more than the Present Trends scenario (no deduction for open space, 100% of permitted guest houses, plus accessory units). For additional details, see the document *Explanations of Island Plan Maps, Data, and Growth Scenarios*.

number of dwellings to what it is today, with a limited number of new houses being built, balanced out with the undevelopment of other properties. (0% more houses)

- **Scenario 2 – Modest Growth:** This option involves putting in place growth management techniques that would lead to a lessening in the total amount of growth that takes place compared to what is currently happening, especially in environmentally sensitive locations. (35% more houses)
- **Present Trends:** This option describes what would happen if development continues until all available land is completely built out under present zoning regulations. The final result is referred to as "build-out." (70% more houses)

### Impacts

What would happen to the Vineyard if future development follows one of the three courses outlined above? The following indicators were used to assess the likely impacts of each of the options based on computer modeling of projected growth and related effects.

Open Space indicates how much of the presently available land would end up being preserved as open space. (This does not consider methods of clustering development on a property.)

Habitat indicates how many of the new houses would likely be in the significant native habitat (referred to as Source habitat, as explained in section 3).

Traffic indicates how many hours per week, between 8 a.m. and 8 p.m. during the summer, traffic would be substantially delayed at locations that now experience congestion. (This is based on projecting the increase in traffic levels resulting from population growth, and then estimating how much of the time the number of cars going through key intersections will result in a delay of about 5 minutes or more, assuming that traffic will grow only at one half the rate of population growth because, as congestion increases, some trips will be diverted or not made.)

Wastewater Treatment indicates how much it would cost to provide the level of wastewater treatment needed to keep nitrogen levels at an acceptable level to maintain the water quality of coastal ponds. (This is based on the number of "excess" dwellings beyond the number that could be built in each watershed and maintain water quality, multiplied by the average cost of treating the wastewater using techniques likely to be most appropriate for their location, centralized treatment facilities in town and individual on-site denitrification systems in the countryside).

Food Self-Sufficiency indicates what percentage of our food we could grow on-Island. (This estimate took the food requirements of the projected population in each scenario, and compared it to how much food could be produced based on the assumption that the same proportion of unprotected farmland would be protected as for other available land. It does not consider options for increasing farmland or food production as discussed in section 3.)

Energy indicates what the total energy consumption would be. (This is a simple arithmetic projection based on percentage increase in the number of dwellings in each scenario. It does not include an anticipated 20% reduction in per capita energy consumption due to general industry improvements in efficiency, nor the 50% reduction anticipated from the more aggressive efficiency measures outlined in section 7 of the Island Plan.)

Solid Waste indicates how much solid waste would be created. (This is also a simple arithmetic projection based on the percentage increase in the number of dwellings in each scenario.)

### Assessment of Scenarios

The table on page 2-9 indicates the projected number of dwellings with each of the scenarios, and the impacts associated with each of these options.

Development & Growth Scenarios					
		Existing Situation	Scenario 1 No Net Growth	Scenario 2 Modest Growth	Present Trends
<b>Description</b>					
Total main buildings, main houses, and guest houses at build-out. (Includes commercial and institutional buildings. Does not include secondary buildings.)					
<b>Number of Main Houses/Buildings</b>	Town	10,200	11,000	12,050	13,900
	Rural	5,400	4,600	7,250	9,100
	Total	15,600	15,600	19,300	23,000
<b>Number of Guest Houses</b>	Total	1,500	1,500	3,100	6,100
<b>Total Houses/Buildings</b>		17,100	17,100	22,400	29,100
<b>Percentage increase</b>		0%	0%	35%	70%
<b>Percent of new buildings in rural areas (estimated)</b>		0%	0%	37%	50%
<b>Population</b>	Year-round	15,444	15,444	20,231	26,282
<b>Projected Impacts</b>					
<b>Open Space</b>	Percentage of presently available land preserved as open space.		100%	60%	20%
<b>Habitat</b>	Percentage of new buildings in sensitive habitat.		0%	20%	52%
<b>Traffic</b>	Percentage of summer hours when key intersections are very congested	14%	14%	70%	94%
<b>Wastewater Treatment</b>	Cost to maintain pond water quality (preliminary estimate of order of magnitude $\pm 50\%$ ).	\$130M	\$130M	\$230M	\$370M
<b>Food Self-Sufficiency</b>	Percentage of our food we could grow on-Island (preliminary estimate)	8%	8%	5%	2%
<b>Energy</b>	Total energy consumption (trillions of BTU's).	4.3	4.3	5.9	7.5
<b>Solid Waste</b>	Total solid waste created. (1000s of tons)	26.4	26.4	36.2	46.0

# development & growth

**Growth and Property Values:** In the past decade, the median home sales price on the Vineyard has more than tripled and is more than double what a year-round family with a median income could afford. The primary reason property values are so high is because Martha's Vineyard is a small, beautiful island and many people in the United States wish to vacation or retire here. They can pay far more for a seasonal vacation house than can most year-round residents with an income earned on the Island. This competition with second-home buyers makes it increasingly difficult for even moderate-income homebuyers to get a foothold in the Vineyard housing market. The desirability of the Vineyard, so vital to our visitor-based economy and livelihoods, also is the principal contributor to high property values.

One concern sometimes expressed about scaling back the amount of growth is that it would make housing even less affordable. The assumption is that the law of supply and demand means that limiting the number of houses will result in a corresponding increase in cost. However, there is no evidence that open space protection or other measures that limit growth would have a significant enough impact on demand from off-Island to affect high property values. Even if there were 50% more houses on the Island today, there are enough off-Islanders wanting to purchase an East Coast, seaside vacation home that the prices would probably stay pretty much where they are today. Even if the prices went down a bit, the average house would still be far beyond the reach of most year-round residents.

Simply allowing for more houses would not significantly impact housing affordability. This needs targeted measures such as the ones outlined in section 8 (Housing).

**Growth and the Construction Industry:** A second concern about the possibility of scaling back the amount and rate of development is its relation with the construction



industry, which is important to the Vineyard economy. Over the past two decades, the number of new home starts declined from about 700 to about 200 a year (not counting the drop to about 100 in 2008 due to the recession). However, the number of Vineyarders working in construction has remained constant since 1985 at about 15% of all jobs. This is because the construction industry was once dependent almost exclusively on new development on

undeveloped land, but in recent years, 25-40% of the annual value of construction is for additions, renovations, and replacements of existing buildings. This includes about 15% for new houses or guest houses on already developed lots.

In the future (after the current economic crisis, which is hitting construction especially hard), it is likely that an even lower proportion of construction jobs will come from building new homes on vacant land, so reducing the rate of this type of development would have a limited impact on the total number of construction jobs. We can also anticipate that, as workers get older or based on changing job opportunities, a few hundred construction workers may transition over to the new growth sectors of the economy outlined in section 6 (Livelihood & Commerce).

**Growth and Taxes:** A third concern about limiting new development is the impact on property taxes, or of "taking land off the tax rolls." An MVC study of this several years ago indicated that residential development costs more than the taxes it generates, and that open space protection results in lower costs to the town. Over the past twenty years, the population of West Tisbury grew from 1,000 to 2,600, and its tax rate spiked upwards. Most kinds of development end up costing a town more than the taxes they bring in, although the impact of seasonal homes has not been analyzed.

**Land Use Mapping:** The preparation of the Island Plan involved extensive analysis and detailed mapping of the Island according to a variety of interrelated criteria. There are six key maps:

1. Natural Resources Map (see section 3)
2. Water Resources Map (see section 10)
3. Hazard Mitigation Map identifying areas most susceptible to flooding and hurricane damage
4. Built Environment Map (see section 4)
5. Housing Development Suitability Map (see section 8)
6. Economic Development Suitability Map (see section 6)

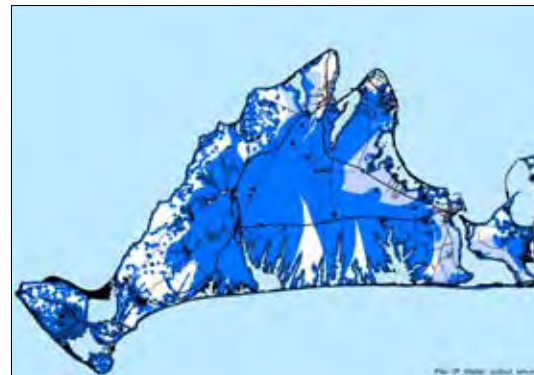
These maps were combined to produce the Vineyard Land Use Guidance Map (pages 2-14 and 2-15). It identifies which areas are most appropriate for additional development and in which it is preferable to limit the amount of development and/or preserve land as open space.



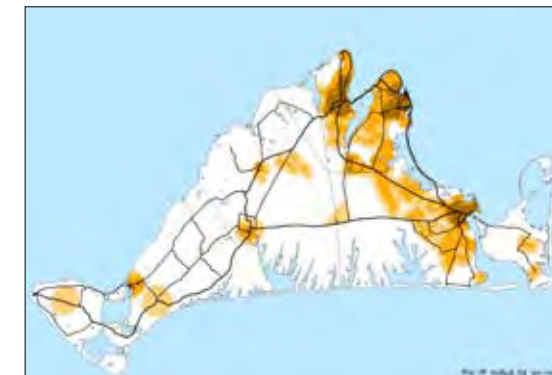
**Natural resources.** (page 3-5)



**Built environment.** (page 4-5)



**Water resources.** (page 10-2)



**Housing development suitability.** (page 8-3)



**Hazard mitigation.**



**Economic development suitability.** (page 6-13)

# development & growth

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## **Objective D1: Preserve and reinforce the traditional settlement pattern of the Island.**

The Island's traditional settlement pattern, with three main town centers, several villages, and a rural countryside, has been disrupted by the spread and visibility of development throughout the Island. We can not only limit further deterioration, but we can restore many of the areas where recent development is not in keeping with traditional development patterns.

### **Strategy D1-1: Limit significant new development in outlying areas.**

We should avoid creating new areas of commercial development, new town centers, or large, dense neighborhoods in other parts of the Island. In rural areas, large and dense new subdivisions should remain prohibited, though we should allow smaller clusters of housing when they are combined with open space protection, especially for affordable housing.

### **Strategy D1-2: Restore and improve areas that were developed in problematic ways in the past.**

There are many ways that we can "heal" areas which were developed in ways that undermine the Island's traditional development patterns. Car-oriented, mainly single-use commercial areas can be transformed into mixed-use, pedestrian-oriented areas better linked to the historic town centers. Destroyed or fragmented habitat in rural areas can be restored, as can the character of country roads with overly visible new development.

## **Objective D2: Reduce the amount of future development, especially in environmentally sensitive areas.**

A development approach that results in an amount of development somewhere between Scenarios 1 and 2, with less total growth than what is currently permitted, especially in environmentally sensitive locations, would provide a better balance between allowing for a reasonable amount of growth and the desire to protect the qualities of Martha's Vineyard.

Achieving the objective of reducing the total amount of future development – for the whole Island or for specific areas – would involve using a combination of several of the following techniques that deal directly with density. In addition, some of the other strategies throughout the Island Plan will likely also result in less overall new development. (See also the recommendations about commercial and industrial development in section 6.4.)

### **Strategy D2-1: Use the Vineyard Land Use Guidance Map to guide decisions affecting development on the Island.**

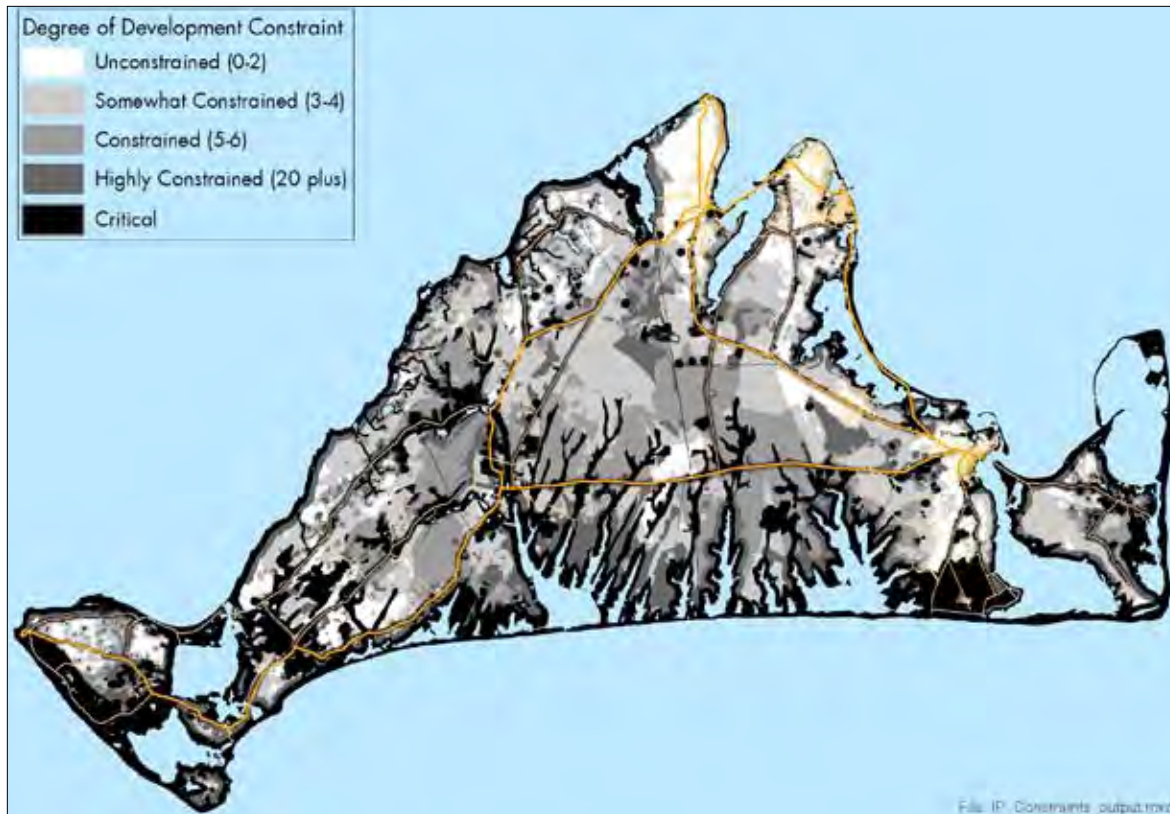
The Vineyard Land Use Guidance Map, described in section 2.4, is central to changing the amount and especially the location of future development. It shows which parts of the Island should have little or no development – such as the Resource Protection Areas – and where additional development is desirable, or at least more acceptable – such as the Business and Opportunity Areas. It should provide the

framework for other measures that should be adopted by each Town and the MVC, such as the other tools described below.

### **Strategy D2-2: Change zoning regulations affecting density.**

The most straightforward single tool is to change zoning regulations to increase or decrease the minimum lot sizes required to build multi-family buildings, single-family houses, guest houses, and accessory units, as well as nonresidential development. This might include reducing or enlarging the districts where each of these uses is permitted. It could also be more permissive or restrictive about having more than one dwelling unit on a property – guest houses, accessory units, and assisted living or retirement communities – in certain areas. For example, in Resource Protection Areas (explained in section 2.4), it would be desirable to increase the minimum lot sizes for main houses, or at least for guest houses. In Business and Opportunity Areas, the extent of zones where multi-family housing is allowed could be enlarged. Also, allowing more accessory units in certain areas is a way to accommodate more families without making a major change to the neighborhood's character. In older neighborhoods, revising the lot dimensions so they are similar to what they were when the areas were first built would reinforce the traditional character, and would allow for infill development. A related measure is to be more permissive about the construction on substandard lots in areas where growth is favored.





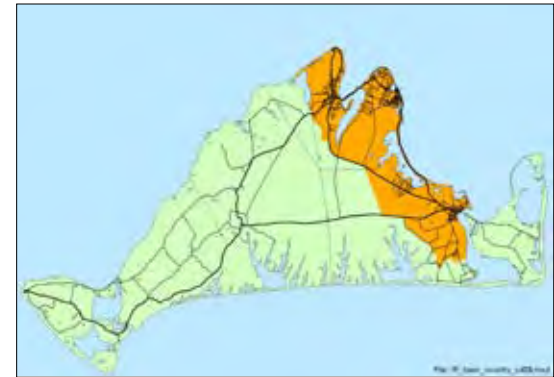
**Combined Development Constraints Map:** Created, using a weighting system, from the first three maps on page 2-11.

### Strategy D2-3: Revise subdivision regulations.

In addition to the changes to minimum lot sizes, other changes to subdivision regulations could limit further subdivision of existing parcels in highly sensitive areas, such as the Critical Resource Protection Areas. Also, the MVC Act could be used to ensure that so-called Approval Not Required (ANR) subdivisions, which are currently exempt from town review in Massachusetts, are reviewed on the Vineyard.

### Strategy D2-4: Increase tax incentives for land preservation.

Several tax incentives already encourage protection of agricultural land or preservation of open space. Possible measures that could be used to encourage the preservation of private land include lowering municipal tax rates on open space.



**Town/Rural:** The “town” areas are the highest-density parts of the Island close to the main town centers.

### Strategy D2-5: Accelerate the rate of open space protection.

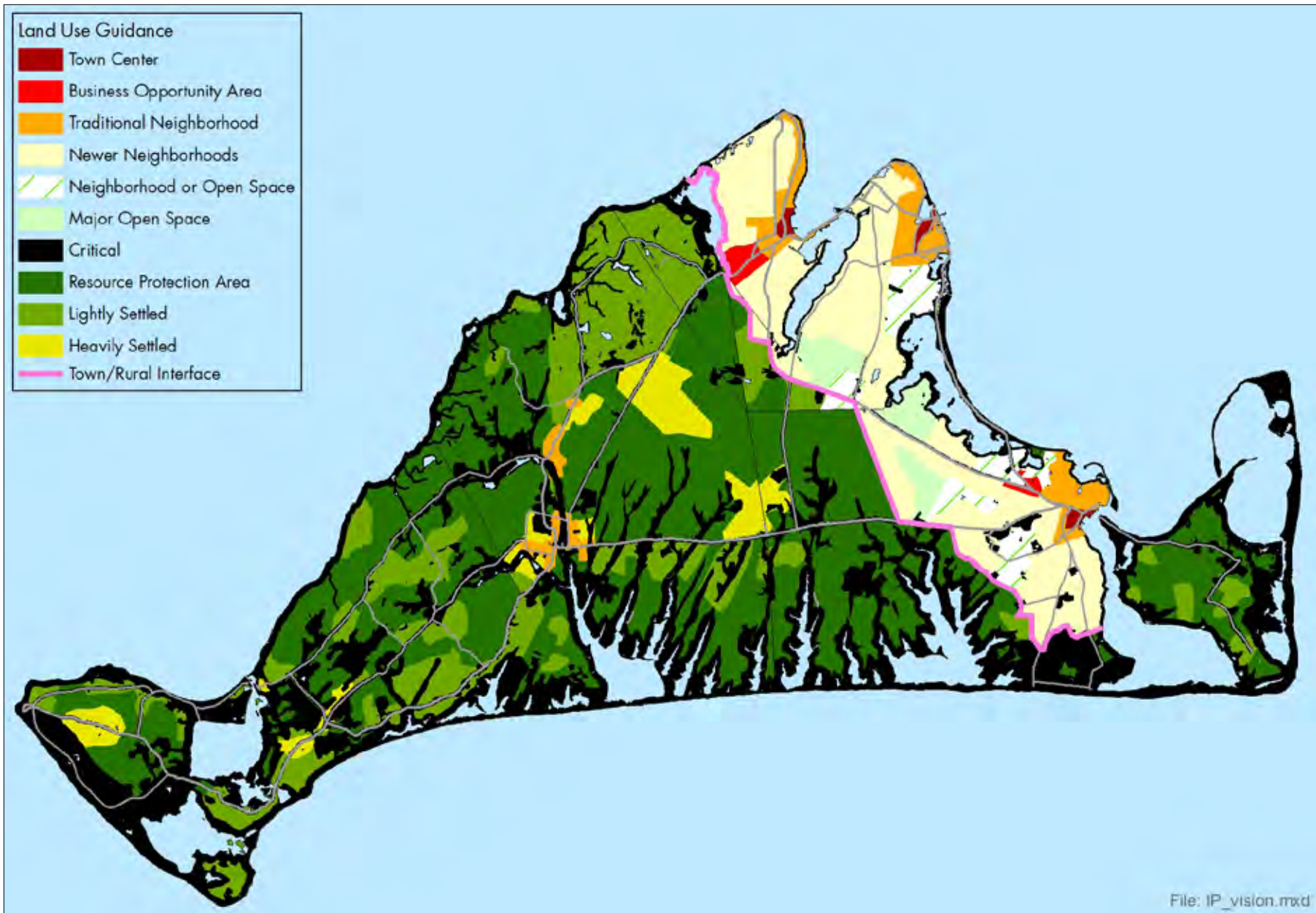
Increasing the rate of open space preservation from the current 150 acres per year could be helped by creating additional sources of revenue, and target acquisition based on the Land Use Guidance Map, to prioritize areas of significant natural resources.

### Strategy D2-6: Set up redevelopment programs for opportunity areas.

The Island Plan has identified several Opportunity Areas where there could be significant transformation in the coming decades. The redevelopment of these areas could include setting an overall concept, preparing an urban design plan, changing zoning, carrying out public improvements, and promoting development. (See section 4.4 for more detail about Opportunity Areas.)

# development & growth

Land Use Guidance Map - Characteristics and Possible Policy Changes				
	Characteristics	Suitability	Town Policy Changes	MVC Policy Changes
<b>TOWN AREAS</b>				
<b>Main Town Centers</b>	Traditional main business, institutional, & higher-density residential areas.	Moderate growth harmonizing with character.	Carefully align zoning with existing pattern. Provide sewer connections.	Raise DRI thresholds (review fewer projects) upon adoption of area plan. DRI Policies more flexible.
<b>Business and Opportunity Areas</b>	Newer business areas and centrally located disturbed areas.	Considerable growth.	Revise zoning to allow higher-density, mixed use. Provide sewer connections.	Raise DRI thresholds (review fewer projects) upon adoption of area plan. DRI Policies more flexible.
<b>Traditional Neighborhoods</b>	Historic areas and traditional higher-density neighborhoods.	Limited growth harmonizing with character.	Carefully align zoning with existing pattern.	DRI Thresholds remain the same, or could go down at town's request.
<b>Newer Neighborhoods</b>	Post-war, lower-density subdivisions close to town.	Moderate growth within basic parameters to limit impacts.	Generally align zoning with existing pattern.	DRI Thresholds remain the same.
<b>Neighborhood or Open Space</b>	Existing or potential lower density neighborhoods or open space.	Low density housing and/or open space.	Zoning changes to limit development and preserve habitat.	DRI Thresholds may be lowered (review more projects).
<b>Major Open Space</b>	Large open space.	Open space. Avoid or strictly limit development.	Zoning changes to strictly limit development, preserve habitat, etc.	DRI Thresholds may be lowered (review more projects).
<b>RURAL AREAS</b>				
<b>Critical Resource Protection Areas</b>	Critical source habitat; wellhead protection; farms, critical scenic, high hazard	Avoid development if possible. If not, strictly limit development.	Zoning changes and project review to carefully limit or manage development.	DRI Thresholds lowered (review more projects)
<b>Resource Protection Areas</b>	Core habitat.	Very limited, well-managed development.	Zoning changes to limit development and preserve habitat.	DRI Thresholds may be lowered (review more projects).
<b>Lightly Settled Areas</b>	Rural areas with low housing density.	Limited, well-managed development.	Requirements for some habitat preservation.	DRI Thresholds may be lowered (review more projects).
<b>Heavily Settled Areas</b>	Rural areas with higher business or housing density.	Moderate growth harmonizing with character.	Policies remain the same.	DRI Thresholds remain the same.
<b>Traditional Neighborhoods</b>	Historic areas and traditional higher-density neighborhoods.	Limited growth harmonizing with character.	Carefully align zoning with existing pattern.	DRI Thresholds remain the same, or could go down at town's request.



**Land Use Guidance:** The map above divides the Island into two main areas – Town Areas and Rural Areas – and nine subcategories that can accommodate various amounts of growth and that seek varying levels of resource protection and protection of existing character. Water quality in each watershed must also be considered.

# development & growth

## **Strategy D2-7: Extend and finance infrastructure in growth areas, and limit infrastructure connections in conservation areas.**

Towns could adopt policies provide town water and sewer in priority development areas – with the community shouldering much or all of the cost – in order to facilitate development where growth is desirable. To avoid encouraging development where it is not wanted, infrastructure connections should be restricted, or if allowed, be charged entirely to the property owner. In most areas where public water or sewers are extended for public or environmental health reasons as opposed to intentionally supporting or promoting development, it is important that extensions of municipal infrastructure be accompanied by “growth-neutral” restrictions that don’t allow more development than what would have been previously allowed without the extended infrastructure.

## **Strategy D2-8: Consider setting up a system of Transfer of Development Rights (TDR).**

TDR involves transferring development rights from a “sending district” to a “receiving district.” It seeks to use private market forces to protect open space in environmentally sensitive areas by making it possible to sell development rights to an area where development is desired or, at least, more acceptable. Though in theory this solves many problems, it has been difficult to put into practice. On the Vineyard, there could be difficulties in dealing with the drastically different property values between potential sending and receiving districts. In some off-Island communities, this type of value differential is dealt with by allowing extra dwellings to be built in the receiving area for each one not built in the sending area, something that would probably not be acceptable here since it would result in more overall growth. While TDR may have limitations for use on the Vineyard, we should be open to some permutation of the technique.



## 2.2

## **Rate of Growth**

Until the 2008 economic downturn, about 200 permits were issued each year for new main homes on undeveloped land – compared to an average of about 400 yearly in the 1980s and about 250 in the 1990s. At the 200 per year rate, it would take about 30 years to issue the 6,000 permits for potential new main homes on the remaining land currently zoned for homes. This is called “build-out.” (This does not include the replacement of existing buildings with new ones, but does factor in additional available land continuing to be protected as open space.)

The current world economic crisis is resulting in a considerable slowdown in the number of

homes being built. After previous recessions, growth rates generally picked up where they left off, and the same thing may happen again here. Alternatively, we can take advantage of the current situation to put in place a framework that would pace development in the future at the rate that best serves community needs.

From the 1970s to 1990s, the Vineyard towns and the MVC routinely limited the rate of construction within large subdivisions to temper the rate of community change; however, current development is mostly on single lots or small subdivisions. Vineyard towns have also used building caps, limiting the number of home building permits allotted per year in each town. In Massachusetts, the Commonwealth generally limits their use to short time periods and the Vineyard caps have lapsed or are lapsing. However, proposed revisions to the Commonwealth's zoning act (Chapter 40A) – called the Land Use Partnership Act – would allow the use of rate of development regulations on an ongoing basis.

### **Objective D3: Reduce the rate of development.**

There are several potential advantages of slowing the rate of growth, or limiting it to its current rate.



- It would keep a steady rate of construction work without debilitating peaks or valleys.
- It would lead to more open space preservation by giving the community more time to acquire land before it can be developed.

- It could improve the quality of development projects by giving priority within an annual quota to desirable projects, such as affordable housing or locations served by town infrastructure.

- It would give the community time to absorb and adjust to the impacts of development and economic booms, and more opportunity to modify growth management policies to deal with problems as they emerge.

### **Strategy D3-1: Implement rate of growth regulations.**

Island towns should adopt long term “rate of growth” regulations to limit the rate of construction to reflect current infrastructure constraints and each town’s plans to expand its capital facilities. This could be done as a District of Critical Planning Concern established by the MVC within one or more towns, or, by the towns if the proposed Land Use Partnership Act is enacted. These should be structured with flexibility and might exempt certain kinds of development, such as affordable housing and/or smart-growth locations where adequate infrastructure is already in place.

# development & growth



## 2.3

### Project Design

Whatever number of new development projects we end up with and whatever the pace of their construction, there is concern about project design in the broadest sense. This includes making each project fit better into its surroundings and responding to other community concerns, such as housing affordability, wastewater treatment in sensitive watersheds, habitat protection, energy conservation, building design, etc.

In some ways, it is easier to deal with these issues, since they don't affect the number of buildings that can be built. There will be less resistance from property owners to designing their projects somewhat differently, provided they are still able to build. However, even if better designed, each new house still contributes to the increase in population, traffic, and many other impacts associated with growth.

Often, several tools could be used to achieve the same design objective. Many of these tools are regulations, and it will be up to each town to decide which it wants to implement.

#### **Objective D4: Ensure that development and redevelopment projects are better planned and designed.**

The other sections of the Island Plan discuss a variety of tools – including regulations, incentives, programs, and projects – for better protecting environmentally significant areas, for increasing housing affordability, for respecting community character, for minimizing visual impact in significant viewsheds and vistas. These strategies are relevant irrespective of what is decided about the amount, location, and rate of growth. For example:

- Open Space – require preservation of natural vegetation of portions of property in critical habitat areas, require no-cut zone along scenic roads (see section 3);

- Water – require that projects meet nitrogen-loading limits for their watersheds; use Low-Impact-Development principles (see section 10);
- Energy – require that all buildings, or at least those larger than a given threshold, meet efficiency standards (see section 4);
- Building Design – design guidelines and review process to ensure that new buildings harmonize with their context, particularly in traditional older neighborhoods, and that their visibility from scenic roads and the coast are minimized (see section 4).

In general, the permitting process should ease permitting for clearly desirable projects by making more of them “as of right,” while providing additional review for more sensitive projects by requiring that they have special permits, site plan review, and in some cases, MVC review. In addition to the specific strategies recommended throughout the Island Plan, three general strategies are listed here, which would impact not only the specific conception of individual projects, but could also impact the other concerns discussed above related to the amount, location, and pace of development.

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### **Strategy D4-1: Require project review for sensitive projects.**

Town boards and the MVC can use project review to ensure that the amount of development that takes place on a property is appropriate. First, the MVC could change its DRI Checklist and towns could change their regulations so that there is additional review in areas where projects propose higher densities than that preferred. (For example, with the current DRI Checklist, a ten-lot subdivision requires MVC review; in Resource Protection Areas, this could be reduced to, say, six.) Another possible approach could be to require MVC review of projects of greater than a given density in highly sensitive areas. Secondly, the MVC and town boards could use the Land Use Guidance Map in project review. For example, they could encourage higher-density Comprehensive Permit (40B) projects in Business and Opportunity Areas, and discourage them in Resource Protection Areas.

### **Strategy D4-2: Provide density incentives for desirable development.**

There are a number of ways in which density incentives can be given to encourage desirable types of development, such as affordable and community housing. This could include allowing accessory units, allowing extra units in multi-family projects, or allowing development on smaller, original-size lots, provided the extra units were permanently deed-restricted for affordable and community housing. In areas where the minimum lot size was increased (e.g. sections of Edgartown and Oak Bluffs were changed from 5,000 to 10,000 square foot minimums), the size could revert back to the original lot size for appropriate projects.

### **Strategy D4-3: Set up an equitable and cost-effective system to finance community improvements.**

Usually, the financing of each community project, from road and sewer improvements to open space acquisition, is done on a case-by-case basis. It would be useful to have a group of town and community leaders take a



broader look at the issue of financing community improvements, especially those that are growth related, to pursue the most equitable and cost-effective financing methods and programs. Funding formulae should reflect the fact that some benefits are broadly shared (with costs properly borne by the whole community such as through property taxes or generalized fees), others are of particular benefit to property owners in a specific area (costs can be financed with a surcharge on property taxes within a

specific district to fund improvements), and still others are direct benefit to the property owner (preferably financed through direct fees). Towns can finance some improvements through bonding to be reimbursed from a specific revenue stream or from anticipated tax increases. New development often results in particularly high costs and it is important that longstanding property owners not be unduly burdened by costs, which are more appropriately borne by those doing the new development (see next strategy).

### **Strategy D4-4: Set up a system of mitigation fees.**

In many communities, if a project causes impacts for wastewater, traffic, municipal services, affordable housing, the developer of the property pays mitigation fees to offset costs which must then be dealt with by the community. This system could be instituted on the Vineyard. There has to be a direct relationship between the project and the impact, and the fees have to be proportional to this impact. Having to pay mitigation fees equal to the full cost of a projects' impacts would have some deterrent effect on development, especially in locations where the impacts (e.g. wastewater treatment, traffic) are the highest. This could result in some reduction in the total number of buildings erected. The same development mitigation fee could be negligible to the owner of a multi-million-dollar house, but could be problematic to the owner of a more modest house, so it would be desirable to exempt affordable housing, and possibly year-round housing.

# SECTION 3

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# NATURAL ENVIRONMENT

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## GOAL: Restore the Vineyard's native lands, waters and wildlife to functional and sustainable levels.

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### TARGETS:

- Double the natural habitat in the five Eco-Regions critical for biodiversity.
  - Create a continuous greenway/trail network from one end of the Vineyard to the other, with cross links to the north and south shores.
  - Grow enough food to meet at least 20% of our year-round needs.
- 

**M**ore than 40% of the open space we take for granted on the Vineyard could be developed. Favorite vistas could be blocked, wild stretches of tree-canopied rural roads could become rows of houses with front lawns, and farm fields could become subdivisions. Over time, areas of open land still large enough to support a rich population of plants and animals could become so fragmented – with a road here, a house and lawn there – as to threaten their biodiversity, and especially the survival of rare species. We need to better protect the remaining open spaces, vistas, farms, and habitat; we can also go a long way towards restoring areas that have been compromised.

This section includes several subtopics.

- **Open Space:** protecting open space and strengthening the culture of stewardship on the Island.
- **Biodiversity:** conserving the viable populations of native species within the Island's ecosystems, crucial for the health of the system.
- **Recreation:** providing for enjoyment of nature in a manner that refreshes the mind, body and spirit.
- **Natural Character:** preserving landscapes and scenic vistas provided by nature.
- **Working Landscapes:** developing land-based economic activities, such as farming.
- **Climate Change:** preparing for sea-level rise and the increasing number and severity of storms.

# natural environment



Vineyarders are fortunate to be surrounded by exceptional natural bounty that makes a vital contribution to our environment, our culture, our economy, and our quality of life. Imagine how different our lives would be without the views, the beaches and trails, the farms, or the variety of plants and animals that make up the Island. The Vineyard relies on its lands and waters for survival and comfort in many ways, such as providing clean air and water, pollinating crops and vegetation, maintaining a livable climate, and fulfilling people's cultural, spiritual, and intellectual needs. The conditions and processes through which natural ecosystems sustain and fulfill human life are called ecosystem services.

However, almost half of the undeveloped open natural lands we take for granted on the Vineyard could be developed. If recent rates of development and conservation are reestablished, for every four acres that are developed only one will be protected as open space.

We can act not only to protect the natural lands that remain, but to repair some of what has been lost. We can restore habitat where it has been fragmented or destroyed, reestablish the natural character of rural roads where it has been lost, and put unused fields back into food production. We can keep large enough tracts of natural areas in good enough condition to not only support biodiversity, but also to absorb a variety of other uses including recreation, agriculture, and in some cases, carefully managed development.



With the great gifts that nature has provided comes responsibility for stewardship. Vineyarders can enjoy the many benefits provided by nature, while respecting the needs for future generations to reap the same rewards. This sense of stewardship will be most widely shared if nature continues to be prominent in the Vineyard lifestyle: in view, physically accessible, or on the dinner table.



## 3.1

# Open Space Protection

The fact that about 40% of the Island is already permanently protected open space is a remarkable testament to generations of efforts by conservation groups, by towns, by individual property owners, and since 1986, by the Martha's Vineyard Land Bank. However, much of the 30% of the Island which is still available for development is environmentally important and should be protected as open space.

The Island Plan, with the help of the staff of the Martha's Vineyard Commission, did extensive mapping of the Island to outline the most critical areas with respect to each of four subtopics discussed in the other parts of this section. These four maps were combined to create the Open Space Conservation Suitability Map, indicating which parts of the Island are most suitable or critical to be protected as open space. Some of the areas identified for preservation are in specific locations, such as frost bottoms, roadside viewsheds, and existing farms and fields. For other concerns, there is more flexibility as to the precise location of the open space protection, provided certain objectives are met, such as providing trail/greenway linkages or an overall area of habitat.

### **Objective N1: Safeguard the most important natural areas of the Island as open space.**

A multi-pronged approach can be used to protect open space on the Island, involving acquisition of the most critical lands, partial preservation of other properties as they are developed, restoration and management of other private and public lands, and, in some cases, undevelopment of previously developed properties.

### **Strategy N1-1: Increase the rate of acquisition of open space, both outright ownership and conservation restrictions.**

Past efforts to protect open space on the Island have been heroic. However, with the dramatic increase in real estate costs, it is increasingly difficult to come up with the funds for open space protection. The adoption of the Community Preservation Act provides a new source of funding, though its resources are also needed for affordable housing and historic preservation. Ultimately, increased private philanthropy will be needed. Organizations involved in land preservation should re-evaluate and coordinate their priorities in light of the mapping efforts in the Island Plan, so that efforts are focused on the highest value areas (such as Source habitat, explained on page 3-7). These organizations should look for new opportunities for coordinating and leveraging funding, and expand their efforts to acquire priority properties. Acquisition could include trail easements from private owners, or buying properties and reselling them after placing a trail or other easement on it, to recoup the purchase price.

# natural environment

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## **Strategy N1-2: Establish clear standards for the MVC and local regulatory boards to require partial open space protection, or other mitigation, as properties are developed.**

The MVC already has an Open Space Policy that requires most projects it reviews larger than 5 acres to include open space protection, typically of between 40% and 60%, and up to 80% in highly critical areas. This policy should be updated to reflect the mapping and other priorities of the Island Plan. It would be desirable that towns adopt similar measures for projects that are reviewed only at the town level. Town planning boards, conservation commissions, and the MVC should work together on planning each area, to identify the most important part of each property to be protected, and how to make protected areas come together as a continuous open space. The MVC could assist the local boards with policies and regulations where they find need for modification; this could include performance standards in local wetlands by-laws for buffer areas subject to conservation commission review.

## **Strategy N1-3: Work with property owners and public entities to restore and manage their lands in a way that furthers open space goals.**

In the past, many areas on the Island were developed in ways that undermine the open space goals outlined in the Island Plan. Some current and future owners would likely be willing to restore much of their land if they were aware of the reasons for doing so, and if they were given assistance such as advice on design and

appropriate plant materials. This could include replanting native vegetation to restore habitat (see Planting the Vineyard Way, below), putting farms back into food production, and maintaining or reopening priority vistas and viewsheds. We should establish mitigation procedures (such as cap and trade) to offset impacts of existing and future development. These offsetting practices should improve, not merely mitigate, conditions.

## **Strategy N1-4: Give predictable tax abatements for open space preservation.**

A program (similar to Chapter 61) that gives fair and uniform tax incentives to landowners for donating open space easements would encourage such donations. This would be similar to the practice among 13 towns on Cape Cod that provide standardized reductions in property taxes for conservation restrictions that provide public access. Ideally, a similar policy would be used in all Island towns.

## **Strategy N1-5: Establish a multi-organizational program allowing long-term voluntary undevelopment of critical natural properties.**

The idea behind undevelopment is to purchase remainder interests (“life estates”) from willing sellers in prioritized areas. At the end of the owner’s lifetime, the house would be moved or recycled and the land restored to open space, usually as native vegetation with public access whenever possible. This strategy, successfully used at the Cape Cod National Seashore, achieves open space goals – such as habitat restoration, linking recreational open space, and view enhancement – at a lower cost, because

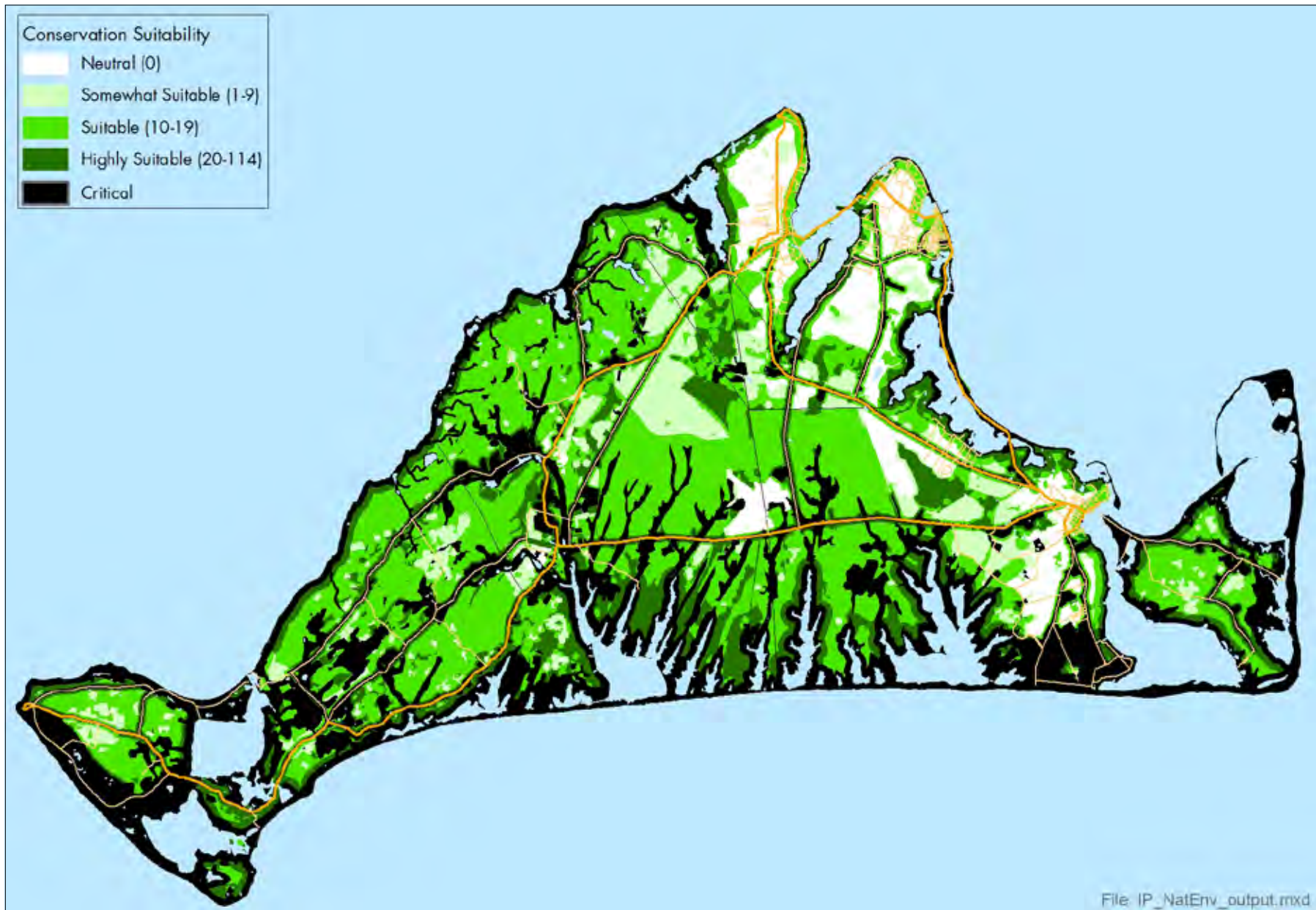
property is acquired in the future (the longer the buyer waits, the less expensive it is). It also allows owners to remain living there, it gives them additional funding at a time in their lives when they might need it, and it leaves them with an asset for heirs that is more easily divisible than real estate.

## **Strategy N1-6: Assist the Commonwealth in the restoration of the Manuel F. Correllus State Forest as a preeminent center for biodiversity, recreation, and natural character.**

We should encourage the removal of exotic species and fire hazards, e.g. Red and Scotch Pine, and the use of prescribed fire and tree harvesting (including biomass for energy production) to improve rare species habitat. The Commonwealth should provide additional staff and resources to manage the Forest for multiple uses (e.g. hunting, horseback riding, possible lumbering, etc.) compatible with biodiversity conservation.

## **Strategy N1-7: Define and adopt performance standards for nearshore ocean developments.**

In the nearshore ocean area (more than 0.3 miles from shore, out to the 3-mile limit of State waters) the development controls of the Oceans Sanctuaries Act were diluted by the Oceans Act to expedite development of renewable energy. The Vineyard community should adopt performance standards on what nearshore areas are appropriate for development and what types and scale of developments are appropriate in which areas. These performance standards should be adopted as part of the MVC Open



**Open Space Protection Suitability:** This map is a synthesis of the other maps in this section and identifies the areas where it is most important to protect land as open space.

# natural environment

Space Policy (or a separate Nearshore Development Policy), and by relevant town boards. Of specific local concern and in need of local input is the determination of what is community benefit and appropriate scale.

## **Strategy N1-8: Cultivate a “culture of stewardship,” a Vineyard community that understands the benefits of open space and a healthy ecosystem, and acts on behalf of its restoration.**

People who are in contact with nature are the most likely to care about it and protect it. Farm fields, scenic views, and a network of greenways invite Vineyarders into the world of nature, which can lead to curiosity and passion for its protection. Several programs on and off-Island (such as the Trustees Saltonstall Education Program) demonstrate that involving people in the research and restoration of habitats can lend passion to understanding and actions. A biodiversity course in the public school curriculum could teach and train young people to become stewards of the Island’s natural resources, and could use the State Forest, beaches and trails as teaching laboratories. The Island Plan Open Space Map, accompanied by specific voluntary actions that landowners can take, such as native plant landscaping, could be posted in schools and public places. Volunteers who help monitor the status of species and habitats can help conservation groups and private landowners to improve ecosystem health.



## 3.2

### **Biodiversity**

Biodiversity, the variety of species, is important to the health of any ecosystem, and of particular concern in some unique and vulnerable areas. About 65% of the Island (37,225 acres) has been designated by the Commonwealth as Priority Habitat for rare and endangered species of plants and animals. Several complex ecosystems form the heart of the Island’s natural environment.

One such special area is the Sandplains, an ecosystem that is extremely rare in the world. The Sandplains are a mosaic of habitats ranging from oak and pine barrens to heathland, scrub oak frost bottoms, maritime thickets, and

– perhaps the most well-known – grasslands. Sandplain Grassland is an open field community that developed on outwash plains created at the end of the Ice Age. This ecosystem developed only on the outwash plains adjacent to that ice front, namely on Martha’s Vineyard, Nantucket, Cape Cod, Block Island and Long Island. The Sandplains are naturally stressed: droughty, acidic soils, subject to frequent fire, exposed to wind and salt spray over large areas. Even here, grasslands tend to be overtaken by shrub and forest growth in the absence of fires that historically kept the fields open, so this system is particularly vulnerable to the fire suppression that comes with human habitation.

Overall, biodiversity is threatened by development as well as by inappropriate management practices such as habitat fragmentation, fire suppression, introduction of non-native landscapes, and the spread of invasive species. Each particular system is more or less vulnerable to each of these impacts.

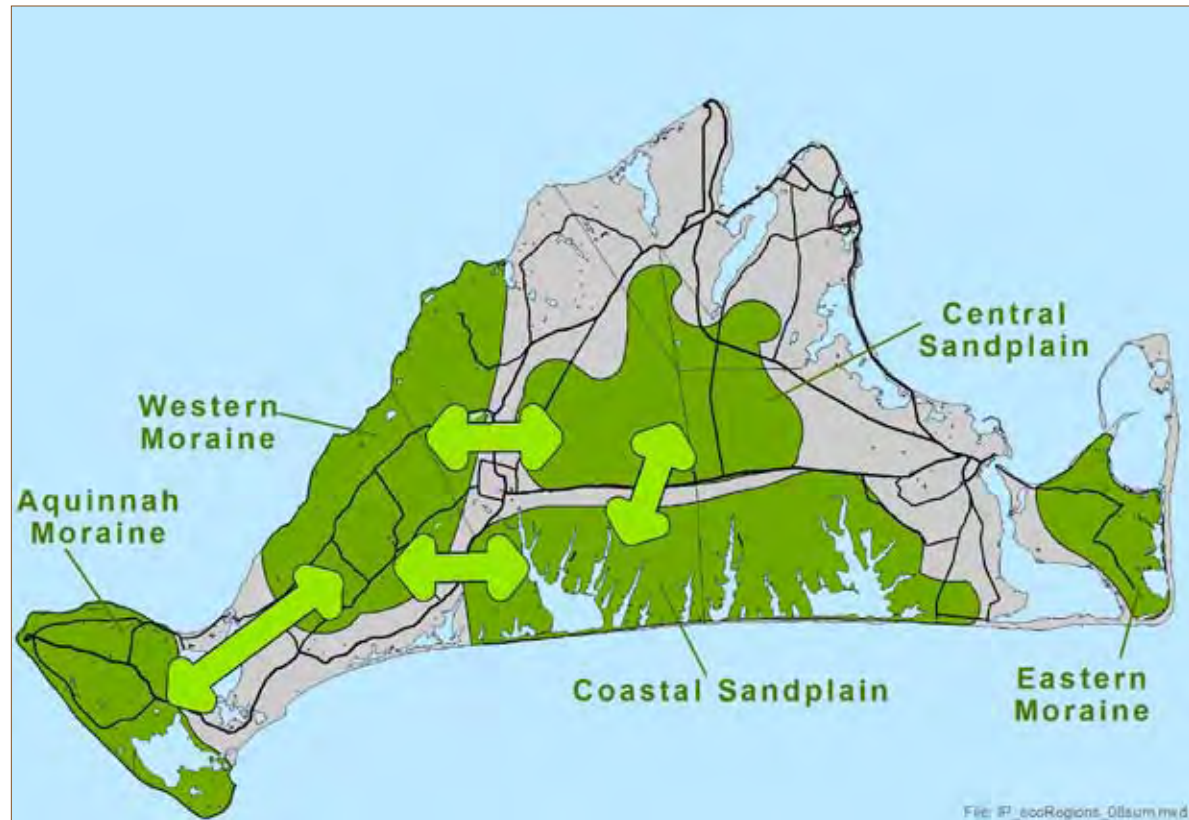
Particularly important to biodiversity is the concept of Minimum Viable Landscapes (MVL) – the amount of ecologically functional land and surface water needed to sustain viable populations of native species. Since these areas act as essential source areas for the plant and animal inhabitants that might disperse to other parts of the Island, they are referred to as Source Areas.

The Island Plan concluded that the area of Minimum Viable Landscape needed to maintain a viable ecosystem so that it functions as a Source Area is approximately 5,000 acres in the Sandplains and 3,000 acres in the moraines.

(Naturally stressed ecosystems generally have to be larger than those with richer soils and more water.) The Plan has identified five Eco-Regions on Martha's Vineyard which should be protected and restored, namely: the Central Sandplain, the Coastal Sandplain, the Western (Moist) Moraine, Aquinnah, and the Eastern (Dry) Moraine (see concept map below, and Biodiversity Classification Map on page 3-9).

The aim in these areas is to protect the remaining areas of native vegetation such as the 65% of the Island that is Priority Habitat (including 25% of Estimated Habitat) for rare and endangered species identified by the Commonwealth's Natural Heritage and Endangered Species Program. It is also to use the long-term strategies described in this section to restore these areas to ecological health. In the future, the specific assemblage of species in each of these areas might evolve as a result of climate change or other factors; however, by keeping an area of adequate size, they should be able to evolve into equally valuable natural communities.

The Biodiversity Plan uses the following tiered approach for the parts of the Island outside of town/village areas. In general, Source Areas should be maintained and restored to tracts large enough to absorb a variety of carefully managed uses, including limited human activity. Fragmentation is a particular concern.



**Eco-Regions:** These are the minimum viable landscape areas needed to preserve the biodiversity of the Island's five significant Eco-Regions.

Significant habitat areas that are long and narrow are particularly vulnerable to edge effects from adjacent developed areas, such as the intrusion of invasive plant species, non-native or hyper-abundant predators, and exterior lighting. These threats are even more problematic when it comes to the hundreds of houses located throughout the Source Areas.

**1. Critical Source Habitats:** These areas, such as scrub oak frost bottoms, barrier beaches, streams and valleys are individual habitats (parts of an ecosystem) that are particularly rare and vulnerable, and cannot absorb much human-based impact. These habitats tend to be linear features vulnerable to edge effects. Development should be avoided if at all possible.

# natural environment

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**2. Source Areas – Intact:** This category includes conservation lands. It also includes other areas where the habitat is still intact, and where it is especially important to avoid destruction or fragmentation of habitat if possible. It is especially important that these areas are managed in their optimum native habitat as they constitute the main source of wildlife that populates the other areas (called “sink” areas).

**3. Source Areas – Lightly Settled:** This category includes areas that are settled at a low enough density that native vegetation is, or could be, largely intact. Restoration and other management measures would allow these areas to harbor more wildlife.

**4. Source Areas – Heavily Settled:** This category includes areas within the overall Minimum Viable Landscape of the Eco-Region that are largely developed and fragmented. Intense management of open spaces and mitigation of impacts from development diminish the effects on neighboring intact and lightly settled areas.

**5. Interface Areas:** These are areas of significant habitat located between the main Source Areas and the main down-Island towns. Though they have considerable habitat value on their own, they are somewhat less critical than the more centrally located Source Areas in that they are on the edges of and are tenuously connected to the Source Areas, and are in a different Eco-Region. The fact that they are next to town makes them especially suitable for recreation and farming, as well as habitat.

## **Objective N2: Protect Minimum Viable Landscapes of significant Eco-Regions to restore and maintain the conditions to protect viable populations of the Vineyard’s native species, both resident and migratory.**

The Island Plan has determined how much land is needed to restore and sustain viable populations of the Vineyard’s native species. The measures discussed in the previous section can be used to protect the most significant areas as additional open space, and the following measures should be implemented to protect these important habitats.

### **Strategy N2-1: Identify and adopt performance standards for habitat protection and restoration.**

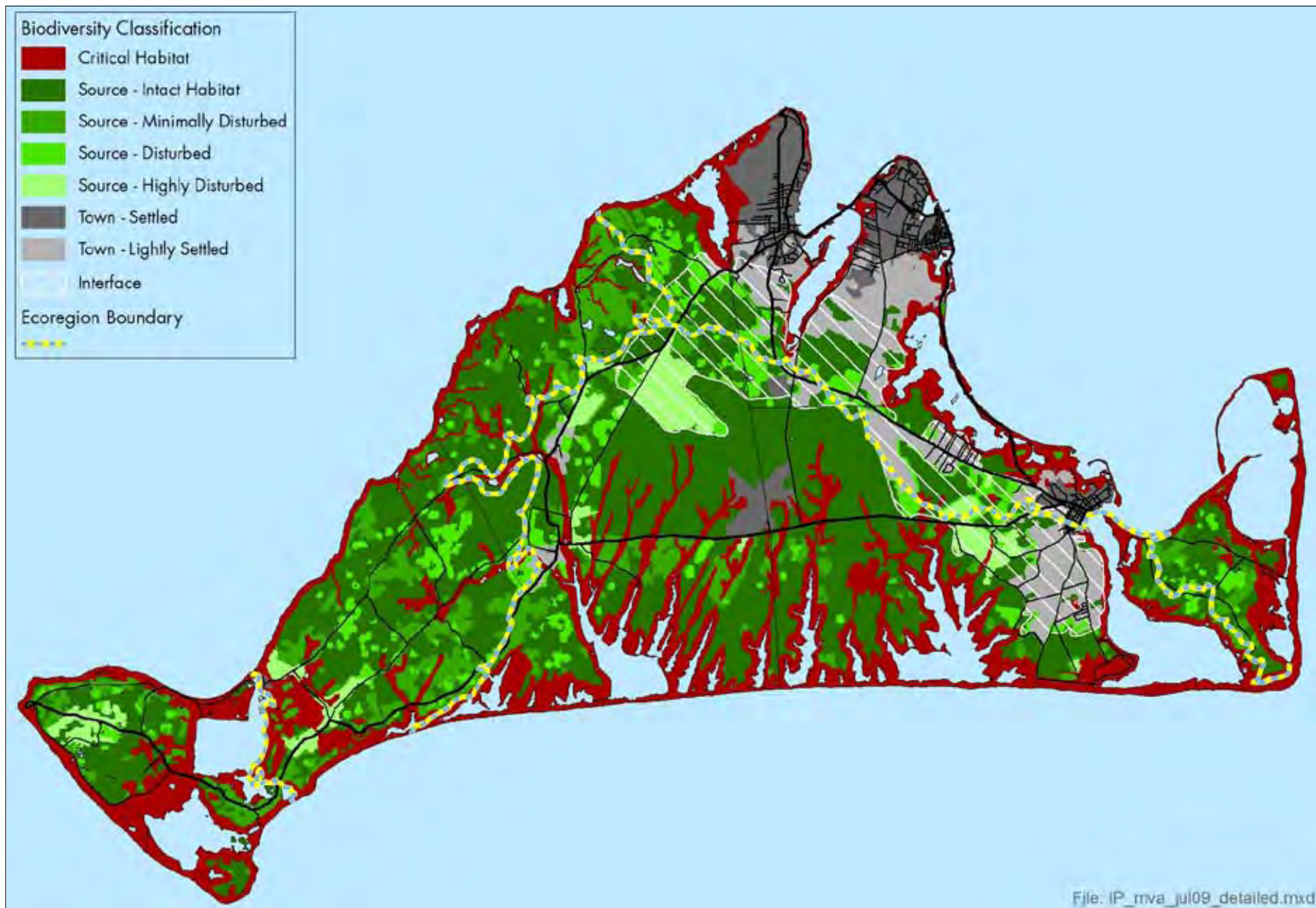
The Island Plan mapping of Minimal Viable Landscapes (MVL) should be refined and coordinated with other land uses, prioritized watersheds, storm-surge protection areas, and areas most susceptible to sea-level-rise. Local conservationists should identify essential performance standards needed from each MVL (e.g. species presence/population size, etc.) and benchmarks for measuring success, and share this information with the MVC and local regulatory authorities. Decision-makers can then use this information to promote the restoration of priority areas for habitat protection and restoration, reuniting tracts of land large enough to absorb multiple uses and still provide for biodiversity and

cleaner watersheds. Town boards, planners and conservation organizations can use the mapping to locate sites for compatible land uses and can target locations where landowners would be encouraged to embrace native plant landscaping, native-grass grazing, and undevelopment.

### **Strategy N2-2: Establish a program encouraging and facilitating Landscaping the Vineyard Way.**

Replacement of native Vineyard vegetation with large, high-maintenance lawns or exotic vegetation reduces habitat, increases the need for fertilizers and pesticides that pollute our water supply, and erodes the Vineyard’s character. Some efforts have already been made to inform the public about Landscaping the Vineyard Way. A broader information campaign could help counter the effects of inappropriate landscaping techniques promoted by television advertising and by people moving here with off-Island perspectives for Vineyard landscapes. To minimize fragmentation and watershed pollution, we should encourage the use of native grass lawns and native plant landscaping on private lands, and native plant roadside planting and management along public roads. Garden centers and landscapers could participate with a good labeling program of native species; expanded local production and sale of native Vineyard plants (as is being developed by the Polly Hill Arboretum) will also contribute to the local economy. We should create a “black list” of known invasive plant species and species known as vectors for disease, regulate against their importation,





**Biodiversity:** This map shows the Island's most critical areas for preserving or restoring native habitat.

# natural environment

sale, and planting, and change regulations to allow the use of biocides for removal of invasive species where no practical alternative exists. An informational campaign could help reduce the population of non-native and hyper-abundant predators (enclose compost piles and outdoor pet feeding areas, enclose crawl spaces under sheds and houses, reduce lawn areas, keep cats indoors, etc.). The possibility of taxing the sale of chemical fertilizers and biocides, and using the funds to promote the production of native plant stock by nonprofit organizations for private, public and commercial landscaping, should be investigated.

## **Strategy N2-3: Increase the use of specialized management techniques such as prescribed burnings and wildlife underpasses.**

For thousands of years, there were periodic natural fires that played an important part in maintaining the health of the Island's Sandplains, keeping them from being dominated by forest, as they are now. Native grasslands and many of their species do not thrive without episodic burning that has always taken place in nature. This has been undermined by decades of fire suppression. The Martha's Vineyard Prescribed Burning Partnership involves town fire chiefs and the other partners to prioritize sites to burn for public safety and biodiversity reasons. The towns and County should work with the Partnership to acclimate the public to the regular and safe use of prescribed fire through daily radio reports during burn seasons, and offer annual volunteer training to assist with prescribed fire crews. They should also create and maintain a single fire cache (e.g. equipment) available for use by prescribed fire crews and Island fire departments. Paved roads fragment those special lands. One method of dealing with fragmentation of habitat caused by paved roads is to provide wildlife underpasses at key bottlenecks.



## 3.3

### **Recreation in Nature**

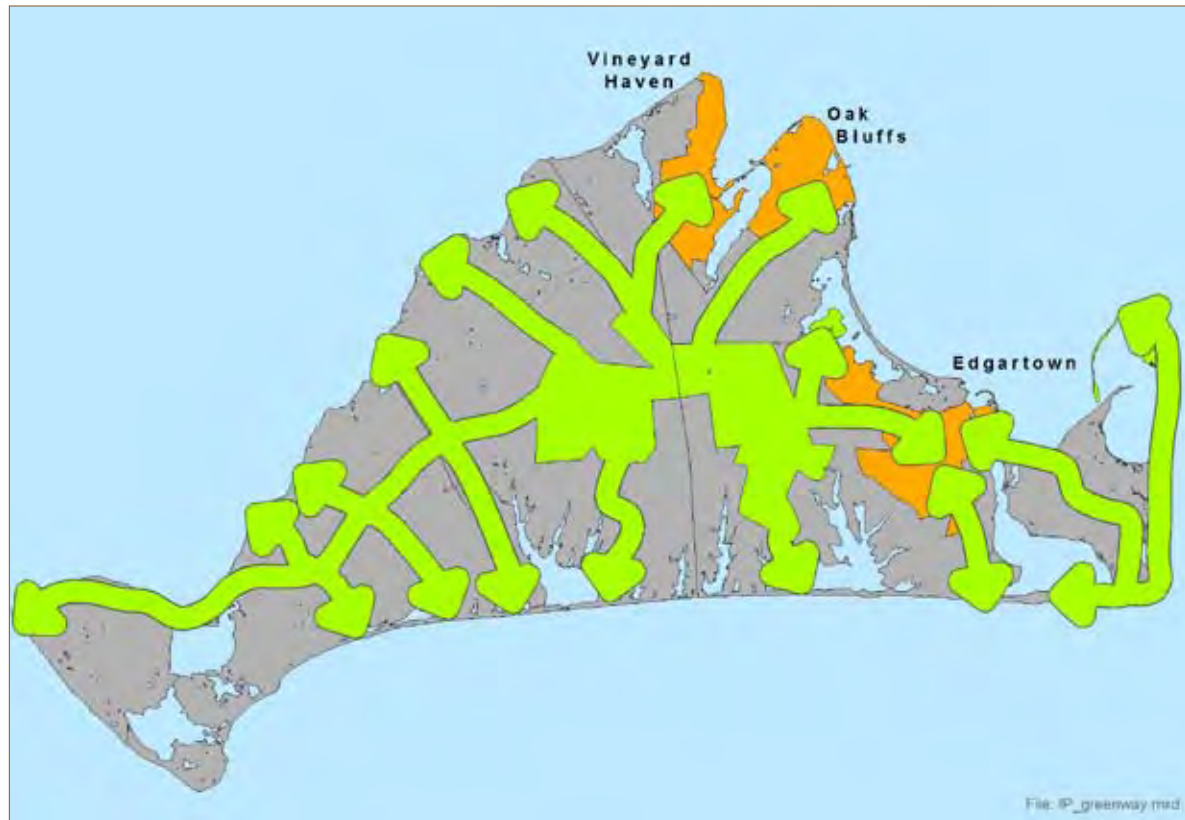
Outdoor recreation is an integral part of Vineyard life. The ability to stroll or cycle or fish is important anywhere, but the Vineyard's natural beauty and evocative landscapes and vistas bring a special restorative quality of respite from the labors and cares of civilization.

Access to and enjoyment of natural areas provides community benefits beyond those to the individual; access to nature inspires the culture of stewardship that is integral to the Island Plan. The towns, Land Bank and various conservation groups have already created more than 127

miles of trails. Expanding this into an Island-wide network of greenways will be key to improving access to all parts of the Vineyard.

There is an intimate relationship between recreational needs and the divergent needs and offerings of natural and developed areas. There is a need to provide access to open space for people who reside in the midst of developed areas, and particularly to do so without compelling them to get in their cars and drive to the open space. Open space, however, is extremely limited in the midst of civilization. Penetrating into civilized areas with greenways is a priority, and careful management of those areas will focus on keeping negative edge effects from penetrating the larger open space destinations. Those greenway corridors should not funnel invasive plants and animals into the larger open space areas.

Sometimes, public access is not compatible with habitat and groundwater protection, or with owners' wishes, including privately owned land that is under a conservation restriction. Where there is access, there are sometimes conflicts among users, or conflicts with management of the resources. User fees could help limit overuse, but may unduly impact those with lesser means. Presently, there is public access to about 73% of conserved open space as well as to 32% of the 211-mile shoreline of oceans and great ponds. Unfortunately, in spite of the apparent bounty, access to much of the most desirable land and water areas is limited, particularly at the shoreline. Only 38.8% of the outer coast is public (37.5% open to the general public



**Greenways:** It is recommended that a network of linear open spaces extend from the State Forest to all shores of the Island and close to the main population centers.

and 1.2% to town residents only). Of the 47 miles of barrier beach (that is the wide, sandy beach that most think of for beach-going), 33 miles are private and 14 are public.

Linear shoreline is a finite resource with correspondingly high cost of acquisition. The regulatory climate in Massachusetts tends to favor the shoreline owners' and waterways abutters' rights over those of the general public. (In the 1630s, Massachusetts adopted

the Colonial Ordinances generously ceding public rights at the waterfront to promote development of wharves; now, Massachusetts is one of the two states where property in the intertidal area may be privately owned, while the public retains the rights of fishing, fowling and navigation there. Since the Vineyard only became part of Massachusetts in 1692, the possibility has been raised of reestablishing the same shoreline rights as New York State.) An effort is also underway at the

# natural environment

Commonwealth level to redefine the activities attached to the public trust uses traditionally assigned to the public in the intertidal area, to include more modern beach uses.

While some coast and beach has been acquired for the public in recent years, there is a perceived reduction in the former free and easy access. With far more people comes correspondingly higher impact, so increasing access must be accompanied by well-planned management.

## **Objective N3: Provide residents and visitors with access to the Vineyard's beaches and shoreline for fishing, shellfishing, walking, sitting, swimming and other recreational activities in a diverse array of settings.**

### **Strategy N3-1: Set up an Access Revival Initiative to reestablish public access to beaches and shorelines.**

There may well be shoreline accesses with public rights that have been encroached upon or forgotten. Reopening them could be an efficient means of enhancing shoreline access. This would involve methodically inventorying under-utilized shoreline access points, determining the legal viability of dormant rights and the accessibility, and then collaborating to secure and manage these assets for better public use. We should research Colonial Ordinances regarding ownership at the shoreline, and monitor and support Commonwealth efforts to redefine the uses retained by the public in intertidal areas.

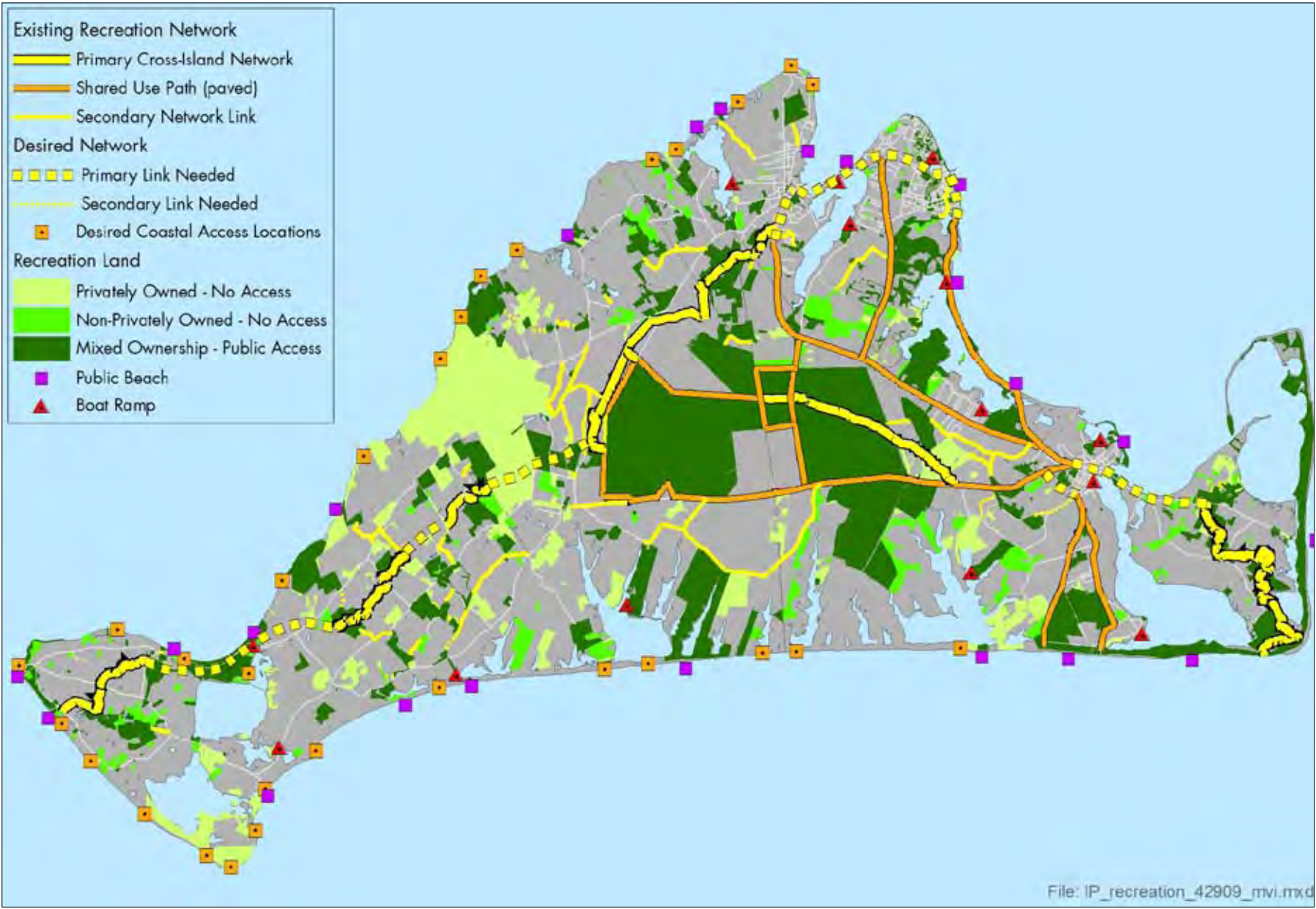
### **Strategy N3-2: Acquire new shoreline access.**

We should map existing access points and target legal public access about every five miles. Access to at least some areas should be by road, so that the elderly and immobile can reach the shore. We should use the Surfcasters Association's identification to target spots, other than every five miles, that would be particularly good to secure fishing access. In addition to mapping access, inform the public of hours and seasons of availability. We should target the area on the north shore between Tashmoo and Menemsha inlets, where public access is scant. Great ponds may be less available than they should be, in some cases because the abutting lands are privately held. The ponds themselves (ponds greater than 10 acres in size) belong to the public and should be available for recreation. We should secure access to great ponds, possibly utilizing Chapter 91 Section 18A to request a hearing on why access to a pond should be available. (See also strategy N5-3 for waterfronts in town.)

## **Objective N4: Enable residents and visitors to enjoy a diverse experience of walking, cycling and horseback riding.**

### **Strategy N4-1: Extend the greenway/trail network from Gay Head to Chappaquiddick with cross connections to the north and south shores.**

The towns, Land Bank, the MVC, and private conservation groups have been working for decades to create a network of trails allowing people to enjoy nature on foot, horseback, and in some cases, bicycle. It would be desirable that enough of these trails are located within broad open spaces – greenways – to allow people to enjoy a natural experience with little intrusion of developed areas. The eventual aim should be to create a continuous greenway/trail network, ribbons of open space, which extends from the Gay Head Cliffs to Cape Pogue, with cross branches in various locations. It is desirable that branches of this future greenway network come as close as possible to the centers of each of the towns' built-up areas, so that the greatest number of people have access to the countryside as close to home as possible. These trails and greenways could be created using a combination of acquisition of properties and easements, and through the development permitting process as properties are developed. Designation of some routes as Special Ways, through the MVC's Island Road District, can address issues of possible development that could impair access. Another method is to use



**Recreation:** This map shows open spaces and trails open to the public, desirable additional trail connections, and desirable beach access locations. (Other open spaces in pale green)

# natural environment

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a community-based outreach program to link trails through a good neighbor policy, as is used by the Trails Committee of the Chappaquiddick Island Association.

## **Strategy N4-2: Encourage landowners to allow access for those who would use the land lightly and respect the property.**

Provide financial incentives that might be helpful for land-rich and cash-poor owners, such as the 90% reduction in assessed value that is granted on Cape Cod to owners who provide conservation easements with public access. Liability and damage issues should be addressed through a risk management plan that could include an insurance pool, and by providing a package outlining liability issues and realities, for owners to use when considering providing access.

## **Objective N5: Provide access to public open spaces in village areas.**

In the rural parts of the Vineyard, open space is plentiful and most properties are large enough to provide outdoor recreational opportunities and access to nature. This is not necessarily the case in the non-rural part of the Vineyard (see Land Use Guidance Map), where people are living in multi-family dwellings or on small lots in denser, village neighborhoods, as well as workers in business establishments, and visitors in hotels and inns. The three largest town centers on the Vineyard were built on the water's edge, but today public access to much of the waterfront is limited.

## **Strategy N5-1: Ensure that public open space is available within a half-mile walk from in-town neighborhoods.**

The aim is to give access to nature and recreational opportunities without the need to drive there. For areas that are deficient, it might be possible to provide access to private open spaces (such as parts of golf courses or private conservation lands), or to acquire open space.

## **Strategy N5-2: Bring the Island's greenway network close to denser, village neighborhoods.**

Bringing greenways as close as possible to the centers of the three Down-Island towns would give easy access to the countryside to people living in the population centers. This will be a challenge for the three Down-Island towns, but it appears to be achievable by using a

combination of acquisition of some properties, and partial open space protection on others as they are developed. (The Martha's Vineyard Commission and Tisbury Planning Board are currently working on a prototype study of how this could work.) Trails should lead from the neighborhoods to the gateway of the greenway in each town.

## **Strategy N5-3: Provide continuous waterfront access in the centers of the down-island towns.**

To reconnect Vineyarders to the sea, a high priority is to open up continuous waterfront access in the densest population centers of the Down-Island towns, namely the stretch of central waterfront that is not adjacent to single-family homes. Almost all the Oak Bluffs waterfront is public and Edgartown has been using its Harbor Plan to require additional sections to be opened. Those waterfronts are faced with bulkheads and filled lands, where the public retains rights, no matter what is constructed there. Because the Vineyard Haven waterfront is mostly open beach, access to that waterfront is intermittent. There, the aim is not to construct a formal boardwalk like those in Oak Bluffs and Edgartown, but simply to allow people to have access to walk along the waterfront among the existing buildings and uses. In spots where security or safety considerations make it impossible to have this access right along the water, there should be a clearly marked by-pass.



## 3.4

# Natural Character

The Vineyard's overall character is defined largely by its natural environment. Even the casual visitor recognizes the evocative beauty and authenticity of the Island's landscapes and vistas. The word "character" can mean many different things. Here it focuses primarily on scenic values, the visibility of the Vineyard's natural environment, especially from public places such as roadside and coastal views and vistas. This visual access contributes to the community's appreciation and stewardship of natural areas.

In the Visual Preference Survey conducted by the MVC, about half of the favorite images were of nature, and half included buildings. Of the nature spots, people chose rural farms and fields as particularly important in defining Vineyard natural character. People expressed concern for maintaining ocean vistas and viewsheds, particularly narrow view corridors such as the Tashmoo Overlook, and showed preferences for rural roadside treatments. Their choices emphasized the significance of maintaining overhead tree canopies, preference for split-rail fencing over expansive stockade fence coverage, and preference for wooden guardrails.

People's sense of the Vineyard comes largely from what they see as they drive along the Vineyard's roads. The Martha's Vineyard Commission has protected roadside views and vistas to a certain extent in the Island Road District of Critical Planning Concern created in 1975, empowering the towns to adopt special regulations. There are Major Roads in all six towns and Special Ways in five towns. Special regulations for the Major Roads Zone include such mechanisms as height and setback restrictions, protections for stone walls, and requirements to bury power lines. Regulations for the Special Ways include restrictions on paving and widening.

The public's preference for open views of roadside fields is at odds with the desire of property owners to keep them shielded. The degree of openness depends on whether they are privately or publicly owned.

Also of concern is the view from public waters, especially the ponds and ocean. There is concern that development highly visible from the water is undermining the natural character of the Island.

In some locations, the aims are to preserve the appearance of openness and great space; to foster the maintenance of existing vistas and the creation of new vistas, as well as the restoration of vistas that have been lost over time from plant succession; to match the use of land to the land's natural and visual qualities; to manage change and growth to enhance the traditional and natural landscapes of the Vineyard, and to require that development plans fit the scale and quality of the inherited landscape so that generations to come will have views and open vistas to enjoy.

# natural environment

## **Objective N6: Protect roadside and coastal vistas and viewsheds.**

The highest priority is to protect the scenic roads that are still relatively intact. However, all the public roads on the Island should be scenic, and the measures outlined below should apply to all major roads. In the longer term, roads that were excessively widened and straightened should be restored to their traditional configurations, which would also serve traffic calming objectives.

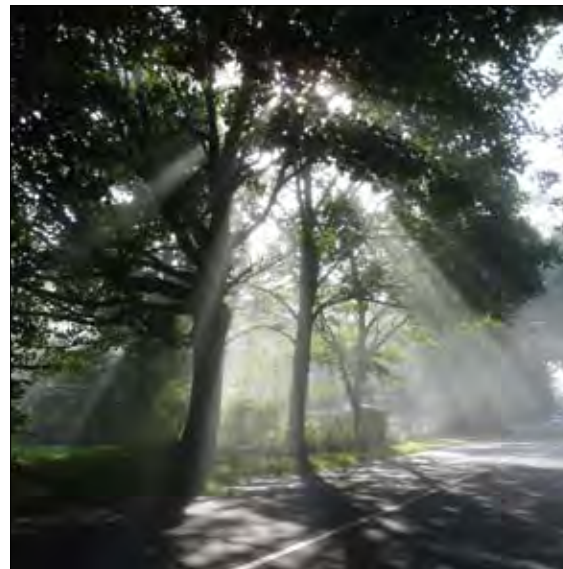
### **Strategy N6-1: Revise regulations to protect scenic roads.**

Over the years, the character of our scenic roads has been gradually, but steadily, eroded with the construction of highly visible buildings, the erection of roadside fences (especially stockade), the clearing of natural roadside vegetation to create lawns or commercial displays, installation of exterior lighting, and the proliferation of commercial and road signs. The Island Road District DCPC can provide the framework to ensure that the natural and historic character of our scenic roads are preserved, by requiring preservation of a no-cut zone to buffer new development, ensuring that fences close to the road be low and open, and regulating signage and lighting. Official designation under the Island Road District or as a “scenic road” provides additional public review of proposals to modify the road or to cut trees. It is important to identify and protect scenic vistas, and to be vigilant for opportunities to reopen critical lost views of the Island landscape and for possibilities to open up views of roadside fields or other natural features. The impact

on roadside vegetation and vistas should be considered in the design review of new projects by the MVC or town boards. Consider adding roads to the Island Road District.

### **Strategy N6-2: Set up a Roadside Vegetation Initiative to protect and enhance rural road character.**

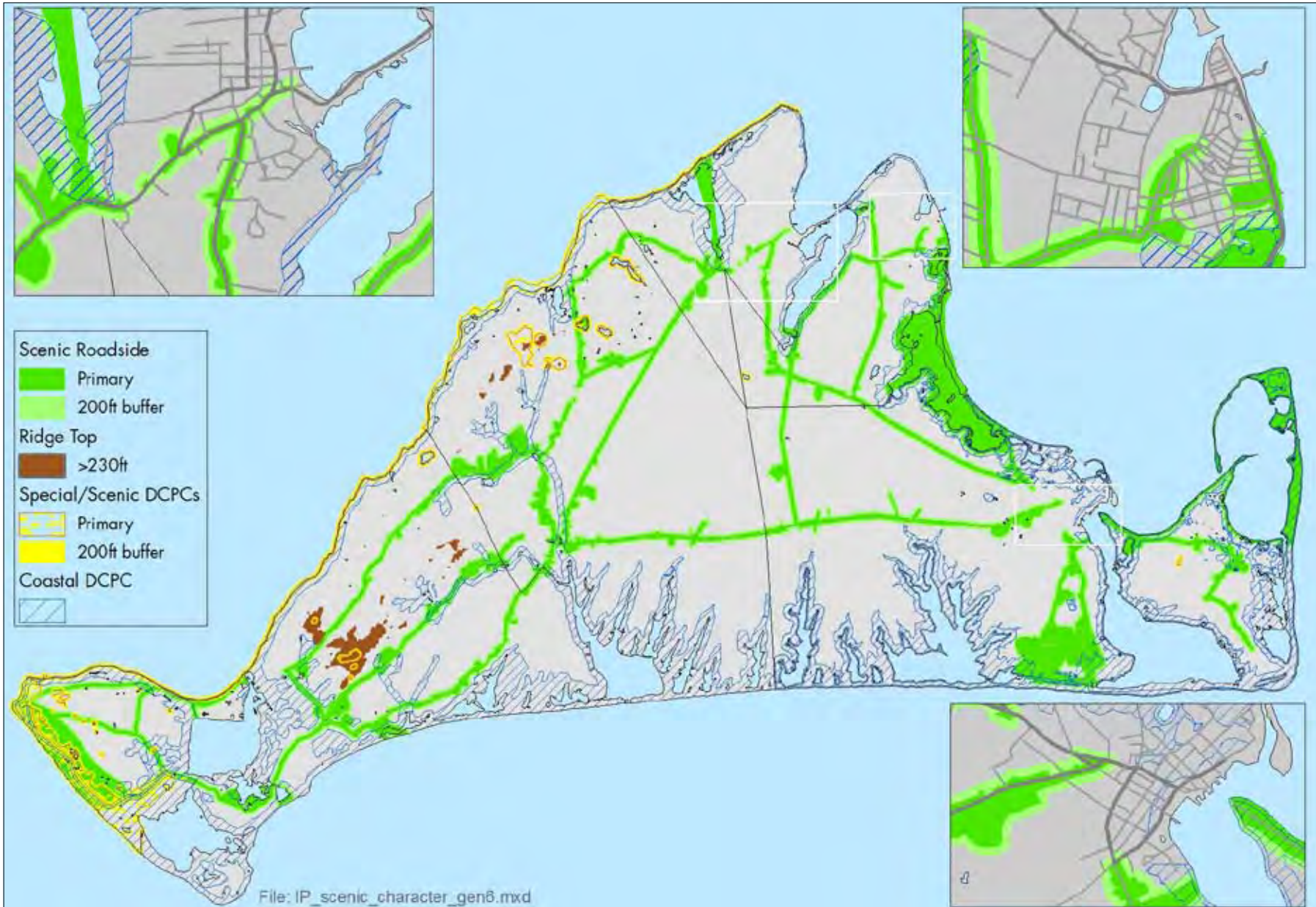
A multifaceted effort could take on a series of actions to protect and restore the character of our scenic roads. A public awareness campaign



could make the community more aware of the importance of our scenic roads and how they should be protected. Roadside property owners could be encouraged to revegetate the roadside in front of newer buildings and fences, or to open views onto roadside fields and vistas, as well as to reduce lighting visible from the roads. The first priority would be to work with public

and institutional properties – such as town buildings, schools, utility company buildings – which are often the worst offenders. Town DPWs and MassHighway should implement a program to restore scenic road treatments to roads that were excessively widened and have inappropriate road “improvements,” removing unnecessary signage and eventually narrowing the roads and replacing steel guardrails with wood ones. Roadsides should be planted with hardy, attractive natives (e.g. butterfly weed), not only to add character to long stretches of road, but also to provide useful corridors for butterflies and other pollinators. Identify the key views and vistas from public spaces, prioritizing those most vulnerable to development, and ensure that new construction or inappropriate vegetation doesn’t block or disrupt them; consider purchasing key parcels (outright or conservation easements).





**Natural Character and Scenic Values:** This map shows the primary scenic roadside viewsheds, ridge tops, and scenic Districts of Critical Planning Concern.

# natural environment



## 3.5

### Working Landscapes and Fisheries

Note: Fishing and farming affect several topics of the Island Plan, including Natural Environment and Livelihood & Commerce. The following discussion encompasses a broad range of aspects of farming, so that this issue is treated in one place in the Plan.

There is an intimate relationship between open space and working landscapes such as farming and lumbering. These land uses tend to involve large areas, while providing open space benefits for lands which might otherwise be developed for other commercial uses or for residences. Without significant change in securing of appropriate lands and facilities, fishing and farming may not remain viable industries on Martha's Vineyard, and could disappear from the landscape and waterfront. The challenge is how to conserve working land and make it available at reasonable cost for uses that have difficulty competing economically with other kinds of development.

Fishing involves planning for critical shore-based facilities, access and water quality. Agriculture has been integral to the Vineyard's culture and economy for generations and has shaped its landscape, though much of the Island's farmland has disappeared over the last century, transformed into subdivisions or allowed to revert to wooded areas.

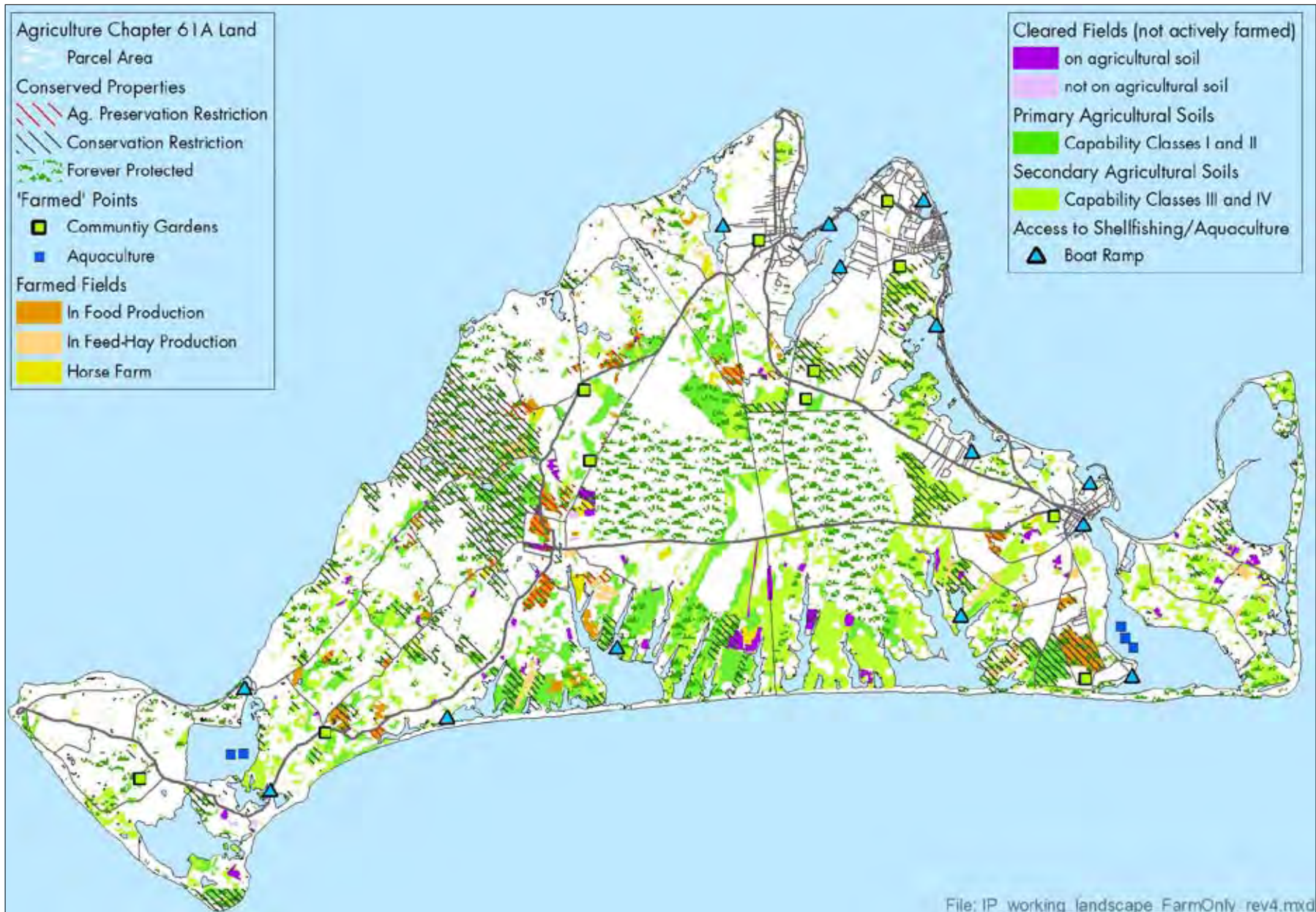
The objective of increasing fishing and farming goes well beyond the jobs created and the new economic activity directly generated. The Island's farms and fishing are icons that need to remain part of our way of life, connecting each of us to our historic roots and to the sources of our food. They are a fundamental part of the character of the Island, add to the market value of real estate, and contribute richness and authenticity to the concept of a heritage tourism program (see section 6.1). Fishing and farming and related cottage industries (e.g. products derived from Vineyard harvests) give meaningful work to those

for whom this is a passion, and in some cases combine with regular jobs to make a better living.

There are now 26 food-producing farms and 30 other farms of five acres or more on the Island, to say nothing of a large number of smaller, backyard farms. A total of 1,687 acres is classified as farmland, with 935 acres in production of food directly for human consumption, 493 acres in hay and pasture, and 259 acres of horse farms. Of the 1,428 acres of land in food-related production, only 300 acres are permanently protected.

Historically, fishing was a vital part of the Vineyard economy. Landings and revenues have gone down significantly. When offshore fishing stocks declined, large fishing vessels all but disappeared from Vineyard wharves, creating pressure to turn over those facilities to recreational uses. Once lost, it would be exceedingly difficult for fishermen to retrieve that wharfage. Fishing faces challenges from declining fish stocks in state and federal waters, the impact of pollution on shellfish stocks in local waters, limited fishing quotas, and the high cost of licensing.

Ensuring that farming and fishing flourish on Martha's Vineyard is a multifaceted challenge involving land preservation, the logistics and economics of farm operations, processing, distribution, and marketing, as well as the difficulty of finding and housing workers. Securing permanently affordable land for farming is by far the biggest challenge.



**Agriculture:** This map shows existing farms, types of legal protection, fields, and soil quality.

# natural environment

Some lands in special areas or sensitive watersheds are not suitable for agriculture, or may be unsuitable for row crops but fine for permanent vegetative covers such as hay and pasture. Light forestry is appropriate in many locations, largely to thin the stands of trees to produce lumber or firewood.



Working landscapes can contribute to open space protection and Island character. Using farmland for food production fulfills the additional goals of making the Island more self-sufficient in food and of fostering food-related employment. We should aim to produce enough to meet at least 20% of the needs of the year-round population.

## Food Self-Sufficiency

It is estimated that the present farms could theoretically produce about 8% of the food demand of the year-round population, based on dollar values of production and consumption (actual production is far less).

This percentage would drop to about 2% if only the permanently protected land remains in food production and the population grows according to the Present Trends option (section 2 – Development & Growth).

However, it could be as much as 47% with an optimistic projection of the area of land in food production (all existing farms and fields, 20% of undeveloped prime agricultural soils, and a large number of backyard gardens), with a Vineyard Food Basket (less meat, more locally viable crops), and the No Net Growth Scenario.

(These are preliminary estimates. The final estimates will be published in a Technical Bulletin: Agricultural Self-Sufficiency.)

Currently, a tomato shipped from California can cost less than one grown just down the road. As agriculture expands on the Island, leading to economies of scale, and as rising energy costs make long-distance shipping more expensive, we can anticipate that locally produced food will become increasingly price-competitive. Farming would also be aided with strategies discussed in other sections of the Island Plan, such as provision of dormitory housing for the seasonal workforce.

## Objective N7: Increase farming and food production.

Ensuring that farming flourishes on Martha's Vineyard is a multifaceted challenge involving land preservation, the logistics and economics of farm operations, processing, distribution, and marketing, as well as the difficulty of finding and housing workers.

### Strategy N7-1: Set up a Martha's Vineyard Agricultural Commission.

The Vineyard is fortunate to have several organizations that work directly or indirectly to promote agriculture – the Agricultural Society, the Island Grown Initiative, the Martha's Vineyard Shellfish Group, the Farm Institute, the Martha's Vineyard Conservation Partnership, the County, and the MVC. However, each of these organizations has a specific and limited mandate or role. A Vineyard Agricultural Commission could help coordinate ongoing efforts and take on new responsibilities to further agriculture on the Island. The nonregulatory AgCom could advise boards of selectmen and other town entities about agricultural and aquaculture issues, advocate for the local agricultural community, encourage the pursuit of agriculture, promote agriculture/aquaculture-based economic opportunities, preserve, revitalize, and sustain agricultural businesses and land, developing trust and a working relationship among farmers, residents, town boards, and other institutions, and oversee implementation of the other strategies listed below. It is proposed that the AgCom comprise a representative of each town and each of the

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above organizations. An informal Martha's Vineyard Agricultural Alliance has been set up as a first step to creating the AgCom.

### **Strategy N7-2: Increase efforts to protect and increase farmland.**

Efforts to preserve farmland and to maintain active farming on the Island have been heroic, often involving great personal sacrifice by property owners and farmers. The AgCom can support efforts to provide affordable farmland into the future, focusing first on protecting existing working farms which might otherwise disappear with the next generation. Next, the effort should focus on expanding farmland, targeting the fallow fields and the 2,641 acres of undeveloped land that is classified as prime agricultural soils. Lands with greater habitat value or in nitrogen-sensitive watersheds should be avoided or carefully managed. The AgCom, in collaboration with the agricultural community, and with technical assistance from the MVC, should identify important existing and potential agricultural lands. Specific techniques that could be used to increase the amount of farmland include using more public land for farming, such as appropriate Land Bank land, school properties, public and utility rights of way, and landfills after restrictions have expired; as well as using tax incentives related to Conservation Restrictions (permanent) and Chapter 61A (not permanent) protections.

### **Strategy N7-3: Increase food production. Several techniques could be used to make Martha's Vineyard more self-sufficient in food.**

We should increase land in food production by protecting more agricultural land and by increasing the proportion of agricultural land that is in food production (such as by having the Land Bank and other land conservation entities make this a requirement for future agricultural protection agreements). We could increase yield per acre, particularly in the areas of backyard gardens and greenhouses, provided these techniques are environmentally sound. We could change what we eat, eliminating foods that don't grow well here and reducing the consumption of meat products that involve significantly more land than production of vegetables, grains and beans.

### **Strategy N7-4: Increase agriculture infrastructure.**

Plan and execute needed agricultural infrastructure; such as a meat processing facility (building on IGI's experience with poultry processing), a fish-processing facility, a dairy co-operative (as there was on the Island from 1946-1961), a co-operative for buying and delivering farm supplies, and greenhouses for winter growing.

### **Strategy N7-5: Utilize value-added techniques to extend production.**

Selling processed agricultural products – such as strawberry jam from Vineyard berries or sweaters from Vineyard sheep – helps take full advantage of local crops and increase sales and export possibilities.

### **Strategy N7-6: Resolve issues of local supply and demand.**

Local food producers and contract buyers (restaurants, grocers) have identified the need for improvements to the distribution system to allow farmers to plan production and be assured of sales. Buyers also need a reliable local supply, which may mean that the farmers would have to grow extra, necessitating a market for surplus.

### **Strategy N7-7: Promote and market local food.**

Continuing efforts to promote Island-grown foods not only support the efforts of individual producers, but also foster pride in the Vineyard as a food producer. Adoption of Right-To-Farm by-laws indicates community support for agriculture, and encourages people to be proud to live near farms and to embrace farming in their neighborhoods.

# natural environment

## Objective N8: Increase fishing.

Many of the strategies outlined above for farming apply equally to fishing, such as those dealing with distribution, promotion, and marketing. The following are additional strategies dealing specifically with fishing.



### Strategy N8-1: Enhance shellfish stocks in coastal ponds.

Presently, the Island has three active shellfish hatcheries and a fourth that is not operating. In addition to restoring water quality and habitat, we should increase the production of shellfish seed from local brood stock. The seed then needs to be grown to survivable size and planted out into ponds. This could lead to hundreds of jobs in commercial shellfishing.

### Strategy N8-2: Increase aquaculture.

Aquaculture – in coastal ponds and in open ocean waters within three miles of shore – can provide many benefits for the community, supplying local food, creating jobs, and removing nitrogen from coastal ponds. The priority is shellfish, since farming finfish involves many environmental problems. It would be best to use aquaculture techniques that minimize conflicts with recreational boating and scenic values, and protect the ecologically fragile pond bottoms.

### Strategy N8-3: Protect harbor facilities for commercial fishing.

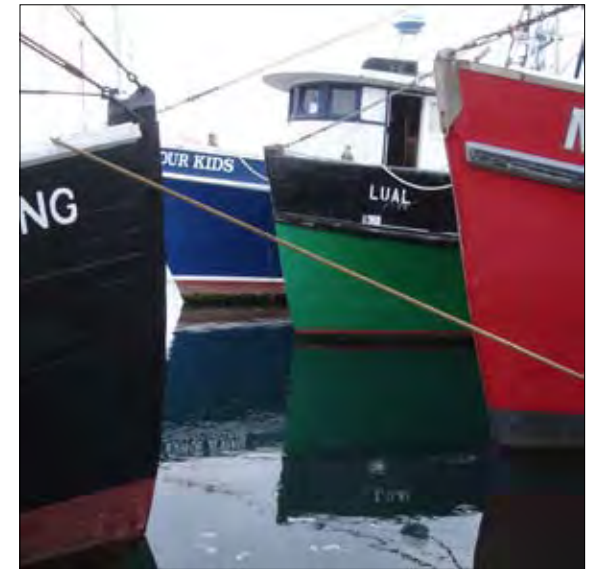
The federal government is moving aggressively to restore offshore fish stocks. It is important that we reserve wharfage and room for icing and takeout facilities, in order to reestablish a viable local large-vessel commercial fishing industry as fish stocks come back.

### Strategy N8-4: Set up facilities for on-Island fish processing.

The shortage of licensed fish processing facilities means that most fish landed by local fishermen must be taken to New Bedford or other ports for processing. A cooperative processing facility on-Island would allow local fish to be sold directly to Island fish markets, grocers, and restaurants. Other measures might facilitate direct sales from fishermen to consumers, something now prohibited by state legislation.

### Strategy N8-5: Purchase community-owned fishing licenses.

Since the cost of a commercial fishing license is prohibitive for local fishermen, almost all licenses are bought by corporations. A Vineyard fishing cooperative or other entity could buy one license and allow several fishermen to operate under it. This strategy has been successful in Maine, and is being investigated by the Martha's Vineyard/Dukes County Commercial Fishermen's Association.



## Objective N9: Promote lumbering.

The land on Martha's Vineyard is so valuable from both an economic and biodiversity point of view that it is not realistic to expect any new commercial plantations for lumbering. However, there is potential for a limited lumber industry on the Island, mainly selective harvesting in wooded areas. Island lumber could be used to make products such as furniture and toys.

### Strategy N9-1: Accommodate the homegrown lumber industry.

Encourage a small scale lumbering industry to harvest trees that need to be thinned and transform them into useful lumber, rather than simply chipping and disposing. This could include removing white pines from the State Forest. This lumber can then be used for construction or making wood products. Harvesting local firewood, especially in areas where this will also improve habitat value (e.g. State Forest) should go hand in hand with a reduction in imports of firewood, which is a key vector for tree disease.



## 3.6

# Climate Change

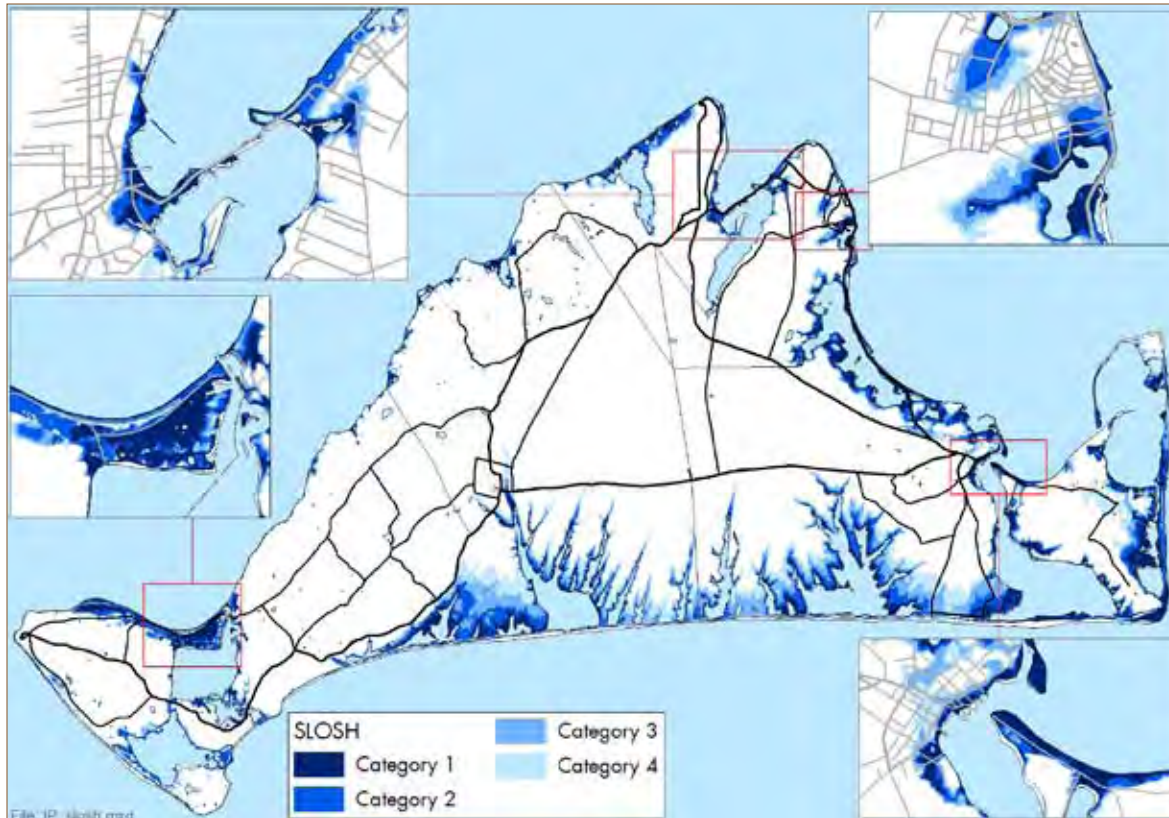
A great body of science demonstrates that the world's consumption of fossil fuels has resulted in increased dispersion of greenhouse gases, altering the planet's atmosphere to the point of global warming and resultant acceleration of sea level rise. In turn, these environmental changes may flood buildings and infrastructure, shift locations of habitats, alter growing seasons for crops, introduce new pests and invasive species, increase extreme weather events (droughts, flooding, and storms), and create more health stress from extreme heat and poorer air quality. Though the extent and timing of the changes communities can expect is uncertain,

current evidence and projections suggest that impacts to the Vineyard are potentially of such magnitude or importance that it is only prudent to anticipate and plan for such contingencies.

Much of the focus of climate change impacts has been on sea level rise. According to the Intergovernmental Panel on Climate Change, by the end of this century we may expect worldwide (eustatic) sea level rise of from 7-15 inches (from a temperature increase of 3.2 degrees F) to 10-23 inches (from a temperature increase of 7.2 degrees F). Recent projections are even greater.

The potential sea rise is much greater for Martha's Vineyard. The Cape and Islands are among many areas around the world where the earth continues to subside relative to sea level. This local subsidence has added to the submergence felt worldwide, so that in the last 100 years, sea level has risen in our area between 10.2 inches (at Woods Hole) and 11.9 inches (at Nantucket), compared to the 6.7-inch worldwide rise in sea level. It is reasonable to assume that local sea level rise may be significantly higher than worldwide projections, meaning that significant public infrastructure as well as private properties on the Vineyard are at risk and will be inundated at some point. Much of the Vineyard's activities and economy are focused on the coastline and are therefore particularly vulnerable to change.

# natural environment



**Storm Surge:** These are the areas that could be affected by storm surge flooding associated with various intensities of hurricane, based on current sea levels.

Section 7 (Energy & Waste) outlines measures to reduce the Vineyard’s contribution to greenhouse gases by adopting practices that generate fewer harmful emissions, such as using energy more efficiently and using clean, renewable energy

sources. The open space protection measures in this section may make a small but symbolic contribution to conserving vegetation that locks up carbon and filters and cools the air.

However much the Vineyard demonstrates responsible action, it is now clear that we must prepare to adapt to the inevitable impacts of climate change.

## Objective N10: Prepare for climate change.

We need to assess the vulnerability of the Vineyard to the diverse impacts related to climate change and plan accordingly to conserve human and natural resources.

Some of the measures outlined elsewhere in the Island Plan will help the community deal with the impacts of climate change. Increased heat stress to coastal ponds will probably promote growth of undesirable plants and animals, further deteriorating water quality, and making decreasing nitrogen input to groundwater even more important. The preservation of large, Minimum Viable Landscapes of native habitat will allow communities and species of plants and animals to shift in response to climate stress.

## Strategy N10-1: Identify lands and infrastructure most at risk to sea level rise.

A Climate Change Plan should be prepared for the Vineyard that uses computer modeling to identify lands at greatest risk from sea-level rise, based on considerations such as previous shoreline change, topography, and a likely range of sea-level change. It should identify areas likely to become underwater, wetlands, or subject to storm surges. This Plan should identify the measures that the Vineyard should use to adapt to and/or mitigate the impacts of climate change, such as those mentioned in the other strategies below. The Oak Bluffs conservation commission’s ongoing collaboration with the Massachusetts Coastal Zone Management Storm



Smart Coasts Program to identify measures for responding to climate change could serve as a model for other towns.

**Strategy N10-2: Limit construction in areas at greatest risk and adopt measures to limit impacts.**

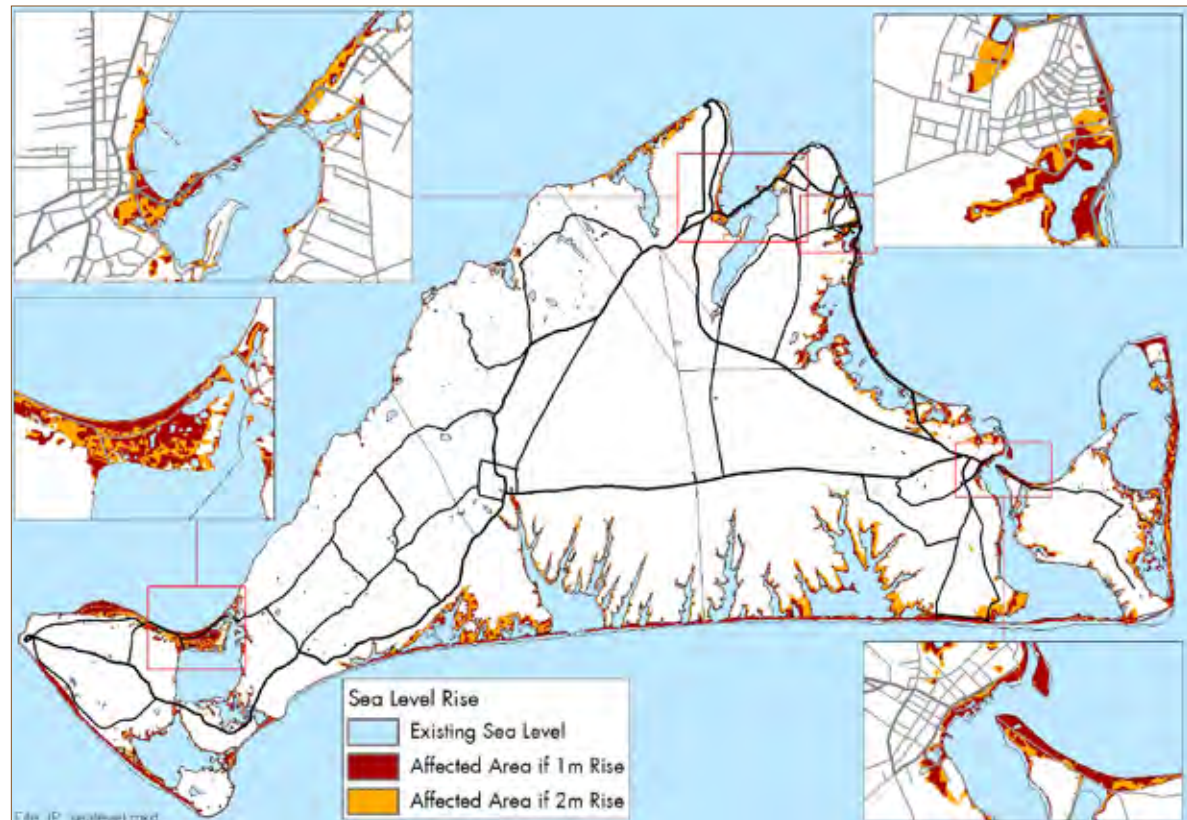
Construction – or reconstruction after storm damage – of buildings or infrastructure should be prohibited in the most highly susceptible areas, including areas which would prevent wetlands from migrating inland so they can continue to play their essential ecological/ environmental roles. Buildings that are damaged in storm surges may contribute significant impacts as toxins, debris and septage enter ponds and bays, affecting water quality, shellfish, and public use of these resources. Building codes should be updated to ensure higher elevations and distance from shorelines as protection from storms and flooding.

**Strategy N10-3: Preserve lands that are susceptible to climate change impacts as open space.**

Acquire lands in areas identified as highly susceptible to flooding (but not soon to be lost to erosion) – especially if they are ecologically important or serve some other open space purpose. Federal pre-disaster mitigation funds may be used acquire land to undevelop properties that cannot be mitigated.

**Strategy N10-4: Carry out pre-disaster mitigation to reduce impacts from storms and flooding.**

The MVC and Island towns recently prepared a Pre-Disaster Mitigation Plan to help identify



**Sea-Level Rise:** The colored areas represent the areas that would be underwater with one or two meter (3 or 6') rises in sea level. The areas subject to storm surges would move further inland, compared to the previous map.

facilities most at risk from natural disasters, and to identify what measures could be taken to minimize impacts in case of an event. This plan should be updated to incorporate projections related to climate change. For example, more aggressive fire-wise strategies such as removal of fuels and their replacement with native vegetation would help deal with the anticipated increased summer fire hazard. Floodplain regulations should be updated to address storms and coastal flooding.

**Strategy N10-5: Minimize shoreline armoring.**

As erosion rates increase with sea level rise, pressure will increase to armor shorelines to protect houses. However, this just directs the erosive forces to the next unprotected shoreline down-drift and prevents beaches from rebuilding such natural storm defenses as dune systems.

# SECTION 4

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# BUILT ENVIRONMENT

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## GOAL: Preserve the distinct character of Martha's Vineyard and promote environmentally sound building.

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TARGET: Ensure that new buildings fit their context by tailoring zoning to reflect each neighborhood's characteristics and by extending design review to all historic areas and traditional neighborhoods.

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**M**ARTHA'S VINEYARD'S UNIQUE, coherent, high-quality built environment is threatened by demolition of significant older buildings and construction of new buildings that are too big, don't fit their surroundings, and/or are not environmentally sound. In the face of increasing threats, largely related to high property values, the Vineyard needs to more actively preserve this distinct character and promote environmentally sound building.

This section looks at:

- **Historic Resources:** the areas, buildings, and public spaces with cultural value to the community, including historic buildings and areas, and other resources such as stone walls, landscaping features, and archeological artifacts.
- **Community Character:** the broader issue of maintaining general neighborhood and Island character, and ensuring that new construction is compatible with existing areas, including minimizing negative impacts on public areas and on abutters.
- **Green Building:** increasing the efficiency with which buildings use resources such as energy, water, and materials, while reducing building impacts on human health and the environment.
- **Opportunity Areas:** selected locations where substantial change is anticipated over the next generation that could substantially and positively modify their character.

# built environment

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The Vineyard's beautiful, historic, and cohesive built environment – everything man-made – is among the most remarkable in the country and is an important part of the scenic beauty at the heart of the Island's character, identity, and visitor-based economy.

It is made up of historic town and village centers, each with its own distinct character such as the white clapboard public buildings and grand residences of Edgartown, the fanciful multi-colored Victorian cottages in Oak Bluffs, and the fishing shacks of Menemsha. These are surrounded by traditional neighborhoods and linked by rural roads lined with stone walls and dotted by roadside farmhouses.

The fact that, throughout the 20th century, we continued to use mostly traditional local forms and materials has resulted in a cohesive built environment that sets the whole Island apart from the rest of America, with its cookie-cutter suburban sprawl and its "Anywhere USA" strip commercial development.

Recent construction usually follows traditional local forms (typically a combination of several simple building volumes with steeply sloping



roofs) and materials (typically white siding in some towns, cedar shingles elsewhere), though there are some newer buildings, especially in suburbs, whose size, style, and materials are not in the Vineyard tradition.

Several factors now threaten this built environment. Skyrocketing real estate costs lead some people to maximize use of their property by demolishing older structures and erecting buildings that go to the limits of zoning regulations, that are too big or otherwise don't fit their surroundings, or that are not environmentally sound. This is exacerbated by a growth in the number of people with few ties to the Vineyard who buy properties and hire architects or builders from different parts of the country whose designs have little relation to the Vineyard tradition or context. A few poorly designed buildings in highly visible locations can seriously undermine the Island's character.

We need more pro-active tools to preserve the Vineyard's distinct character and ensure that environmental concerns are respected, such as revised zoning for quantifiable issues such as setbacks or energy consumption, a process design review for qualitative issues, education, and incentives.

## Objective B1: Increase public awareness of the Vineyard's built environment.

On Martha's Vineyard, much attention is focused on our exceptional natural environment, while less attention is given to the Island's outstanding built environment. This proposed strategy deals with all topics in the Built Environment section.



### Strategy B1-1: Produce a publication for property owners and building designers on what defines the Vineyard's distinct built environment and how to protect it, on historic areas, and on green building.

A guidebook on Building the Vineyard Way should be published that deals with all the issues discussed in this section, including the special features of each historic area, what defines Visually Critical Areas, and the general character of Vineyard buildings, roadscapes, public spaces, and landscaping. It should include guidelines about how to protect existing buildings and features, and how new development can fit in, as well as information about green building and ways to reduce environmental impacts including dark-sky compliant lighting. The key is identifying the defining characteristics of each area on the Island – typical siting, relationship to street (setback, orientation), scale, and massing, and sometimes style – and educating people so they know what they are buying into and are sensitive to the context when planning their building projects. The information contained in this document could also be made available in other ways, such as on the Internet, on community television, in information sessions, with walking tours, and in a traveling exhibit. The MVC could coordinate this with input from planning boards, historic district commissions, and Island architects.



# 4.1

## Historic Resources

Most important for keeping the authentic, unique character of Martha's Vineyard is preserving historic buildings and other historic resources from destruction or inappropriate alteration.

Most of the Island's historic buildings are concentrated in historic town centers, traditional neighborhoods, and along historic roads. The map on page 4-5 identifies two types of older area which, together, include a significant proportion of the pre-1946 buildings, though they represent only 5% of the land:

# built environment

- **Historic Areas:** These areas have high concentrations of buildings over a hundred years old, whether or not they are now officially designated as historic districts, including the town centers of Edgartown, Oak Bluffs, Tisbury, West Tisbury, and Menemsha.

- **Traditional Neighborhoods:** These areas, outside the Historic Areas, have high concentrations of buildings built before the end of World War II, and/or where the urban pattern was set before the War.

- **Scenic Roads:** The main roads of the Island, all of which pre-date World War II, are significant for a combination of historic, natural, and visual reasons.

Some 2,000 buildings more than 100 years old still stand on the Vineyard, as do another 1,500 built before the end of World War II. Of these, about 930 are located in the Island's six designated Historic Districts (which cover 502 acres), four of which are on the National Register of Historic Places. Another 1,900 are concentrated in Historic Areas (about 2,000 acres for the Island) and Traditional Neighborhoods (about 500 acres).

A decade ago, historic building surveys were undertaken for parts of all six Island towns. Some of the surveys updated earlier, incomplete survey forms but, while not an exhaustive inventory, more than 150 structures and places were recommended for nomination to the National Register of Historic Places or Districts. Additional properties were recommended



for further study. At the same time, similar archeological surveys were conducted in all towns but Tisbury.

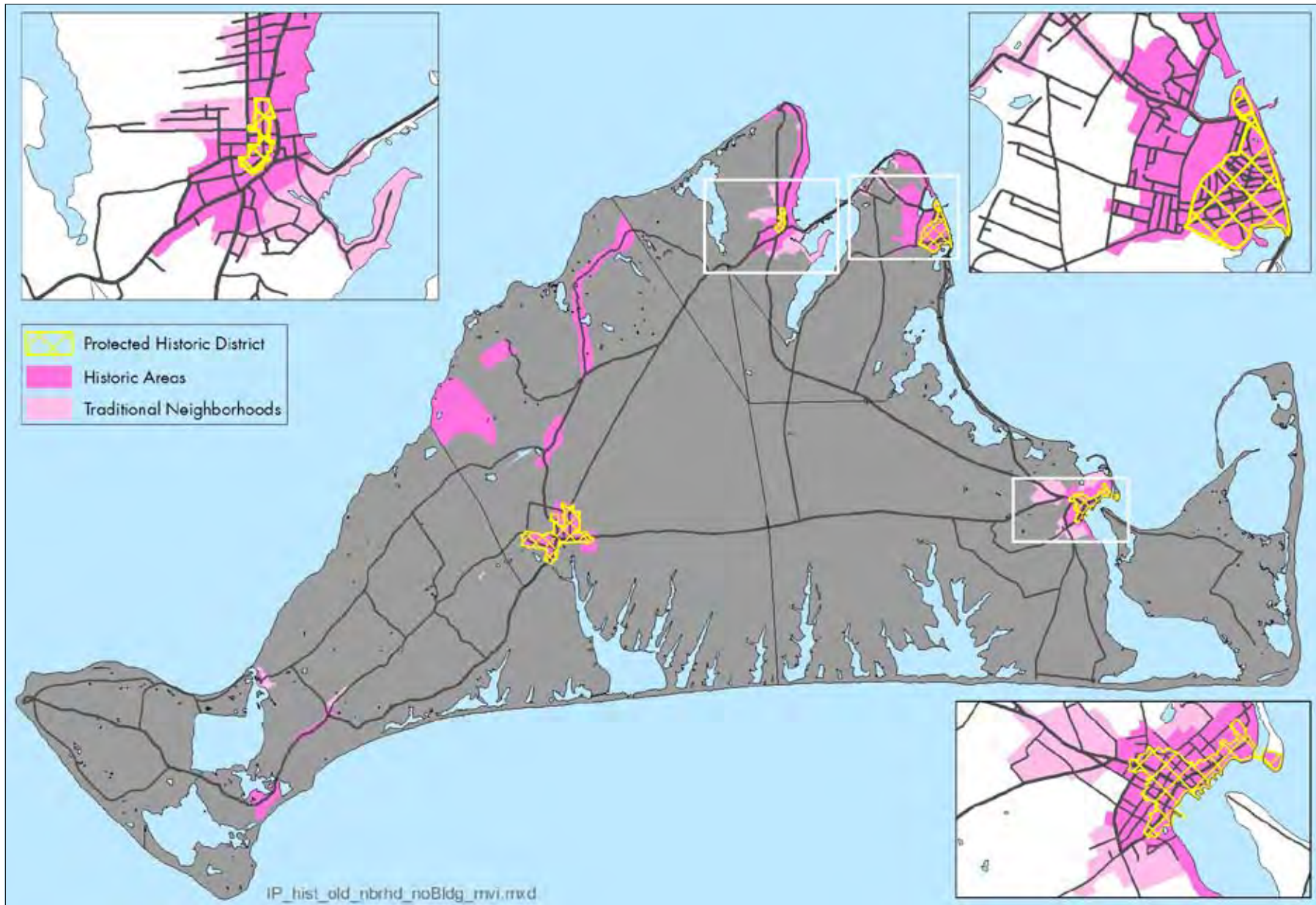
As development pressure increases in the future, the Island's historic buildings and other resources will be increasingly threatened by demolition, disfigurement, and inappropriate new construction that undermine the character of historic buildings, streetscapes, scenic roads, traditional villages, and other historic areas.

## **Objective B2: Protect historic resources – such as culturally significant buildings, streetscapes, and areas – and ensure that new development is compatible.**

To improve protection of historic resources, we should identify and preserve the significant features of historic areas, streetscapes, public spaces, structures, uses, artifacts, and other resources. We should also ensure that new additions to historic structures and new infill buildings in historic areas harmonize with the defining characteristics of the existing buildings and areas. It is generally preferable to protect historic resources on an area basis, since this allows for an integrated approach to zoning and design review, and yields a cohesive environment that is to everyone's benefit. Preservation of existing buildings is environmentally sound compared to the considerable energy and other resources involved in demolition and reconstruction.

### **Strategy B2-1: Identify historic resources and area defining characteristics, and prepare guidelines.**

The first step in protecting historic resources is to take the existing inventories of buildings and archeology, and complete them to include all significant resources. For Historic Areas, these should indicate which buildings are the most significant and should be carefully preserved intact, which buildings are of moderate importance with more flexibility about changes or additions that don't affect the character-



**Historic Areas and Traditional Neighborhoods:** Only a small fraction of historic areas (concentrations of hundred year-old buildings) or traditional neighborhoods (concentrations of sixty year-old buildings) are protected with historic district designation.

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defining features, and which buildings are of little value and could be altered or replaced. Guidelines should be prepared to identify the defining characteristics of each area, such as alignment of buildings, relation to street, distance between buildings, presence of fences, volume, density, scale, materials, roof shape, solid-to-void relationship of windows and doors, etc., without being overly proscriptive about style. Simple diagrams could help explain relationships. In some areas, characteristics are quite consistent and it is more important that new buildings respect these features; in other areas, there is more variation, offering more flexibility for new buildings.

## **Strategy B2-2: Enlarge historic districts to protect all historic areas and traditional neighborhoods.**

We should enlarge historic districts and create new ones to protect the large parts of the Historic Areas and Traditional Neighborhoods identified in this plan that have no protection. This would provide for review of proposals to demolish or modify buildings. There might be some resistance to historic designation; however, this is the most effective way to protect the quality of people's streetscape and neighborhood, and to protect their property values. For Traditional Neighborhoods, this could involve creating Neighborhood Conservation Districts, which provide more flexibility in project review.

## **Strategy B2-3: Revise zoning in historic areas and traditional neighborhoods to conform to historic patterns.**

Often zoning is not aligned to historic patterns. If too permissive, this can lead to the demolition of historic buildings because an owner can build a much larger building on the property, and it also allows for excessively large new buildings



that don't fit into their historic context, especially with respect to building massing and setbacks. If too restrictive, they may require much larger lot sizes or setbacks than other buildings on a street. For example, in the historic areas of Edgartown and Oak Bluffs, the minimum lot size was changed to be larger than the historic pattern, leading to bigger houses that don't fit into the neighborhood (and are less affordable). So a fundamental principle for historic areas and traditional neighborhoods is to ensure that

zoning regulations closely match the existing pattern with respect to density, setback, and height. This could include reverting to historic lot sizes, allowing smaller houses on smaller lots (possibly linked to a requirement that units be used only for year-round, owner-occupied housing and/or affordable housing and provided that wastewater, traffic, noise, and privacy issues have been dealt with). To allow successful historic preservation projects, zoning could provide for exemptions from some regulations such as easing parking requirements and use restrictions, allowing greater lot coverage and floor area, and allowing guest houses.

## **Strategy B2-4: Improve the operation of historic districts.**

The most effective Historic District Commissions publish clear guidelines for preservation and harmonious new construction that help owners and architects design appropriate projects, and serve as a basis for a commission's review of applications (see Strategy B2-1). Historic District Commissions could also individually or collectively provide education (e.g. publications, courses, websites) and technical assistance to property owners, architects, and builders to help them make appropriate choices. Island Historic District Commissions could meet regularly to share experiences and learn about best practices on and off the Island on issues such as establishing and enlarging historic districts, other legal measures (such as creating demolition delay by-laws and how to refer applications to the MVC), and issues related to renovation (e.g. appropriate window types, how to deal with solar panels, use of plastic trim).



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**Strategy B2-5: Designate individual structures outside historic districts.**

The 2,570 buildings, as well as other structures and archeological sites, located outside historic areas also need protection. This requires designating them, and requiring that proposals to alter or demolish them are reviewed by planning boards or historic district commissions. Since Massachusetts law does not provide for designation of individual structures, this should be done by using the MVC Act's provision for Districts of Critical Planning Concern.

**Strategy B2-6: Establish a revolving fund and a grant program to promote historic preservation.**

Revolving funds allow for the purchase of buildings which are then resold after preservation easements have been placed on them, and sometimes after restoration work was carried out. This allows leveraging a limited amount of funds into a maximum amount of preservation, as evidenced by the Providence Revolving Fund, a program that includes funding for affordable homes of heritage value. Outright grants can also play a key role in getting an owner to opt for preservation. Community Preservation Act funds can be used.

**Strategy B2-7: Make greater use of federal historic tax credits and other incentives.**

We should list more historic buildings and areas on the National Register of Historic Places to make them eligible for Federal Historic Tax Credits, informing owners of the availability of these credits at time of purchase or when inquiries about building permits are made. There has been extraordinary success in using revolving funds for preservation, such as buying façade easements from willing owners, leaving them freedom to do what they want in the parts not visible from the public way.

**Strategy B2-8: Set up an advocacy organization promoting historic preservation and the quality of the built environment.**

Several organizations advocate effectively for the Island's natural environment, but none for the built environment, which is somewhat surprising given the richness of the Vineyard's historic buildings and neighborhoods, and the general importance of building design to the Island's character. The Martha's Vineyard Preservation Trust's mandate is to manage the historic properties it owns rather than advocate for preservation of other buildings; the Martha's Vineyard Museum manages its collection and is a historic society rather than a preservation organization. An Island-wide advocacy organization could work to promote preservation of historic buildings and neighborhoods, cultural landscapes, archeology, and good building design. It could be made up of architects, historians, and interested citizens.



## 4.2

# Community Character

This section looks at retaining the Vineyard's character in the 95% of the Island outside Historic Areas or Traditional Neighborhoods.

Buildings should generally harmonize with their neighborhoods or natural settings, and minimize any negative impacts on Island character and on abutters are minimized. This is especially important as seen from major public roads and vistas, and from public waters – ponds and the ocean. For example, under current zoning, about 540 buildings could be erected only slightly set back from the Island's scenic

# built environment

roads, and there is nothing to prevent owners of these, or existing, buildings from removing the vegetation that now lines these rural roads. The result would transform the country part of the Island into what would appear to be a densely built suburb. Also of great concern is the construction of new buildings that are so large that they overwhelm their neighborhood.

This can be addressed by ensuring that new construction is compatible with the character of neighborhoods, roadscapes, and the Vineyard as a whole. In many natural areas, this often means limiting the visual presence of new development. At the same time, the flexibility and creativity of owners and project designers should not be unnecessarily inhibited.

We want to avoid a free-for-all where inappropriate new construction is allowed to undermine Island character and to negatively impact quality of life and property values. But we also want to avoid an excessively bureaucratic approach requiring individual review of all projects, or an excessively restrictive approach that squelches creativity, such as a requirement that even buildings in new subdivisions must exactly follow historic design details down to the number of window panes.

It is proposed that the community take a two-pronged approach:

- Use a system of individual project review for the relatively few projects that are more critical because of their location – especially those highly visible from major roads or public waters – or some other factor, such as size.
- For other areas and projects, use a combination of zoning to ensure that the basic parameters of new buildings are appropriate, and education to make owners aware of other considerations about site layout, building design and landscaping (see Strategy 3.0-1).

## House Size

So-called “trophy homes” or “McMansions” are the poster child for concerns about the changing Vineyard. Many people expressed concern about the visual impact of large new homes, their energy and water use, as well as the traffic and loss of open space they generate. The number of large houses is certainly increasing, with the percentage of houses with more than 4,000 square feet of living area before and after 1990 increasing from 3% to 5% in Tisbury, and from 8% to 19% in Chilmark. It must be remembered, however, that the vast majority of new houses are still smaller than 4,000 square feet and many impacts are similar no matter how large a house is. In some cases, it might be preferable to have one large house on thirty acres in an environmentally sensitive area, than to build ten medium-sized houses along with ten guesthouses, ten garages, and multiple swimming pools and tennis courts.

**Objective B3: Protect community character by ensuring that buildings fit their context – especially as seen from public places such as roads and public waters – while allowing creativity and flexibility.**

**Strategy B3-1: Set up project review processes along Scenic Roads and Public Waters Viewsheds.**

The first step is to identify and designate Visually Critical Areas. For Scenic Roads, the viewshed along the Island’s main roads includes a depth of 100 feet in wooded areas, the visual extent of open landscapes (e.g. fields, low vegetation found in areas such as Moshup Trail and Cape Pogue), as well as scenic vistas from public spaces. The Public Waters Viewsheds include areas clearly visible from 100 feet offshore in coastal ponds and the ocean. The MVC and/or towns should establish an approval process for projects in these areas (MVC review, special permit, and/or site plan review as discussed in section 10 of this Plan). Projects that are clearly demonstrated to have limited impact – say by maintaining a permanent 50-foot no-cut zone between them and a Scenic Road, by keeping fencing low and open, or by being visually narrower than a given angle as seen from the coast – could be exempted from review. Larger buildings could be permitted, but would be reviewed to ensure that their impact was minimized. Two existing Districts of Critical Planning Concern – the Island Road District

and the Coastal District – could provide the legal framework to allow towns to adopt the necessary regulations.

**Strategy B3-2: Set up a project review process for high-impact buildings based on size or other criteria.**

A design review process for high-impact buildings such as those larger than a specific size would help ensure that new or enlarged buildings are properly reviewed, given their potentially greater impact. The threshold could vary by neighborhood. For denser neighborhoods, it could apply to all buildings whose floor space was, say, more than 25% greater than the average for the neighborhood. In rural areas, it could require review of any project greater than, say, 5,000 square feet. The trigger might also be based on project density, so that larger projects on larger lots would not be reviewed. Projects could be exempted if they met objective criteria dealing with potential areas of concern, such as ensuring adequate wastewater treatment, limiting energy consumption, and minimizing visual impact. The process could require a special permit from a town board for projects with local impact, and MVC review for more significant projects.

**Strategy B3-3: Revise zoning requirements in neighborhoods to conform to existing character.**

For much of the Island, even outside Historic Areas and Traditional Neighborhoods, the zoning bears little relation to the actual pattern of building in an area. Large areas, even whole towns, have the same minimum setbacks and



**Urban Design Study:** An analysis of past and present built form can provide guidance for future development. The MVC is working with the Tisbury Planning Board on a design study analyzing the past and present defining characteristics (buildings in white based on 1914 map).

maximum building heights, adopted in the 1970s and based on standard formulae used across America. Until recently, this was not so much of a problem since people erected buildings much smaller than the maximum permitted in zoning regulations. However, the high current property values, changing lifestyles,

and the fact that we are running out of vacant land are increasingly leading people to build right up to the maximum permitted in zoning. For example, traditionally, virtually every building on the Island had a steeply sloping roof. But today, someone trying to maximize the floor space within a 35-foot height limit is tempted to propose a bulky building with a flat roof. Zoning dimensional regulations (setbacks, building heights, density, etc.) in neighborhoods should be revised to bring them into general conformity with the existing pattern, thereby preventing the most inappropriate new development. Also, we should limit paving over front lawns in town to park cars, as well as creating large parking areas in front of buildings in all areas.

**Strategy B3-4: Set up municipal tree-planting programs.**

Each town has a tree warden responsible for public shade trees (pruning, removal of damaged trees, planting). The Aquinnah DCPC also gives the tree warden review powers for clearing, cutting, pruning, and topping of ground cover shrubs and trees on public and private land. It is recommended that other towns follow suit, at least for major trees on or close to the public way. A related effort is to set up municipal street tree planting programs to plant and maintain trees along public roads. Those responsible for this program could also offer advice and assistance (e.g. access to plant stock) to help people increase vegetation in front of buildings and fences in Visually Critical Areas.

# built environment

## **Strategy B3-5: Plan and implement improvements to the public realm.**

An important factor in determining the character of a community is the design of its public realm, namely the publicly owned streets, sidewalks, rights-of-way, parks and other publicly accessible open spaces, as well as its public and civic buildings and facilities. Adopting an integrated plan for the design of these spaces – including street lighting, street furniture, and signage – would ensure that decisions are coordinated and reinforce the particular character of each town.

## **Strategy B3-6: Implement design excellence in public and utility buildings and facilities.**

Some of the most visually problematic buildings or properties on the Island belong to towns or to utilities such as NStar or Verizon. These organizations should provide leadership by seeking the highest building and landscape design quality when planning new facilities. They should also analyze all existing facilities to identify improvements.



### 4.3

## **Green Building**

The whole world is recognizing that we need a major shift in how we deal with energy and the environment. It is important to increase the efficiency with which our buildings use resources — energy, water, and materials — while reducing building impacts on human health and the environment. This can be done through better siting, design, construction, operation, maintenance, and removal — the complete building life cycle. We should also be concerned about other building impacts on its surrounding area, such as light pollution and noise, and should balance the benefits of renewable energy facilities with their impact on scenic values and historic resources.

Though there is great interest in green building on the Vineyard, there are no regulations or incentives to actually make it happen. In addition to energy-related issues (see section 7: Energy and Waste), there are many other things we could do, such as minimizing demolition of existing buildings or scrapping of building materials, using environmentally sustainable building practices, using green building materials (reused, reusable, non-toxic), and ensuring high indoor air quality.



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## **Objective B4: Encourage use of environmentally sound “green building” techniques and minimize the negative environmental impacts of building and human habitation.**

### **Strategy B4-1: Set energy/green building standards for new construction and major renovations.**

We should require higher basic energy standards for new construction and major renovations such as Energy Star Plus certification, the Commonwealth’s “stretch” building code, or a custom code for the Island (such as VineyardBuild). We could require LEED certification for major projects and, as it becomes more affordable and accessible, require it for all building projects, possibly subsidizing the costs for nonprofit organizations and year-round homes. The MVC has already adopted such a policy for projects subject to Commission review.

### **Strategy B4-2: Set up a program to encourage energy/green-building standards for existing buildings.**

Owners should be encouraged to incorporate energy efficiency and green building techniques in their buildings, especially when they are carrying out other renovation or expansion projects. The Vineyard Energy Project and town energy committees’ efforts in this regard could be expanded to include other green building issues. This can be done through education and technical assistance, which can provide advice

about possible energy savings and the other advantages of environmental building design, and can help with access to materials, products, and expertise. Just the decision to preserve an existing structure rather than demolish and replace it is an environmentally friendly choice, compared to demolition and new construction.



### **Strategy B4-3: Ensure that renewable energy facilities are compatible with historic and community character.**

The current energy crisis will likely lead to the proliferation of renewable energy facilities such as wind turbines and solar panels. A challenge is balancing energy and green building objectives with other objectives such as scenic values and historic preservation. Examples include the impact of wind turbines on neighborhoods and scenic vistas, or the installation of highly visible solar

panels on historic buildings. Based on the recommendations above, there would be a project review process in historic areas and traditional neighborhoods, and along scenic roads, to ensure that impacts are minimized by using efficiency measures first and by siting turbines or solar panels where they are less visible. Outside those areas, regulations should include project review for larger wind turbines and arrays of solar panels, to minimize their visual impact and to ensure that those projects that do have a significant impact on the public or abutters are warranted. For example, the Wind Energy Facilities Siting Plan (see section 7) should minimize visual and noise impacts, especially from public places. When renewable energy facilities that compromise other objectives must be installed, it is desirable that the benefits accrue to those who will be negatively impacted; for example, those who see large, community wind turbines could get reduced and stabilized electricity rates.

### **Strategy B4-4: Manage building construction processes.**

Construction can be disruptive of a neighborhood, especially large projects that extend over several years, projects with nearby abutters, and projects where the only access is a narrow, shared road. As part of the project review (special permits, site plan review, and MVC DRI review), applicants for potentially problematic projects should be required to submit and follow a Construction Management Report that outlines how impacts would be minimized.

# built environment

## Objective B5: Minimize the general ongoing environmental impacts of human habitation on its context.

Many broad impacts – such as light, noise, and chemical use – emanate from the presence of human habitation in a community. These impacts don't respect property lines and are becoming increasingly problematic as we concentrate development. Impacts can be on immediate abutters or on a larger neighborhood. People living close together are particularly affected by stray lighting, noisy machinery, and the use of pesticides on neighbors' properties.

### Strategy B5-1: Require dark-sky compliant lighting.

Poorly designed outdoor lighting shines on abutting properties, causes glare that can be a safety hazard for drivers and can interfere with navigation in Island harbors, and creates a sky glow that can block out the view of stars. The fact that the Vineyard is surrounded by miles of unlit ocean means that by controlling lighting on-Island, we can be especially successful in reestablishing a dark sky over the Island. Dark-sky compliant lighting regulations require that lights be fully shielded to shine only down, be glare-free, use correct lighting levels, and be used only when needed (e.g. during business hours and motion-activated security lighting for commercial buildings). This could be accompanied by upgrades to public buildings (which are some of the worst offenders) as showcases, a public information campaign acknowledging good examples, encouraging

lighting review to be included in subdivision covenants, and privately approaching owners of problematic properties.

### Strategy B5-2: Limit the use of toxins.

Towns should explore the possibility of regulations on the use of pesticides and other chemicals used in landscaping, especially in the most problematic areas such as sensitive watersheds, significant habitat, and dense neighborhoods.

### Strategy B5-3: Limit nuisances.

Regulations and enforcement procedures dealing with smoke and odor, such as from outdoor wood stoves, as well as the impact of noise from construction, landscaping work, and home businesses, should be reviewed and improved if possible.

### Strategy B5-4: Curtail use of two-stroke engines.

Two-stroke engines are especially polluting (and a common source of noise complaints). Promote use of electrical equipment when available, such as leaf blowers, weed trimmers and lawnmowers.



4.4

## Opportunity Areas

In a few areas of the Island, changes over the next generation could substantially and positively modify their character. These areas include landfills, disturbed areas, and areas developed in the past thirty years as single-use, car-oriented commercial areas dominated by large parking lots and outdoor storage, such as the Upper State Road/park-and-ride area in Tisbury, the Upper Main Street/Triangle in Edgartown, and the West Tisbury Business District. In the longer term, the Goodale Pit might be redeveloped.

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These areas give us the opportunity to concentrate mixed use, compact development as an alternative to sprawling, car-oriented growth in more environmentally sensitive areas. Increased density could be tied into reduction in density in rural areas, and/or be reserved for affordable or elderly housing.

The redevelopment of these areas could be infill development based on the principles of Traditional Neighborhood Development, namely neighborhood design that accommodates a mix of residential and commercial uses within in a compact walkable area using traditional town-planning principles. These include a range of housing types; a network of well-connected streets and blocks; humane public spaces, and amenities such as stores, schools, and places of worship within walking distance of residences. At the same time, these areas could be transformed into 21st-century neighborhoods incorporating leading edge techniques for renewable energy, green building, communications (fiber optics, broadband internet), new modes of transportation, and waste management.

These areas could be good locations for affordable housing, in that they could have more compact development, are generally close to transit, and the land might be less expensive.

### **Objective B6: Redevelop “Opportunity Areas” – presently problematic areas – to improve the quality of the physical environment, to make them work more efficiently, and to incorporate compact, mixed-use development.**

#### **Strategy B6-1: Outline redevelopment programs and urban design plans for each Opportunity Area.**

The first step for each area is to determine the basic uses and concept. Then, an urban design plan should be prepared, delineating the public-private realm, proposing the main public improvements and the main parameters for future private development (massing, relation to street, materials, etc.). A challenge will be accommodating parking for existing and new uses.

#### **Strategy B6-2: Revise zoning regulations in Opportunity Areas.**

It will likely be necessary to revise zoning regulations to conform to the area plan. This could involve the use of the Commonwealth’s 40R provision allowing communities to create overlay zoning districts to promote housing production and smart growth development. It might be desirable to adopt a system of pre-permitting or streamlined permitting to speed up the issuance of building permits for conforming projects.

#### **Strategy B6-3: Make public improvements in Opportunity Areas.**

It might be necessary to make public improvements to the areas, such as putting in or improving roads, bike paths, sidewalks/trails, open spaces, street trees, etc.

#### **Strategy B6-4: Encourage development in Opportunity Areas.**

The towns could actively encourage private development within these areas. In some cases, towns might want to facilitate development by helping with land assembly or by entering into public-private agreements.

# SECTION 5





# SOCIAL ENVIRONMENT

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**GOAL: Maintain a healthy, engaged, and diverse community.**

**VINEYARD LIFE REFLECTS** small-town America. It is marked by strong community connections, a high level of public involvement and empowerment, attachment to the land and sea, and a special relation between year-round and seasonal residents. Behind the rural façade is a community of great sophistication. The desirability of Martha's Vineyard as a place to visit and live, combined with its insularity, are both a strength and a challenge. We will need a concerted effort to maintain a viable, diverse, year-round community. We must not only provide good health, educational and human services, but also give the whole community opportunities to make healthy living, lifetime learning, and cultural expression integral parts of daily life.

This section looks at four aspects of the Vineyard's social environment, going beyond the basic delivery of health, education and other services, to consider the broader aspects of how these topics relate to the community as a whole, and to the other issues the Island Plan addresses.

- **Social Identity:** features that might be considered defining elements of our community character and the principal threats to it.
- **Health & Human Services:** the main challenges with supporting our resident and visitor populations, and how to make the Vineyard a healthier community.
- **Education:** the broader challenges and proposed solutions, especially students' relation to the wider community, and the role of learning for all members of society.
- **Arts & Culture:** how we can help an already rich cultural community to flourish.

# social environment

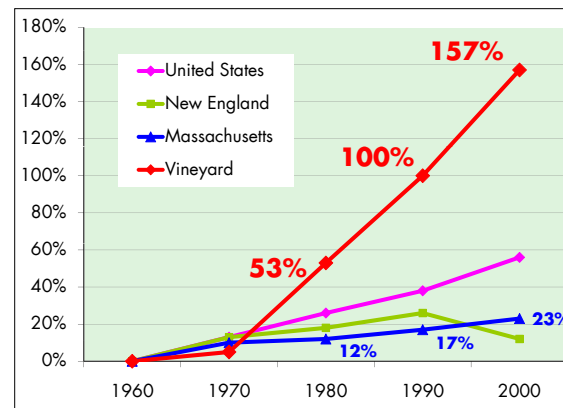
Martha's Vineyard is different. While its exceptional natural environment is immediately obvious, even a short-term visitor quickly discovers that life on the Vineyard – the way people interact with each other and with their surroundings – is not entirely the same as on the mainland. The social environment of Martha's Vineyard is rich and distinct, especially for a community whose year-round population is only about 16,000, swelling to a summer peak roughly four-fold in size. In addition to the native Wampanoags, strong, centuries-long Island family lineages continue to exist among many year-round residents. Many summer residents and even short-term seasonal visitors also have strong ties to the Vineyard that extend back for generations.

**Compilation of Cultures:** The Vineyard community has been enriched by a succession of different groups.

The native people of the Island, the federally recognized Wampanoag Tribe of Gay Head (Aquinnah), date back 10,000 years and continue to be a presence on the Island. From the 17th century onward, English settlers and their descendents became a dominant population. In the 18th century, the Island saw the origins of the Vineyard's Portuguese population.

In the 19th century, the Island became a retreat destination for mainlanders seeking religious respite; thus began the dynamic between year-round residents and visitors that still helps define the Island's character. The Vineyard, and especially Oak Bluffs, became a popular vacation destination for African-Americans.

The Island's population grew relatively slowly until the 1970s, but since then has multiplied more than 2½ times, which is seven times faster than Massachusetts as a whole. A diverse influx of people was attracted to the Vineyard: people drawn by the beauty, beach, and boating who built summer homes; people who moved here for jobs and chose to stay; retirees and others seeking



**Population Growth:** The rate of population increase on Martha's Vineyard has far outstripped the growth rates of Massachusetts, New England, and the United States as a whole.

an alternative lifestyle to mainstream America; "wash-shores" bringing new information and ideas to the insular community.

Recent years have brought an influx of people from all parts of the globe, especially Brazil, that has added a substantial new component of the Vineyard community.

**Changing Population:** The huge increase in numbers of people living on and visiting the Vineyard over the past few decades has had profound impacts upon the community.

The desirability for people of means to vacation on and retire to the Island has greatly increased property values, pushing the cost of living up higher than on the mainland. The increase in housing costs hit particularly hard those people newly entering the Vineyard real estate market, namely young adults and new residents.

The Vineyard has fewer people between the ages of 15 and 35 than the Massachusetts average (21.2% compared to 27.5%), and the proportion of children is declining faster than elsewhere in the state. These factors combine to push the Vineyard's median age four years beyond that of the Commonwealth's (40 compared to 36 in 2000).

Combined with the post WWII "baby-boom" cohort that is moving through all communities, The proportion of people over 60 is only slightly greater than the Massachusetts average. However, Chilmark and Tisbury have much higher rates. By 2020, the Vineyard's year-round population between the ages of 60 and 70 will triple. A significant increase of seasonal residents moving here to retire would further increase that number. This aging population will add to the community's knowledge and creative talent base, while placing new demands on health and human services.



## 5.1

# Social Identity

It is hard to specify exactly what factors define the Vineyard's distinct community character – its “small c” culture – but several features are often mentioned as being important aspects of Vineyard lifestyles and our social interaction.

- The Vineyard is rural, small-town America, with the strong community connections usually associated with such communities – high “social capital,” to use the jargon. People take care of each other.
- There is a sense of attachment to the Island. People have to make a conscious decision to reside here despite the challenges of living on Martha's Vineyard. The presence of six towns

provides an even more local sense of community and opportunity for civic engagement focusing on local issues.

- There is a high level of community and public involvement, with a rich tapestry of community organizations, volunteer boards, committees, and nonprofits. There is a sense of empowerment; that we are an island unto ourselves, freer to approach community problems differently or more innovatively.
- There is a strong attachment to the land and sea, to our farming, fishing and hunting heritage, and to contact with our natural environment.
- The community is defined by the seasonal variation in population, and the relationship between year-round and seasonal residents, who tend to have different socio-economic characteristics. Seasonal residents provide important support to town services and community organizations through tax revenues, philanthropy, and volunteerism.
- Some see the Vineyard as a safe harbor, a refuge from the mainland's commercialism, crime, and values. It is felt to be a place with a slower, gentler pace where one can get away from it all, even during the summer peak.
- Behind the rural, small-town façade is a community of great sophistication. Many highly educated year-round residents choose to live here despite limited professional opportunities; “wash-ashore” retirees bring considerable expertise, experience, and contacts; and the seasonal population links the Vineyard to cosmopolitan centers around the world.

Nevertheless, the Vineyard community faces particular challenges, mostly related to the fact that it is a small, rural island, or to the high cost of housing and living here.

- The most commonly raised concern is the perceived increased polarization by income and threatened loss of the Island's middle class. There is fear that Martha's Vineyard will become like some resort communities that have wealthy seasonal visitors served by a largely commuting underclass.
- A related concern is the decrease in the number of families with children, with families leaving because of the high cost of living, and fewer people moving here to raise families.
- The influx of new residents is often seen as changing the traditional character of the Vineyard. It has been suggested that some people move here saying they love it just as it is, and then try to recreate a homestead and lifestyle that mimics their off-Island primary or former home, with McMansions, five-car garages, heated pools, and suburban, manicured lawns.
- There are somewhat strained relations, misconceptions, and even discrimination between ethnic groups.

# social environment

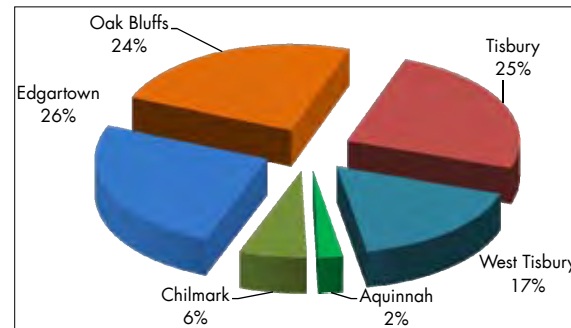
**Objective S1: Maintain the Vineyard's strong sense of community and inclusiveness, preserve the economic continuum, and increase understanding among groups (year-round/seasonal, income, age, ethnicity, color).**

**Strategy S1-1: Improve coordination among institutions and town boards to deal with social environment issues.**

Though there are some mechanisms to foster Island-wide collaboration within specific fields – such as the Health Council and meetings of all town health agents and police chiefs – we need greater coordination of efforts across disciplines. We need to define a mechanism to promote Island-wide cross-discipline collaboration to deal with all aspects of the social environment. At a basic level, the Martha's Vineyard Commission, Superintendent of Public Schools, Community Services, towns, and other entities should coordinate their efforts in gathering population and economic data to monitor trends and make more informed projections about the community's future.

**Strategy S1-2: Reach out to the immigrant community.**

As first-generation immigrants with a different native tongue, the large Brazilian community (at one time "guesstimated" at perhaps 20% of the Island's year-round population) is less



**Population by town:** Each of the down-Island towns has about a quarter of the Island's population, and all of up-Island makes up the fourth quarter.

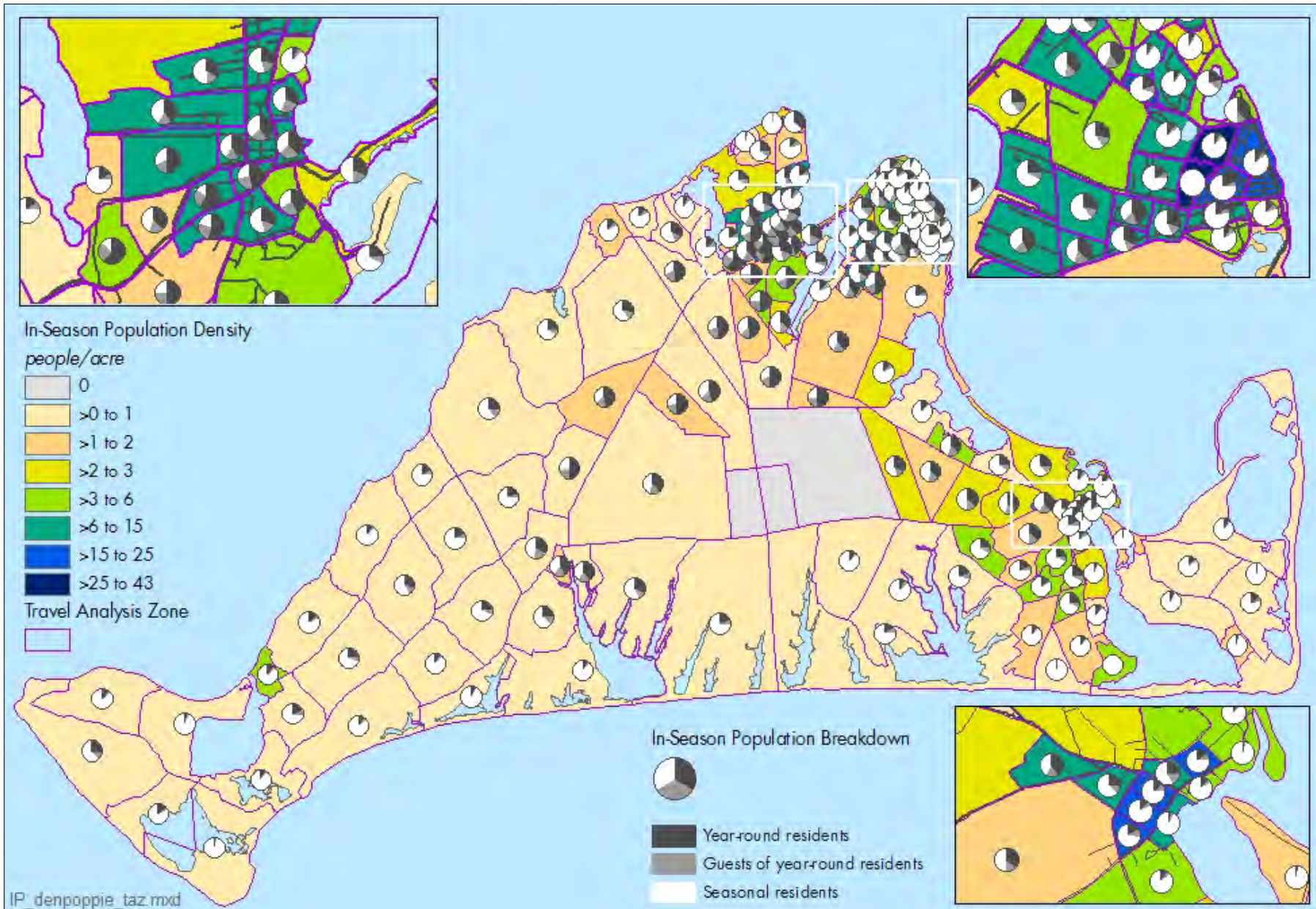
assimilated into mainstream Vineyard society and less inclined to participate in community/public service. This population includes a number of undocumented residents in the U.S., meaning they may be more susceptible to exploitation while also less inclined to seek medical or legal help.

**Strategy S1-3: Provide information to new residents and visitors about Vineyard services and practices.**

Prepare a welcome guide for new residents and visitors about various services and aspects of Island living, including information about the Vineyard environment, way of life, and culture, and about the ways they can help retain the special qualities of our community. It could be distributed through real estate agents, towns, the Chamber of Commerce or the Steamship Authority. Another approach would be for towns to hold an annual reception for new residents/landowners. This gives newcomers an opportunity to meet town officials and heads of community organizations. Each household could receive a package of reference information from the town, organizations and businesses.

**Strategy S1-4: Increase volunteer opportunities for retirees.**

The Island's large and growing number of retirees represents an enormous pool of talent and experience that could be of even greater benefit to the community than it already is. An Island-wide or series of town-based programs could enlist volunteers and match them with opportunities ranging from student mentoring to environmental action.



**Seasonality:** The neighborhoods on the outskirts of the down-Island towns have the highest concentration of year-round population. (Data from 2000 and 2005)

# social environment



## 5.2

### Health & Human Services

The health of our community is determined not only by access to affordable, high-quality health care and social services, but more importantly, by overall wellness. Health depends on individual lifestyle and behavior; on interpersonal relationships within families, neighborhoods, and the community at large; on economic forces within a community; and on the quality of the community's environment. Health care providers are increasingly encouraging communities to focus on promoting wellness to prevent or minimize the need for traditional

health care services – to create a healthy and supportive environment in which people develop physically, mentally, and socially.

The Vineyard is well served with a range of health and human service facilities and entities that provide high quality services.

- The full-service, critical-access Martha's Vineyard Hospital is undergoing a 90,000-square-foot expansion to a 22-bed facility, and became formally affiliated with Massachusetts General Hospital in 2007.
- Martha's Vineyard Community Services offers an array of education and health and human services for all ages, including mental health and substance abuse services, child development, services for the disabled, victims of domestic violence and sexual assault, and other treatment and prevention programs at their clinic, family center, schools, and in homes.
- The Dukes County Health Council is a coalition looking at health issues. Its efforts helped create the Vineyard Health Care Access Program, helping residents obtain affordable, high-quality care, mainly assisting those with no health insurance, families with children, seniors, people with disabilities, and low-income residents.
- There are multiple town agencies and nonprofits focused solely on the needs and care of senior citizens.

- The Vineyard has a network of physicians, nurses, and counselors, as well as an extensive array of alternative care providers.

Despite this rich array of service providers, the Vineyard institutions and community face particular challenges, many related to being a small, mostly rural island.

- Poverty, mental illness, and substance abuse incidence rates exceed levels elsewhere in the Commonwealth.
- The low population density leads to heavy car use and less walking. It also means that many people live in isolated situations, making it more difficult to socialize and to get help in an emergency. Isolation can contribute to depression and substance abuse.
- With an aging population, there will be a growing need for services. A 2006 retirement housing study showed half of the Vineyarders surveyed would prefer to age at home, yet with our dispersed development pattern, transportation is a problem for seniors and caregivers.

- There is a counter-culture sector that is “outside the system” by choice – people who don’t immunize their children and who reject social services. There are also marginalized people – mentally ill and/or substance-using people – who are not comfortable with the formal health care system.

- The isolation and limited population make it difficult to offer a full range of medical services, meaning that people have to go off-Island for some specialized treatments. It also makes it difficult to train staff, or let them upgrade skills. The high cost of housing and living makes it hard to attract and retain specialized personnel.

- Year-round services and not-for-profits are heavily supported by the generosity of seasonal residents. The dependability of such funding and our ability to sustain the current level of services is uncertain.

**Objective S2: Make Martha’s Vineyard a healthy community with a mindset to promote healthy lifestyles and to improve human and infrastructure capacity to provide necessary health and human services that are seamless, complementary, coordinated, and accessible.**



**Strategy S2-1: Create a structure to address public health issues Island-wide.**

The aim is to complement the local responsibilities of town Boards of Health by focusing on specialized activities that may be more broadly based, such as the examination of Island-wide health data.

**Strategy S2-2: Provide more support of family caregivers.**

There will be an increasing need for home-based services for an aging population and more family members thrust into the role of caregivers. Family members need easy access to information, training and support services to improve the quality of home care, but also to reduce the stress associated with family caregiving. Family caregivers also need periodic respite from the continuous demands of homebound care. Vineyard Village at Home is one community response to these needs.

**Strategy S2-3: Create walkable neighborhoods and communities less dependent upon automobiles.**

For an island community known for its summer outdoor recreational activities, we don’t always make it easy for people to maintain healthy habits. Our pattern of development is decidedly automobile dependent, and even where sidewalks exist, they are frequently too narrow and obstructed with utility poles or mailboxes. We should provide and maintain adequate infrastructure for pedestrians. As we plan future growth, we should favor appropriately located neighborhoods of higher density that promote physical activity as well as the social interaction so important to community strength.

# social environment



## 5.3

### Education

The Island's physical isolation from colleges, universities and the other resources of a metropolitan area on the mainland limit education on Martha's Vineyard – whether grade school, continuing adult education, or professional development. For example, it is much more difficult for senior high school students to take advanced college courses, or for adults to pursue a degree, certificate, or occasional night course.

In just one generation, society has witnessed a tremendous change in individuals' typical career paths, with far fewer people staying in the same vocation throughout their working lives. The best

schooling is one that gives students choices and teaches them skills that are transferable and adaptable.

The Vineyard's six public schools have long addressed this by conducting field trips and excursions to broaden students' perspectives and experiences. Dramatic technological advances in communications have expanded instructor and student access to worldwide information and hold the promise – not yet fully realized – for access to more educational opportunities and student-specific training. This also could satisfy the desire of residents and visitors for continuing education and personal enrichment.

The Martha's Vineyard six public schools and the MV Public Charter School provide education from pre-kindergarten to grade 12, generally recognized as being of excellent quality. The Martha's Vineyard Regional High School has a 91% graduation rate, 6% higher than the state average, and a dropout rate of just 1%. The school population has been declining for about eight years; the 2008 enrollment of 2,245 students was three-quarters of its facility capacity of 2,980. The public school system is the largest single Island employer, with about 600 employees.

Another important challenge in public education is that the high cost of housing and living on Martha's Vineyard makes it difficult to recruit and retain teachers. Also, professional development for teachers is more difficult here than at mainland locations which have easier access to evening college courses.

The challenge of continuing development applies to other professions, as well. Many public employees and volunteers must regularly obtain training to remain certified. The addition of travel time to the required hours of instruction is a burden to people needing such instruction and a deterrent for some people to accept these necessary civic positions.



**Objective S3: Turn the whole Vineyard into a “school without walls” by providing community-based pre-K-to-12 education for students in the school system, and by encouraging and promoting opportunities for residents and visitors to pursue education throughout their lives.**

The term “school without walls” refers to two parallel phenomena, having students in the school system getting out of the school building and actively engaging the broader community, and having the general population outside the school system make learning part of their everyday lives.

**Strategy S3-1: Provide greater vocational training geared to employment opportunities.**

Not all students are college oriented, and there is a need for many skilled workers and entrepreneurs on-Island and off. In response to this need, the High School already provides courses in culinary arts, hospitality, landscaping, and carpentry/construction, and recently added courses in banking/financing and farming.

**Strategy S3-2: Provide more opportunities for community-based education for school students.**

About 200 students participate in some work-study program each year, not including summer internships. However, Vineyard schools, and especially the High School, could expand

opportunities to allow students to integrate their education with the rest of the community, both on and off-Island, with techniques such as internships, mentorships, on-line courses, and programs offering a year off between high school and university (such as City Year, other AmeriCorps programs). This will help Island students make the transition to jobs and/or university.



**Strategy S3-3: Provide professional development programs.**

We can make it easier for residents to take professional courses and work towards certification in various fields such as teaching, nursing and, perhaps, for emergency response personnel. Past efforts to collaborate with off-Island colleges and universities have been mixed, since our small population base makes it difficult

to support programs here. The Dukes Academy provides training courses for Island Realtors. Another model for other professions might be the Martha’s Vineyard Hospital’s successful nurse certification training, combining on-Island courses with visiting professors, together with concentrated off-Island specialized training.

**Strategy S3-4: Provide post-secondary education for residents and visitors.**

Though past efforts, such as The Nathan Mayhew Seminars, have faltered, there is a sense that the community wants and could support a more robust program of continuing education. The new Adult Continuing Education (ACE MV) program at the High School offers a range of language and enrichment courses, including some for undergraduate and graduate credit through Northeastern University and Cape Cod Community College.

**Strategy S3-5: Improve availability of daycare and pre-kindergarten schooling.**

Daycare is needed for children (especially infants), particularly for nontraditional work hours. This includes before- and after-school care and summer care for school children. The Vineyard Affordable Child Care Project is one entity working on this. Preschool benefits toddlers educationally and socially, but its cost is often prohibitive. Perhaps with shrinking school populations, existing facility space can be used for preschool initiatives that can incorporate childcare training for older students, as is presently done at the High School with the Community Services Daycare Center.

# social environment



5.4

## Arts & Culture

The beauty, character, and quality of life have inspired the creative expression in many residents and visitors, and attracted many creative people to move to the Vineyard. The Island has a thriving arts and culture community, involving and supported by both the year-round and seasonal populations. For a small community, the Island has a remarkably broad range of cultural institutions, including a museum, playhouse, arts center, dance center, nightclubs, chamber music society, native culture center, center for the arts, and several institutions focused on nature and farming. In addition, there are many libraries, historic buildings, museums, festivals, fairs, lecture series, and

galleries. Venues for performing arts include the 791-seat Performing Arts Center at the High School, and about twenty smaller locales.

The arts and culture are important to the Vineyard economy, both directly in terms of the business they generate, and indirectly in terms of their contribution to the Vineyard's role as a destination resort, which is the foundation of the Vineyard's property values and economy. Some of the Vineyard's cultural institutions and artists are significant on the national level.

Nevertheless, the Vineyard could be doing a much better job of supporting the arts and taking full advantage of the cultural potential of the Island, both for personal fulfillment of residents and visitors, and for the economic benefit of the community.

**Objective S4: Increase coordination of and support to the arts and culture community in order to bring various groups together, to foster cultural expression, to support the diverse for-profit and nonprofit arts sector, to promote Vineyard culture to the local and visiting community, and to increase cultural tourism.**

**Strategy S4-1: Create an Arts/Cultural Collaborative.**

An entity could take the lead in supporting, coordinating, and promoting arts and culture on the Vineyard. The collaborative could offer artists or groups assistance or training in the business aspects of their creative pursuits, such as marketing, group purchasing, inventory, shipping, billing, and taxes. It could create and maintain a database directory, help coordinate event calendars (such as gallery openings, performances, courses), take on promotion (such as weekly show on coming events on MVTV or Plum TV), and help solicit funding (such as grants, fundraising).

**Strategy S4-2: Create a Vineyard Art/Cultural website.**

A single website could provide information about or links to all cultural organizations, instructors, musicians, artists, nightclubs, activities, and events. This could be done by expanding an existing website (such as

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MVOL, Tickets MV, or Vineyard Voice) or by creating a new site.



**Strategy S4-3: Set up an Island-wide Arts Festival.**

A festival held before the summer season – to make residents, visitors, and hospitality workers aware of the broad diversity of Vineyard culture – might result in them informing their guests and clients throughout the summer. The festival could include an open house with demonstrations at all Vineyard cultural institutions and shuttle buses linking venues. This could be a natural evolution of the Memorial Day weekend collection of large arts events such as the Family Planning Art Show at the Ag Hall and the Artisans Festival at the Grange.

**Strategy S4-4: Foster an increased offering of courses and workshops.**

Courses and workshops on topics such as writing, painting, music, and cooking – especially in the off-season – would be of interest to residents, and learning vacations based on these activities could be promoted.

# SECTION 6

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# LIVELIHOOD & COMMERCE

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**GOAL: Transition to a more diverse and balanced year-round economy that enables those who grow up here to stay or return, helps year-round residents lead productive lives, and fortifies the seasonal aspects of the economy.**

**T**HE MAIN THRUST OF OUR EFFORT should be to strengthen and balance the economy, to support local ownership, to replace imports by exports, especially of such essentials as food and energy, and to increase year-round jobs with living wages.

This section looks at four aspects of the Vineyard economy:

- **Business:** Business development, particularly how to bring more balance to the economy by promoting resource-based businesses and a diversity of other local activities that produce good jobs.
- **Livelihood:** Improving employment opportunities: especially year-round, career-path jobs.
- **Purchasing:** Purchasing to “buy smart,” in order to retain and circulate more local earnings on-Island, including buying locally when it is the sensible thing to do.
- **Commercial & industrial development:** Land use planning to accommodate current and future needs.

# livelihood & commerce

The Vineyard economy is largely driven by its vacationers – second home owners and visitors – who bring significant economic activity to the Island. Hospitality (food and accommodations), retail, construction, and real estate are the four key industries that make up more than half of the Island’s economy. We need to keep this part of the economy robust, vital, and responsive to changing needs.

At the same time, a more diverse and stronger year-round economy would be good for the Island’s residents. Greater diversity and economic self-reliance means that the Vineyard economy can remain strong as we face the challenges of a global economic recession, climate change, peak oil, and globalization.

The natural beauty and history of the Island are matched by the great diversity of its community. Protecting and building on the Island’s natural resources, environment, and cultural heritage is key to sustaining both the seasonal and year-round economy of Martha’s Vineyard.

From winter to summer, it is estimated that the population swells from 15,000 to more than 60,000. The number of jobs grows from 6,104 to 10,681 (2008 figures from the Massachusetts Department of Labor and Workforce Development), plus an estimated 3,400 self-employed individuals (2007 figures reported by the US Census Bureau and the US Department of Economic Analysis). Unemployment typically drops from 7% to 2%, though the unemployment rate surpassed 11% in February 2009. The Vineyard is remarkable in that more than 70% of Island businesses employ between one and

four employees and most are locally owned. Tourist-related sectors (retail, accommodation and food service, arts, recreation, and entertainment) represent 37% of employment (2008) but only 28% of wages. Construction accounts for 10% of jobs and 14% of wages.



The following economic approaches might help to strengthen and balance the economy:

- Bolster the existing vacation-based economy, especially supplying services to second-home owners;
- Encourage more Island spending (reduce economic leakage) to foster greater circulation of money within the community (increase economic multipliers);
- Support local ownership; when those conducting commerce are deeply connected to the community, they tend to have community interests at heart;

- Substitute imports through local production, especially of such essentials as food and energy;
- Stimulate local investment;
- Increase year-round jobs with living wages;
- Optimize self-reliance, so that we become less dependent on distant forces and events;
- Promote a greater diversity of off-season activity, more fully utilizing our historic character and environmental attributes;
- Create a robust environment for lifetime learning;
- Incentivize economic behaviors that protect, restore, and celebrate our environment.

The Vineyard will benefit from a diverse and prosperous year-round economy that enhances our community and environment, that respects our character and history, and that understands that although we are an Island we are also part of the larger world.

Note that in this section, even more than the others, the various objectives are highly interrelated, and many strategies will help achieve several objectives.

*(Please refer to two studies carried out by the Island Plan, which served as a basis for the analysis and recommendations in this section: the Economic Profile of Martha’s Vineyard by John Ryan, and the Leakage Analysis of the Martha’s Vineyard Economy Study by Michael H. Shuman and Donald Hoffer.)*

## The Vineyard Economy Today

- It is estimated that year-round residents purchase about a third of the goods and services sold on the Island. Seasonal homeowners and their guests generate more economic activity (38%) than do residents. Vacationers and day visitors generate about 26%.



- The visitor-related component of the economy produces far more low-wage jobs than high-wage jobs. The core visitor-related industries of construction; retail; accommodation and food services; arts, entertainment and recreation; and property services employ about half of wage-earning workers. These core industries produce only 20% of the Island's high-paying jobs and 80% of its low-paying jobs. By comparison, other year-round economic activities produce

twice as many high-paying jobs as they do low-paying ones (1,184 to 586).

- Many low-wage workers are making significantly more than those doing the same jobs elsewhere in Massachusetts. The market seems to reflect, at least partially, the higher cost of living on the Island in the compensation paid to the lowest-wage workers. The Island's low average wage (73% of the statewide average) and low median household income (90% of the statewide median) are more a function of the nature of the jobs than the level of wages within those sectors.

- By contrast, traditionally high wage jobs tend to pay less on the Island than elsewhere in Massachusetts. The ceiling seems to be formed partly by a higher reliance on part-time and seasonal work, but also by the limited number of professional, financial, business, scientific, technical, educational, and health-related jobs that serve the visitor and year-round populations or that sell services to a market beyond the Island itself.



# 6.1

## Business

Any effort to advance the long-term economic well-being of this Island must begin with our natural environment. Each initiative we recommend should, ideally, have positive net impacts on the water we drink, the air we breathe, the soil we cultivate, and the natural beauty we enjoy.

The seasonal, visitor-based economy provides the Island with many benefits such as lower taxes, philanthropy, a diverse seasonal community, and the relative tranquility of the off-season. But there is a downside to being so dependent on the visitor-based economy, putting all of our eggs in this basket. In economic

# livelihood & commerce

downturns, tourist communities are usually impacted first and the hardest; unemployment rises significantly in the off-season; a disproportionate number of jobs are unsteady and pay lower wages, and housing is costly.

We need to concentrate efforts on building the infrastructure and capacity to export high-value services from the Island to other places, and to replace goods and services we now bring in from off-Island (import substitution). This might involve development of more web-based jobs, a Vineyard “brand,” and new educational services. It may be worthwhile to strategize with high school officials about how our educational system meshes with future economic opportunity, and whether improvements could be made.

The possibilities of promoting economic development to diversify and balance the economy and provide better job opportunities include new resource-based activities, other support to other new entrepreneurial activities, and the gradual realignment of our traditional industries of hospitality, retail, construction, and real estate.

## **Objective L1: Look to the creative stewardship of the Island’s rich natural resource base to generate interesting, meaningful, living-wage jobs.**

The Island’s natural resources offer several avenues for new economic development, particularly by reinvigorating farming and fishing, and by taking advantage of the area’s exceptional wind resources for producing renewable energy.

Section 3 (Natural Environment) outlines various strategies to encourage greater local food production, which would create new jobs and generate greater economic activity, and also contribute to the overall special character of the Vineyard so important to the Island’s visitor-based economy. Section 7 (Energy & Waste) outlines some strategies to improve the energy efficiency of our buildings and to harness renewable energy that will serve a significant part of the Island’s electrical needs. Developing new industries such as green technologies and creative industries can result in more year-round, better-paying job opportunities and help keep funds within the Island economy.



## **Strategy L1-1: Encourage the business community to lead the celebration and support of the Island’s beauty and heritage, as well as its nonprofit sector.**

All of these contribute, in ways that we cannot even measure, to the extraordinary nature of our economic climate. Vineyard businesses need to lead the way in protecting and enhancing our environment by embracing low-impact practices whenever possible. Many do so, but the commitment can be broadened and far more can be done through financial support and ensuring that business practices do not undermine Island Plan values.



## **Objective L2: Create new business opportunities appropriate to the Vineyard, emphasizing initiatives that are environmentally benign or restorative.**

In addition to the resource-based businesses discussed in the last section, there are many other opportunities for new business expansion that will achieve the Livelihood & Commerce objectives of diversifying the economy and creating more career-path jobs as well as allowing us to replace imported products and services with local ones, and even exporting some goods and services. Measures that could support these private-sector initiatives include providing greater access to local investment capital, stronger business-to-business networking capabilities, and a more integrated marketing effort to support these entrepreneurial activities.

See section 5 (Social Environment) for a discussion of an objective and strategies to strengthen the health and human service sector to meet the needs of an aging population and growing number of retirees.



### **Strategy L2-1: Provide entrepreneurial training, mentorship, and technical support to sole proprietors and micro-businesses in the for-profit sector.**

The Vineyard has a thriving culture of sole proprietors and micro-businesses. Over 70% of the Island's business establishments have fewer than five employees; in addition, there are roughly 3,400 self-employed individuals, not to mention unreported businesses or bartering services. This seems an especially ripe environment to build entrepreneurial capacity, dealing with issues such as: what common needs these sole and micro-businesses have that could be handled more efficiently; what marketing, operational, and financial tools would allow the scope of entrepreneurial activity to grow; and what outside linkages and partnerships could

begin to export what is done especially well on-Island to other locations. The High School, Chamber of Commerce, and MVC already support some programs along these lines. In this arena, continuing education could have enormous payback over time.

### **Strategy L2-2: Create new financial mechanisms, such as a revolving loan fund ("The Vineyard Fund"), to promote investment in local enterprise.**

The Vineyard has significant capacity to attract investment capital from those with local ties to the Island as well as from our local banking community. This capital can spur the kinds of entrepreneurial efforts needed to develop the heritage tourism concept, expand export products and services, harness local renewable energy sources, and expand agriculture-related production. We need to create simple, locally focused mechanisms that offer community-based investors the opportunity to earn fair-market returns from local for-profit initiatives.

# livelihood & commerce

## **Strategy L2-3: Facilitate remote work and telecommuting.**

A small but growing number of Island professionals work “freelance” or for a remote employer via computer, telephone, and occasional off-Island travel. This is a growing national trend that supports the kind of higher-paying professional work needed to afford life on the Island. The Vineyard has many attractions for this kind of work and could develop this sector with greater intentionality. We need to explore what infrastructure and linkage improvements could promote development of remote work professions.

## **Strategy L2-4: Establish and market a Martha's Vineyard brand.**

Such a branding exercise can drive marketing efforts in tourism; in professional, scientific, technology, and waste-management initiatives; in renewable energy production; in fishing and farming (especially value-added products); in local arts and crafts; and in other emerging industries.

## **Objective L3: Strengthen and gradually realign our core, visitor-based economic activities.**

Hospitality, retail, construction, and real estate are our bread-and-butter. Embracing visitors is the driving force of our economy and the hospitality sector can be bolstered



with specifically targeted niche marketing efforts. If we over-build the Island, however, our natural and cultural resources can become endangered, thereby undermining the economy. Many Vineyarders rely on construction and real estate for good livelihoods, and these sectors are becoming more sustainable as they now deal more and more with already developed properties. The challenge is to continue to make these important sources of income and livelihood

durable while being careful to align them with the other purposes of the Island Plan.

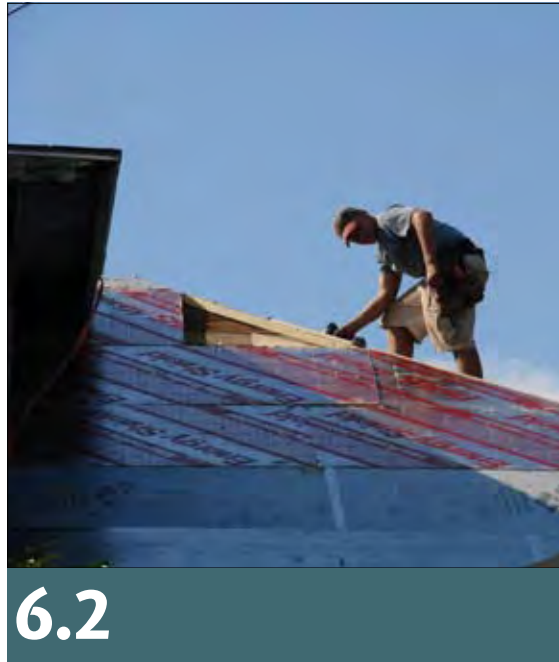
## **Strategy L3-1: Create a world-class “heritage” tourism program.**

The Vineyard shares a broad range of interests in nature and culture with visitors year-round. We should encourage a well-marketed program of educational, ecological, recreational, spiritual, physical, historical, social, and psychological activities that could run off-season (mid-October through April), to attract participants mainly from off-Island, but open to all. It could be a partnership between the Island’s hospitality industry and the Island’s vital environmental and cultural not-for-profit sector. The goals would be to deepen and lengthen the visitor’s experience; to provide more interesting and higher-paid work experiences; to capture more of the “life learning” market for older visitors; to utilize the wealth of knowledge and experience embodied in our retirees; to expand the activities and financial base of community organizations; and to increase off-season visitation and local spending by residents, tourists, and seasonal visitors. Efforts must be carefully planned to avoid damaging significant resources or disrupting the community.

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**Strategy L3-2: Consider “formula” business impact on Island character and economy.**

Presently, the vast majority of retail, food, and other businesses on the Island are small, locally owned enterprises. This increases the proportion of residents’ and visitors’ spending that stays on the Island, and contributes to the sense that the Vineyard is different from mainland America. Many resort areas have seen a rapid change as chain stores and restaurants owned by corporate entities expand into their communities. If we conclude that this is a threat here, we could restrict “formula” businesses in historic town centers (or perhaps even the whole Island), as some nearby off-Island towns have done, or suggest to the MVC that it add this kind of commercial activity to the Development of Regional Impact Checklist.



## 6.2

# Livelihood

Many young adults raised on the Island have expressed a desire to stay here or to come back (if they have gone elsewhere for education, military service, or other work and life experiences). We need to create new work opportunities that utilize our young peoples’ educations and provide long-term capacity to grow in skills, responsibility and income. This is valuable both for those professionally trained and for those who are not. Equally important are those things that will cause the Island to be a welcoming environment for those returning: community vitality and sufficient community housing.

The main challenge is not to encourage job growth per se, but to encourage the growth of better-paying and stable year-round jobs, and to raise the level of pay for all jobs. The universal dilemma of vacation communities like Martha’s Vineyard is that costs are high and the type of work needed is largely seasonal and pays relatively low wages. We need to explore options that can address some of these imbalances by providing workforce development and job training that add greater value within vacation related sectors, as well as facilitating new opportunities not driven by our vacation economy. The employment situation would also be helped by bringing jobs that are often “under the table” into the official economy. This is not to say that bartering, a traditional part of our culture, should be discouraged. However, it is important that workers are not left unprotected if they are injured, require health care, or find themselves unemployed.

# livelihood & commerce

## **Objective L4: Find ways to provide “career path” jobs for the next generation and expand the proportion of higher paying “living wage” jobs.**

The strategies outlined above for creating new business opportunities and for gradually re-aligning our core, visitor-based economic activities, are largely focused on achieving this objective.

### **Strategy L4-1: Encourage new opportunities for higher learning and continuing education.**

The Vineyard has a long history of post-secondary education. Degree and certification programs for teaching, environmental studies, and other carefully chosen areas may be beneficial to many Vineyarders. Some of these may be attractive to off-Islanders and make use of under-utilized facilities off-season.



## 6.3

### **Purchasing**

One of the key lessons learned in this planning effort is how valuable it is to keep the money earned on the Island circulating within the local economy. In the simplest terms, every dollar we spend locally contributes to another resident’s financial wellbeing. As long as that dollar keeps getting spent on the Island, its benefit multiplies here; once it leaves the Island, its benefit goes elsewhere. This is true not only for our purchases of consumer goods, but also for large expenditures for products like mortgages, insurance, health care, and prefabricated homes.

For a small Island like ours, there are clearly limits to what we can buy locally, but even in our off-Island purchases, we need to explore ways we can combine our buying power to purchase those items at a lower cost. The idea is to “buy sensibly” – first: on-Island, second: on-Island collectively, third: off-Island collectively. Creating a Vineyard buyers’ cooperative might allow us to influence prices on and off Island.

**Objective L5: Use the community's buying power to keep more dollars circulating within the local economy.**

**Strategy L5-1: Increase community awareness of the impact of purchasing decisions and create an integrated "buy local" campaign.**

Establish an ongoing mechanism to keep the following inter-related issues in the minds of Islanders in ways that will influence individual and institutional actions: buying local products and services, reducing economic leakage off-Island, expanding the Island's capacity to provide more and better services for the resident population. As part of the educational effort above, develop a multifaceted, Island-wide Buy Local campaign that emphasizes the community value, authenticity, and economic advantages of local production and buying. These efforts support local currencies that help keep money circulating in the local economy (such as the Martha's Vineyard Greenbacks card) and discount programs offering discounts for local purchasing (such as the Island Card).

**Strategy L5-2: Establish an Island-based buying cooperative to provide Islander discounts for products and services that must be obtained off-Island.**

It may never be economically feasible to support businesses selling many big-ticket items or offering specialized services with the Island's population alone. If we could harness our collective purchasing power, however, we may be able to buy automobiles, health insurance policies, and an array of other products and services from off-Island providers at wholesale rather than retail prices. The savings would generate a financial benefit and leave more money available to circulate in the local economy. Our geographic isolation has historically translated into paying a premium for items. It may be possible to turn it around into a buying advantage.



6.4

## Commercial & Industrial Land Use

Currently, there is about 3.4 million square feet of commercial and industrial floor space on the Island, located on 1,254 properties covering about 780 acres of land area (see table on next page). About 578 acres of commercial land are located in residential areas. A total of 1,311 acres or about 2% of the Island are commercially or industrially zoned, but only 202 acres of this are actually used for commercial industrial uses; of the remainder, 1,030 are

# livelihood & commerce

being used for residential purposes and 66 acres are vacant.

Today, there appears to be adequate building space and land for the current commercial needs of the Island, with the possible exception of home-based businesses such as landscaping and construction that require parking for commercial equipment.

As residential growth takes place on the Island, we will need more commercial and industrial space – retail, office space, and industry/ warehousing – to serve the needs of the growing population. Existing businesses and facilities will be able to absorb part of the growth, in some cases by adding space on existing properties, so the percentage increase in commercial space is anticipated to be considerably less than the population growth. The estimated need for additional commercial property – based on the assumption that percentage increase in commercial land is half the percentage increase in population – suggests a long-term need for about 280 acres with the maximum growth option and 140 acres with the modest growth option.

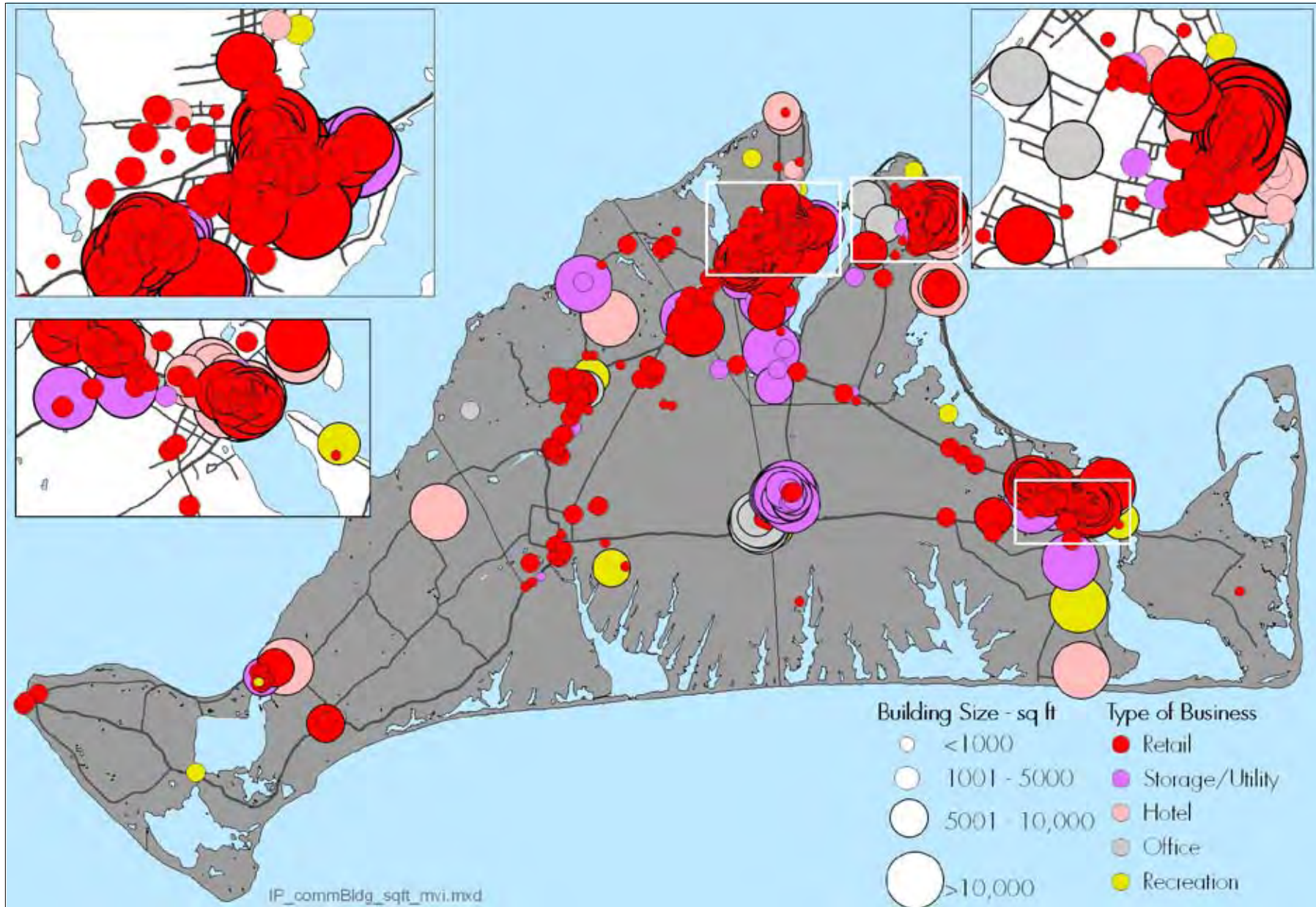
This can be accommodated in the 621 acres of noncommercial land in the commercially zoned areas of the Island, involving a construction on vacant land and a gradual transformation of residential to commercial uses. The currently developed section of the Airport Business Park is largely full; some increase in density in the existing section plus construction of the new section closer to the Airport entrance would provide some additional space.

Commercial Land Use and Buildings							
	Aquinnah	Chilmark	Edgartown	Oak Bluffs	Tisbury	West Tisbury	Total
<b>Number of Commercial Properties</b>	<b>10</b>	<b>25</b>	<b>449</b>	<b>232</b>	<b>378</b>	<b>160</b>	<b>1254</b>
<b>Commercial Land Area (acres)</b>							
Commercial uses in commercial districts	7	0	64	14	81	36	202
Commercial uses in residential districts	9	72	104	178	100	115	578
<b>Total Commercially Used</b>	<b>16</b>	<b>72</b>	<b>168</b>	<b>192</b>	<b>181</b>	<b>151</b>	<b>780</b>
Vacant land in commercial districts	15	0	4	0	26	15	202
Residential uses in commercial districts	226	0	289	14	66	436	1,031
Total "available" commercial land	231	0	293	14	92	452	1,233
<b>Total Commercially Zoned</b>	<b>260</b>	<b>0</b>	<b>381</b>	<b>36</b>	<b>188</b>	<b>446</b>	<b>1,311</b>
<b>Commercial Floor Space (sq ft)</b>							
Stores	1,758	14,661	285,237	312,426	422,267	83,542	1,119,891
Restaurants	3,537	18,429	77,772	36,897	29,887	7,799	174,321
Offices	0	1,818	89,536	17,899	133,088	40,894	283,235
Hotels and Inns	5,637	31,125	385,630	167,910	140,690	25,899	756,891
Warehouse/Distribution	0	9,136	283,158	18,203	256,569	55,940	623,006
Other	3,299	2,064	136,352	57,003	100,436	167,628	466,782
<b>Total Commercial Floor Space</b>	<b>14,231</b>	<b>77,233</b>	<b>1,257,685</b>	<b>610,338</b>	<b>1,082,937</b>	<b>381,702</b>	<b>3,424,126</b>

*Based on assessors' data for 2008*

Over the past generation, many businesses and services have moved from the older, downtown parts of Tisbury and Edgartown to the newer uptown areas (Upper State Road and Upper Main Street / Triangle), attracted by larger parcels of land for bigger buildings and parking lots. The older downtowns are in danger of becoming ghost towns in the off-season, housing only visitor-oriented activities. The commercial vitality of both the older and newer town centers would be further eroded if commercial development was allowed to spread to other areas (such as the idea of putting retail at the Airport which has been put forward and rejected several times in the past). The

Edgartown and Vineyard Haven town centers could be strengthened by having a free shuttle link the uptown and downtown sections (see strategy T2-3) and by retrofitting the uptown sections to be more mixed use and pedestrian friendly.



**Commercial Floor Space:** Each dot represents the number of square feet and use of each commercial building (based on 2008 assessors' data).

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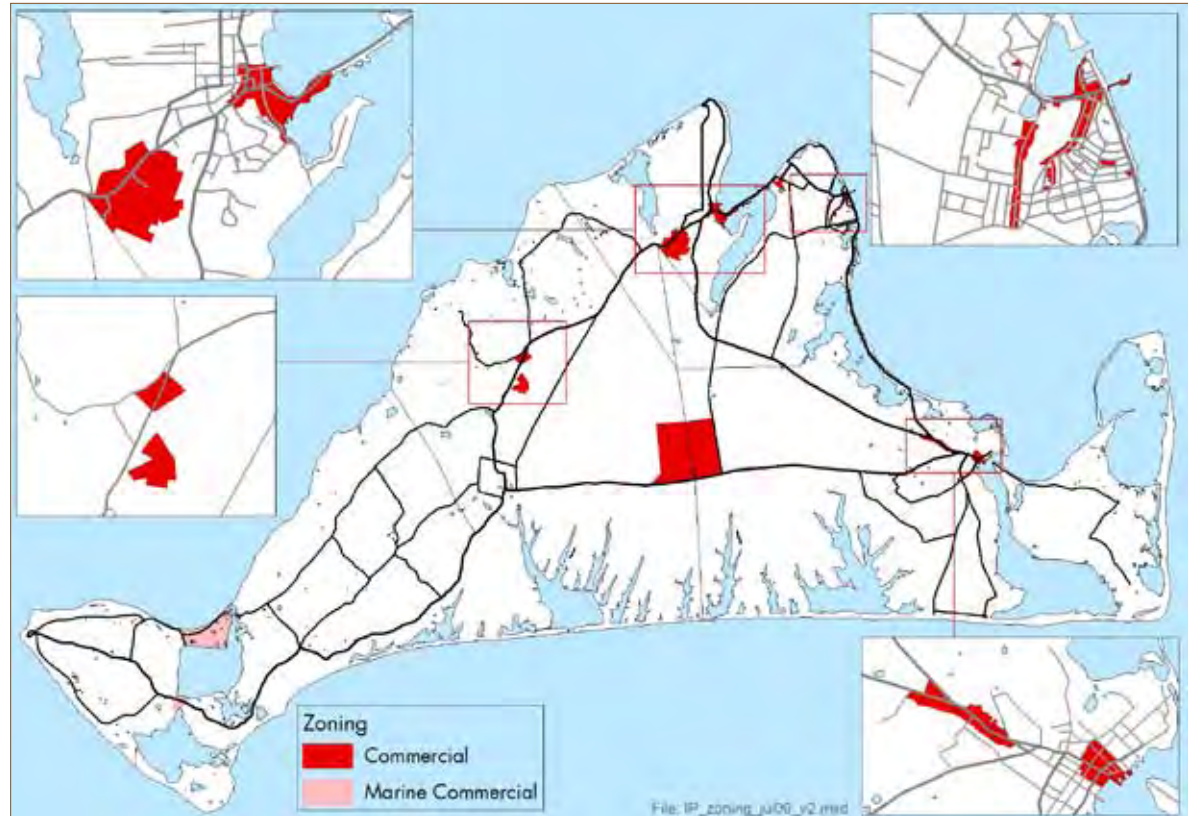
**Objective L6: Locate commercial activities appropriately and ensure that there is sufficient commercial land for future needs.**

**Strategy L6-1: Keep retail activities and visitor services concentrated in vibrant, walkable, town centers.**

Lively, easily accessible commercial districts, each with the anchor businesses that are necessary for the conduct of daily life, are essential components of a healthy community and a strong economy. We should keep these activities in the town centers (see section 2 – Development & Growth) and avoid retail development in other areas including the Airport Business Park or strip development along roads.

**Strategy L6-2: Ensure that each town center has a full range of essential anchor businesses.**

In order to have a vibrant downtown that offers the basic services needed by nearby residents, each town center should have a grocery store, pharmacy, post office, and bank. Tools that might be used to achieve this include providing property tax incentives for land owners and/or business owners who accommodate these businesses, using publicly owned land or buildings for such activities, and zoning some areas for these uses.



**Commercial Zoning:** The Island's commercial districts represent about 2% of the area of the Island.

**Strategy L6-3: Ensure that there is sufficient land to satisfy the range of needed commercial activities.**

We need appropriate in-town places to locate the new businesses discussed in this section, including small manufacturing, service businesses, incubator industries, wholesale and industrial uses including truck storage and construction staging and storage areas. The MVC and town planning boards should prepare an analysis of existing and projected

commercial needs and compare this to available and potential commercial space based on existing zoning. The aim is to have enough land for current and projected needs, but to avoid zoning too much land for business, in that commercial zoning can undermine the stability of existing residential areas (owners hesitate to invest in existing buildings hoping they will eventually sell for commercial development). A related challenge is to protect desirable, but "weaker" activities from gentrification; for



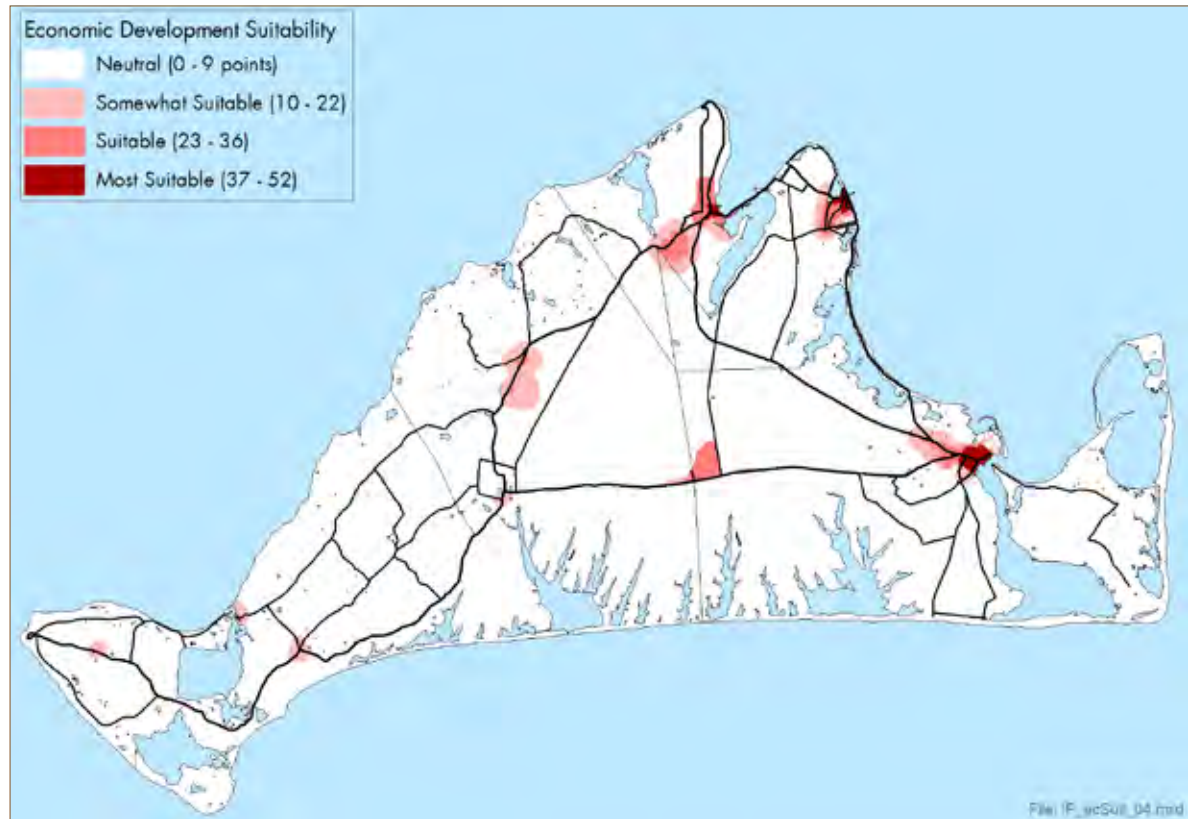
example, working waterfront uses on Beach Road in Tisbury could be squeezed out if higher intensity uses such as restaurants, motels, or bars were permitted. Because there are limited commercial areas on the Island, towns could require that ground floors in these areas be used for business.

**Strategy L6-4: Encourage development of small convenience stores.**

Ensuring that there are small convenience stores in locations throughout the Island, including within walking distance of denser village neighborhoods, would cut down on car trips to main commercial areas for simple needs. They should be carefully located and designed to minimize negative impacts on residential areas.

**Strategy L6-5: Ensure that home businesses are compatible with their surrounding neighborhoods.**

Home businesses play an important role in the Vineyard economy. Most home businesses are compatible with their residential neighbors, but some, especially those involving trucking such as landscaping and contracting, can be disruptive. Regulations should be reviewed, revised if necessary, and enforced. This goes hand in hand with the availability of alternative locations.



**Economic Development Suitability:** These areas were identified as the locations most suitable for commercial and industrial development based on proximity to existing commercial activities and population concentrations, presence of infrastructure, and access to transit.

# SECTION 7

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# ENERGY & WASTE

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**GOAL: Ensure that the Vineyard community has reliable, secure, ample, affordable, and environmentally sound energy supplies; obtains as much of its energy as possible from sources that are renewable and, increasingly, local; and transforms a maximum amount of our waste into useful resources.**

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TARGET: Cut projected energy use by half using efficiency measures for buildings and transportation, and produce or offset the rest, mainly from community-owned facilities (e.g. about fifty, 500-foot-high offshore wind turbines).

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**R**ISING FUEL COSTS and increasing environmental concerns make us more aware of the high costs and unsustainability of bringing virtually all our energy to the Island and transporting away virtually all our waste. Energy and waste offer huge potential to establish sustainable practices that will also generate local employment.

This section presents a multi-pronged approach to transforming the way we deal with these important resources.

- **Energy Efficiency:** to decrease the total energy needed, mainly in buildings and transportation.
- **Renewable Energy Generation:** to generate our own clean energy.
- **Solid Waste:** transforming waste into useful resources in order to reduce the amount of waste we produce and then deal with it in more sustainable ways.

# energy & waste

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The management of energy and of waste is essential for supporting human activity on the Vineyard. We take for granted that we'll have plenty of energy and that someone will take care of our trash, garbage, and human waste.

**Energy:** As of 2005, the Vineyard used approximately 4.3 trillion BTUs of energy annually (equivalent to 757,000 barrels of oil, or three-quarters of a 1,000-foot supertanker). We use about 30% of this energy for heating and cooling our buildings, 33% for electricity for lighting, appliances, and machinery, and 37% for transportation. Our principal energy fuels are oil, propane, and gasoline, as well as electricity generated primarily from the source fuels (in decreasing order of magnitude) natural gas, nuclear, coal, and oil. Most of the cordwood burned for heat comes from off-Island. The generation of electricity on-Island from small wind turbines and various solar systems does not yet produce a meaningful percentage of our energy needs.

The Vineyard consumes a disproportionately high amount of energy because of the nature of our buildings and settlement pattern. It costs a lot more to heat a single-family dwelling with four exposed walls and a roof, than an apartment that loses heat only through one exterior wall. And our low-density housing, spread across the Island, means that we have a much higher proportion of people who drive compared to an inner-city neighborhood where people can more easily walk, bike, and take transit.

There are several reasons to want to change the current system of providing energy to the Vineyard community.

- With respect to cost, the Vineyard has a large and steadily increasing annual energy bill (more than \$64 million in 2005). Our energy costs are



among the highest in the United States. Since more than 99% of our energy is produced off-Island, these expenditures leave our local economy. Both the Vineyard's year-round community and visitor-based economy are sensitive to high energy costs and disruptions to the energy supply.

- With respect to the environment, fossil fuels are our major source of energy. There is general scientific agreement that burning fossil fuels produces carbon dioxide that is influencing the earth's atmosphere and contributing to rapid climate change. Burning these fuels results in air and water pollution and emissions, which endanger health and contribute to climate change. Annual carbon dioxide emissions attributable to the Vineyard were 329,000 tons in 2003 and will rise to 457,000 tons by 2050 if we take no new action. The Vineyard is particularly vulnerable to effects of climate change such as rising sea levels, more frequent and severe weather events, and health risks from insect-borne diseases. Importing our electricity from distant power plants means that a substantial amount of power is wasted in the conversion of source fuels into electricity and in transmission losses; it takes about three units of energy at the plant to produce one unit on the Vineyard.
- With respect to reliability, foreign fuel sources are increasingly insecure and unstable and may subject the community to supply shortages and price fluctuations beyond our control. The fact that we have to bring energy to our shores results in higher risks. Fuels are shipped to the Island by ferry or barge, subjecting the Vineyard to shipping-related issues. Electricity is brought to the Island by four 23.2-kilovolt underwater cables that are vulnerable and hard to repair, and the Vineyard's 50-megawatt peak electricity usage level is fast approaching their 62.5-megawatt capacity; the cost of additional cables will be high and will be borne by all.

Many communities in the U.S. and elsewhere are well ahead of us in embracing new technologies to change their dependence upon fossil fuels, and can serve as models for Martha's Vineyard. Also, the Vineyard's abundant resource of wind energy gives us options not available to most other communities.

In relation to the Island Plan's goal of making the Vineyard a sustainable island, this section outlines a way to make the Vineyard largely energy neutral by 2050, essentially by using efficiency measures to reduce overall energy consumption by 50%, and then generating this energy from renewable sources such as wind turbines. Achieving these ambitious targets presents complex challenges that would involve a significant commitment, but if the community chooses to do this, it is within our reach.

Fundamental to achieving the energy objectives outlined in this section is to achieve a consensus on effective strategies among major stakeholders. This involves bringing together the energy establishment – utility companies, Cape Light Compact, fuel transporters, wholesalers and retailers – to build consensus for cohesive, integrated strategies.

## Energy Self-Sufficiency

The region's strong and consistent winds could enable the Vineyard to supply or offset its energy needs, and even produce excess energy to sell to the mainland, by 2050. While current projections do not foresee complete replacement of fossil fuels with renewable energy sources, mainly due to transportation power demands, we could generate enough surplus electricity to offset greenhouse gas emissions from those fossil fuels.

With current growth trends, our energy use would grow from 4.3 trillion Btu today to 5.5 trillion Btu by mid-century. This projection anticipates that improved efficiencies will outpace increased power usage, so per capita energy use decreases some 20%. With the Plan's Modest Growth scenario and additional aggressive efficiency measures, we could reduce our projected total energy use by more than half, down to 2.7 trillion Btu.

Even producing this reduced amount of

energy locally is a large, expensive task. While there is a variety of renewable sources and different scales of production from which we can generate our needs, there are definite economies of scale. For example, to produce the amount of energy we are likely to need, it would take 32 of the largest, utility-scale wind turbines (more than 550 feet high at the blade tip, presumably located well offshore in federal waters) at a cost of about half a billion dollars, whereas it would take an impractical 85,500 small, domestic-scale wind turbines (one for every  $\frac{3}{4}$  of an acre of land) at a cost of \$2.6 billion.

We will likely obtain our future energy needs from a variety of sources using a combination of individual, municipal and utility scale facilities. From what we know today, though, it seems clear that to produce substantial portions of our energy needs will depend mainly upon utility-scale wind facilities that can only be physically accommodated in the waters offshore of the Vineyard.

**Waste:** The volume of waste the Vineyard disposes of is an energy-intensive and, thus, costly operation. Currently we ship 33,500 tons of trash off-Island each year, accounting for 15% of the Steamship Authority's freight traffic, or one in seven freight trips. Our generation of waste is growing much faster than our year-round population. If we look instead at waste as a resource, we might address multiple issues. We import compost at great expense, while shipping

off sewage sludge and organic materials we could use to make our own fertilizer and compost. Wiser use of what we now discard as waste could reclaim useable resources, reduce waste transportation costs, create new economic opportunities, and even produce energy.

# energy & waste

## Objective E1: Organize to deal effectively with energy issues.

Common to all the energy issues discussed in this section is the need for well thought-out and integrated mechanisms to organize, educate, fund, and lobby.

### Strategy E1-1: Develop an Island-wide organizational infrastructure to sustain energy efficiency and generation initiatives.

The challenges to our community for effectively addressing the demands, technologies, and costs for the production and management of energy will require multiple initiatives and strategies. While individual towns and the private sector may perform some of this, the larger initiatives that promise the most impact in improving efficiencies, changing user behavior, or developing our Vineyard-grown resource will require a high level of coordination among the towns to produce a complementary, if not unified, effort to bring about positive change. A few examples of such Island-wide activities that could fall under one or more entities are:

- Receive grants, rate surplus and tax revenue, evaluate proposals and administer funds; authorize bonding authority to finance larger public energy projects.

- Provide technical outreach and assistance to identify opportunities and evaluate technologies, train construction community and building inspectors in energy efficiency construction techniques, offer and coordinate incentives such as tax credits, rebates, grants, and low interest loans, design and operate an energy audit-upon-sale program, train and supervise competent energy auditing teams.

- Provide technical support for existing building inspectors with enforcement powers to certify the energy efficiency of construction. Presently, each town has its own building inspector. Until towns could justify their own individual energy inspectors, the position of an Island-wide Energy Building Inspector could be created to check for compliance and ensure that techniques are being applied correctly.

- Establish a revolving fund allowing financing of energy projects.

The Vineyard Energy Project provides some of these functions. The VEP could be transformed or a new Vineyard Energy Commission could be created with official town representation.



7.1

## Energy Efficiency

Energy efficiency efforts may be the least exciting, but are also the simplest and least expensive way to improve our energy situation. In the oil crisis of the 1970s, President Carter asked the American people to put on a sweater and turn down the thermostat. That is an example of energy conservation. Today, technological advances offer us the opportunity to provide the equivalent services using smaller amounts of energy. Compact fluorescents provide the same amount of light using one-third the energy. This is an example of energy efficiency.

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Readily available technology can make dramatic improvements in energy efficiency both cost effective and reliable. Examples include fluorescent lighting, super-insulation, high-performance windows, Energy Star appliances, and high-efficiency heating systems. Retrofit projects can save up to 50% of energy use. Our targets for 2050 include 50% improvement from efficiency gains using currently known efficiency techniques, with the anticipation that even greater opportunities will avail themselves in the future. This is an ambitious target, given recent growth in energy consumption.

Existing technologies, our low-density settlement pattern, and our automobile-dependent society make it most challenging to substantially reduce energy and carbon emissions in transportation, which is one third of the Island's energy consumption. Total motor vehicle miles traveled has been increasing by approximately 2% per year, twice the population growth rate, and SSA traffic has grown in the shoulder and off-seasons (at least until the current economic crisis). The large home services and construction sectors require a lot of travel throughout the Island.

The Island Plan (section 9: Transportation) outlines a series of measures aimed at reducing the amount of car usage, including making public transit more compelling to use and improving facilities for bicycles and pedestrians. It also (section 2: Development & Growth) outlines long-term planning strategies to focus development in more compact, walkable towns and villages.

Nevertheless, the dispersed physical development of the Vineyard makes it likely that personal motor vehicles will remain our predominant means of transportation even 50 years from now. If we are to make a significant reduction in the amount of the energy that transportation consumes and the destructive waste it emits, we will need to improve fuel consumption rates of vehicles, and transition to cleaner burning or "green" fuels that might be generated on-Island.

## **Objective E2: Reduce the amount of energy used in buildings.**

In 2005, the approximately 15,000 housing units (including guest houses and apartments) and nonresidential buildings accounted for 58% of the energy used on the Vineyard. Energy use in buildings can be reduced by requiring higher efficiency new construction, improving the energy performance of existing buildings, and setting up a rate structure that encourages people to use less energy.

### **Strategy E2-1: Adopt a Vineyard Energy Code requiring new construction to be more energy efficient.**

It is now feasible to build much more efficiently, thereby reducing owners' annual heating and cooling costs. In 2009, the Commonwealth adopted a stricter energy code that will be fully effective in July 2010. Since 2008, the Commonwealth's Green Communities Act enables localities to adopt even stricter local energy codes. The state has drafted a "stretch" energy code for possible adoption by municipalities. It is recommended that Vineyard towns amend the energy portion of their building codes to phase in improved energy performance, requiring 50% greater energy performance in 2015, and increasing performance targets every five years so that by 2030, new buildings will be 90% more efficient than today's requirements. These performance standards should give credit for using renewable energy sources and could include offsetting

# energy & waste

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part of the requirement with mitigation fees that would go into a revolving fund to pay for other energy improvements in the community. Homeowners could finance these efficiency improvements in several ways such as low-interest loans or energy efficiency mortgages which are paid back with the cost savings from reduced energy consumption, as well as by using the increasing number of federal and state grant and tax credit programs.

## **Strategy E2-2: Institute energy audits and upgrades upon residential property sales and for all commercial buildings.**

Our old buildings are usually the least energy efficient. Once a Vineyard Energy Code is in place, we should set up a system requiring that an energy audit be conducted when a property is sold, similar to mandatory Title 5 septic inspections. The audit could be accompanied by expert advice in reducing energy needs for lighting, refrigeration, ventilation, and air conditioning. Energy upgrades could be encouraged, or even required for efficiency measures with less than a 10-year simple payback, perhaps assisted with a revolving fund. Conversions to non-greenhouse-gas-emitting energy sources would be encouraged and rewarded.

- Residential audits would be required upon the home sale, allowing sellers and buyers to negotiate prices or possibly triggering required upgrades by the seller for efficiency measures with a 10-year payback.

- Business audits would be required for buildings with annual energy bills of more than a given threshold, with mandatory implementation of efficiency measures with less than 10-year simple payback.

## **Strategy E2-3: Create a revolving fund for energy improvements – the Island Energy Fund.**

Property owners who undertake energy efficiency improvements – especially those with less than a 10-year payback identified in their energy audit – could get low-interest loans from a revolving fund. Loans for public and affordable housing projects could be interest free. The fund could be financed by floating bonds, from mitigation fees for buildings unable to meet their full energy requirements, and with arrangements with energy suppliers to pay back implementation costs from savings in energy bills (already available to large customers under area-wide agreements or Utility Energy Savings Contracts). Aspen, Colorado has had such a program for many years, and Vachon Island in Washington State is instituting energy fees to support a revolving loan fund for energy improvement programs.

## **Strategy E2-4: Implement energy pricing structures that encourage energy efficiency.**

The average house size has increased considerably on the Vineyard, and seasonal homes are increasingly heated year-round, so even with more efficient buildings, energy consumption can continue to rise. This could lead to energy price increases or supply disruptions that will affect the whole community. Communities across the nation have shown that inverted pricing such as inclining block rates (the more you buy, the higher the unit price) is an effective way of changing behavior, allowing efficient users to benefit from rates subsidized by inefficient users. Setting up an inclining block rate program would require working with the power supplier, fuel distributors and state agencies. The inclining block methodology was applied successfully to water rates in California during the 1990s drought and remains in place at many public and private water agencies. The program could be designed to be revenue-neutral, or to send net proceeds to the Island Energy Fund for reinvestment in efficiency and renewable generation projects.



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### **Strategy E2-5: Become an incandescent-free Island.**

Replacing incandescent light bulbs with efficient compact fluorescents (CFL) or other efficient bulbs is the simplest short-term energy-efficiency measure and one from which homeowners most immediately see reduced monthly electricity costs. Annual savings average about \$100 per household. Australia is banning the sale of incandescent bulbs by 2010 and Canada by 2012. If every Islander exchanged 15 incandescent bulbs for more efficient bulbs, the Island's annual electrical consumption would decline by 7%. A program promoting this exchange could involve trained door-to-door personnel equipped to make on-the-spot change outs, calls on businesses to explain efficient alternative lighting and arrange incentives for efficiency measures.

### **Strategy E2-6: Require new pools to be solar-heated.**

Solar pool heating has very quick payback and offers significant fuel savings. A simple and effective short-term efficiency measure would be to mandate that any new heated pool be accompanied by passive or active solar pool heating adequate to meet the pool's needs, as well as requiring that all pool and hot tub covers be insulated.

### **Strategy E2-7: Convert to more energy efficient building HVAC systems.**

As surplus renewable electric energy becomes available, establish incentives and furnish expertise for conversion of building heating/cooling/hot water systems to geothermal heat pumps.

### **Strategy E2-8: Publicize our energy challenges and opportunities for addressing them.**

Changing attitudes and behavior is the most challenging part of this work. For generations, energy has been an inexpensive commodity and has been taken for granted. We need to foster greater understanding of the critical role that energy plays in our lives and the energy challenge before us. Our efforts will be more successful if they emphasize the benefits of choice and comparability of options rather than suggesting that being efficient involves self-sacrifice or "doing without." If we are to succeed at creating an energy paradigm shift, we need to have the commitment of Islanders of all ages – essentially a mass movement. Educating and motivating people about the energy choices the Vineyard faces will require the involvement of utility companies and major energy consumers. A variety of approaches should be pursued and could involve developing a social marketing program to popularize energy awareness; stepping up energy education programs in schools to educate future consumers; illustrating operational costs/benefits of energy efficiency implementation; and running a program to raise awareness about carbon footprints and how to reduce them.

### **Objective E3: Reduce the amount of fossil fuels used in motorized transportation.**

Other parts of the Island Plan address strategies to reduce the use of motorized transportation, but it is also important to reduce the use of fossil fuels in the motorized transportation that does take place.

We have choices in the size of our vehicles and, increasingly, the fuels to power them. Choosing fuel-efficient vehicles could significantly reduce the amount of petroleum-based fuels we consume and the related damages to the air quality and public health.

With fuel efficiencies double or more than today's average vehicle, hybrids and other efficient vehicles – such as soon to be available plug-in hybrids and all-electric vehicles – offer the easiest solutions to reducing our fossil fuels used in transportation.

The Vineyard holds particular promise for alternative-powered automobiles. Some concerns about these vehicles – such as the duration of battery charges between charging stations, the inability to accelerate rapidly, and the reduced collision resistance of lighter vehicles – are less problematic here, since Island trip distances are relatively short and there are no speed limits over 45 mph. The Vineyard could be the ideal location for a prototype installation of innovative vehicles, for the reasons mentioned above, and because only a small number of prototype fueling stations would be needed to service a fleet of experimental cars kept permanently on-Island.

# energy & waste

In the long term, replacing the use of combustion engines with other available technologies such as electric motors, hydrogen-powered fuel cells or vehicles designed to store power for the Island, in combination with locally generated energy from renewable sources, will allow us to work towards the goal of zero emissions for the Island's transportation sector.

## **Strategy E3-1: Promote use of hybrid and other energy-efficient vehicles.**

Hybrid cars go twice as far on a gallon of gas as the typical car on the road, so if we all switched to hybrid vehicles, we'd reduce gasoline consumption in automobiles by 50%. If, in a decade from now, we all drive the plug-in hybrids that will then be available, we'd reduce gas consumption by 75%. Measures to encourage use of fuel-efficient vehicles include having towns and other public agencies buy them, and/or requiring that taxis and a proportion of car rentals be fuel-efficient. Individuals could be encouraged to make their next car a hybrid or other fuel-efficient vehicle with an information campaign, and with incentives such as priority ferry reservations and better parking spaces.

## **Objective E4: Improve Island air quality related to transportation.**

Burning fossil fuels pollutes our air. Motor boats, lawn equipment, idling vehicles, all impact the Vineyard's air quality. Diesel fuel is one of the contributors to particulates in the air that are linked to the rise of asthma in the United States. The Island has many services and industries dependent upon diesel-fueled engines: the ferries and boats; most of the buses used for public transit, schools and tourism; vehicles and equipment used in construction, home services such as fuel delivery and landscaping, and agriculture.

## **Strategy E4-1: Use available technologies to lessen the impact of diesel fuel use on the Island.**

Phase in requirements for all Island diesel-powered vehicles to use clean fuel alternatives: better grades of diesel, biodiesel, electric. Conduct a pilot project for Island school buses and/or for ferry buses to demonstrate the viability of clean fuel alternatives to use of diesel fuels, such as adding a percentage of biodiesel to the fuel mix.

## **Strategy E4-2: Eliminate unnecessary vehicle idling.**

Institute an anti-idling program based on education, monitoring, and enforcement. Target staging and passenger pickup areas at ferries, airports, schools, and parking lots. Work to alleviate vehicle wait times and congestion, especially due to parking.



# 7.2

## **Renewable Energy Generation**

Generating electricity locally can help stabilize our energy costs; reduce hazards, power losses and costs associated with bringing fuel and power from off-Island; and provide a strong new sector to our year-round economy and labor market. The main potential local sources for renewable generation – wind, solar, and geothermal – can meet the Vineyard's power needs while appreciably lessening our carbon dioxide emissions. Energy generated from biomass, septic waste, or solid waste may also supplement our needs.

There are three sizes of facilities:

- Small, residential-scale, or on-site, facilities serving the relatively small energy demands of the individual land owner.
- Medium, municipal-scale facilities for individual users with large energy needs or serving a cluster of energy users.
- Large, utility-scale facilities providing power to a broad community of users.

Wind, especially the stronger winds offshore, offers the best opportunity for utility-scale generation, which is needed if we are to meet much of our Island's energy needs. Relatively large amounts of land are needed for utility-scale solar and wind facilities, and large wind turbines could have significant impacts on their surroundings, which is another inducement to erect wind-powered facilities offshore.

Well before 2050, the Vineyard could generate enough renewable energy to supply our electricity needs and to offset the carbon from the fossil energy we would still likely need to import, based on the projection that energy efficiency measures will reduce demand by 50%. Any number of potential combinations of energy source type and scale could achieve energy self-sufficiency. One largely decentralized scenario of mostly on-site, municipal-scale wind and solar facilities would have a capital cost of about \$1.4 billion. A more centralized scenario of utility-scale facilities would produce the same energy at about half the cost.

The Commonwealth's draft Ocean Management Plan, released in June 2009, identifies two areas in state waters for commercial, utility-scale wind-generated renewable energy, both in the waters of Dukes County. One area is south of Nomans Land Island (in the waters of Chilmark and Aquinnah) and the other is southwest of Cuttyhunk Island (in Gosnold). Combined, these two areas could host about 166 turbines (3.4 megawatts each, 440 feet high) producing about



**Ocean Plan:** The Massachusetts Ocean Management Plan designates two areas west and south of Martha's Vineyard for large-scale commercial wind farms. The waters east of the Cape Cod National Seashore are a prohibited area. Potential areas in federal waters are shown in blue and gray.

600 megawatts. The Ocean Management Plan also suggests that the federal government develop additional turbines in federal waters between and beyond the two state-designated areas.

Possible Renewable Energy Sources		
Various ways of producing 2.1 trillion Btus per year (modest growth and efficiency measures)		
Source	Units	Total \$M
Wind - offshore utility scale (6MW turbines)	32	675
Wind - domestic scale (10kW turbines)	85,500	2,565
Solar - centralized utility scale (acres)	577	1,297
Solar - domestic rooftop (3kW units)	171,100	2,848

The federal government has initiated a process for planning development of commercial wind farms in a large area of federal waters stretching from south of Martha's Vineyard to south of Nantucket, identified as having exceptionally good wind resources. This area offers the potential of significantly greater energy production due to higher wind speeds, while minimizing environmental and other impacts on the land and in coastal areas (birds, boating, scenic values, etc.). However, technologies for erection of wind turbines in deeper waters are not as proven.

These state and federally identified areas could serve as the site for any Vineyard-initiated or owned wind projects, and could generate many times the power needed by the Vineyard. It is very likely that power from these wind facilities would be connected to a substation in New Bedford.

As the state and federal planning and permitting processes advance, it is important to ensure that these projects are well designed and that they maximize the community benefit to the people of Dukes County.

# energy & waste

## Objective E5: Pursue local, utility-scale generation of energy.

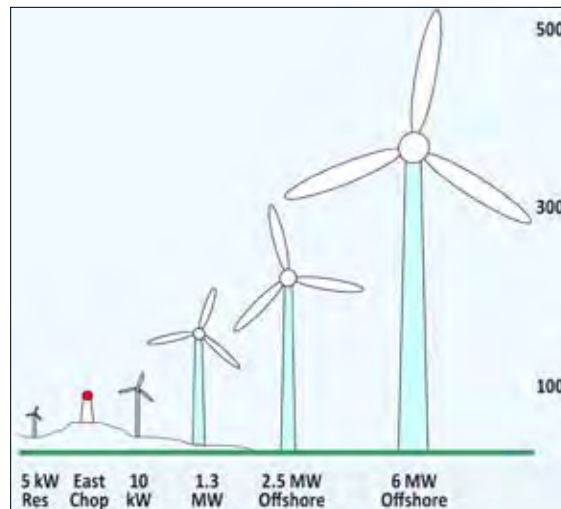
The simple fact is that our energy demands far exceed the energy generation capabilities of on-site, residential-scale generation technologies. The only practical and most cost-effective way to produce substantial amounts of our energy needs would be to use utility-scale energy generation. This would most likely involve town planning boards, the utility company, conservation groups, and state and federal officials identifying the best onshore and offshore sites for clustering utility-scale wind turbines, to find the best balance between maximizing renewable energy production, minimizing negative impacts (such as noise, flicker effect, deterioration of scenic and cultural values), minimizing costs, and providing community benefits.

## Strategy E5-1: Advocate changing state law to allow electricity distribution by local energy generation facilities.

Present regulations limit flexibility and cooperation in the harnessing and use of renewable energy. For example, a neighborhood might have a superior site for a wind turbine that could support the entire neighborhood, but current state law prevents the power from a private generation facility being transported across property lines. The Commonwealth's efforts to allow electricity generated at one farm to be allocated to other farms across the state may pave the way for the nonfarming private sector.

## Strategy E5-2: Establish an electrical cooperative or Island utility company.

Community ownership of generation facilities can pass on savings in energy production costs directly to community members in the form of reduced electric bills. Community ownership might be in the form of sales of shares in energy projects or the establishment of a Vineyard public utility



**Wind Turbines size.** Height in feet relative to the East Chop Lighthouse and the High School turbine (HS).

company. Because a community-owned entity that could contract for, finance, and manage utility-scale electrical generation facilities and future storage facilities is more likely to reduce user rates, it would also be more likely to gain public support of necessary projects. The Cape Light Compact has established the Cape and Vineyard Energy Cooperative focused on supplying electricity to municipalities, and several Vineyard towns have joined. The Vineyard Energy Project is in the process of setting up Vineyard Power, a

consumer-owned cooperative aimed at generating renewable energy and distributing it to members.

## Strategy E5-3: Prepare a plan that identifies the best locations for renewable energy facilities.

The preparation of a Wind Energy Facilities Siting Plan for Martha's Vineyard would allow for balancing available energy sources with other community considerations. It is recommended that town planning boards, energy committees, utilities, and Island conservation groups participate in evaluating potential sites and gaining public approval of sites through public outreach and education. Analysis of potential locations for wind turbines should consider factors such as average wind speed, airport restrictions, environmental and scenic impacts, proximity to the electrical grid, access to major roads for construction, and proximity to abutters. Producing our own energy through community-owned facilities such as a carefully located offshore windfarm – with siting determined by the local community – can stabilize and eventually reduce our electric bills. A similar analysis should be made of potential locations of tidal projects and large-scale arrays of photovoltaic solar panels.

## Strategy E5-4: Explore renewable energy generation with site-specific sources.

Work with the Island's refuse organizations and wastewater commissions, State Forest management, and Island farmers to explore the potential for using the Island's construction waste and woody biomass, and possible use of methane gases for energy generation.

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## **Objective E6: Optimize potential for on-site, residential-scale energy generation.**

Current technologies do not enable us to economically produce all of our energy needs from on-site, residential-scale generation facilities. Nevertheless, such on-site facilities are an effective strategy to help curtail use of fossil fuels as they eliminate transmission losses and reduce the size of the generation facility, which can reduce concerns about visibility of facilities scaled for larger generation. All sites should be thought of as potential energy generation locations. Solar electric and wind systems can generate power for the Island year-round whether or not the buildings they are associated with are occupied. Solar hot water is particularly beneficial for buildings occupied year-round and for sites with high hot water demand. New technologies make geothermal energy increasingly viable for home heating and cooling.

### **Strategy E6-1: Identify sites with advantageous access to renewable energy sources.**

Use mapping and other technologies to identify areas with good wind resources or with soils suitable for geothermal installations. Include in the evaluation proximity to the electrical grid. Prepare for public consumption a list of sites or areas that might benefit most from available energy sources. This could be part of the Wind Energy Facilities Siting Plan (Strategy E5-3).

### **Strategy E6-2: Require that new development provide for the incorporation of renewable energy.**

Town zoning regulations should require that new buildings be positioned and built to provide for the incorporation of renewable energy, now or in the future. This could include orienting buildings to maximize solar gain, solar energy generation, and day-lighting opportunities; positioning buildings so as not to shade each other; and preparing buildings to enable installation of solar hot water and solar electric systems in the future if the site has south-facing roofs or ground area.

### **Strategy E6-3: Promote conversion to more energy-efficient building and hot water systems.**

A program should be undertaken to encourage property owners to upgrade existing heating and hot water systems and to incorporate the best systems in new construction. It should target existing homes with electric hot water heaters, year-round housing with good solar access, and any buildings that will be using large amounts of water, such as hotels and restaurants. It should promote use of clean-burning, efficient wood-fired appliances and upgrading from outdated wood stoves to systems that meet the highest EPA standards.

### **Strategy E6-4: Develop information and incentive programs for property owners to encourage on-site energy generation.**

Provide information on available equipment, funding options, zoning and interconnection issues for all technologies. Funding options might include property tax breaks, low-interest loans, funding from the Island Energy Fund and feed-in tariffs (once an Island utility company is established).

### **Strategy E6-5: Investigate renewable energy options specific to farmers.**

Costs of farming operations may be lowered, the cultivation season lengthened, and waste reduced by providing supplemental heat to farm greenhouses with solar thermal technologies or biogas digesters for use with animal manure and farm waste to generate on-site energy.

# energy & waste

## **Objective E7: Develop capacity and a regulatory framework to encourage and support the development and installation of renewable energy generation.**

The public's confidence in using renewable energy can be greatly boosted by providing unbiased, clear information in the rapidly evolving industry, which is partly accomplished through trained installers and maintenance personnel. Well crafted regulations on where and how renewable energy facilities can be developed can help assure the community that all aspects of such facilities are being taken into account.

### **Strategy E7-1: Create training programs for workers needed to support the growing renewable energy industry.**

Provide ongoing education for electricians, plumbers, and the construction community to ensure that knowledgeable installers and maintenance teams are available on the Vineyard. Enact a certification program for renewable energy installers using a nationally recognized program and offer certification courses and testing on-Island. Provide vocational programs at the high school to train students as renewable energy installers or energy efficiency technicians.

### **Strategy E7-2: Adopt development regulations that encourage renewable energy generation.**

Town by-laws and MVC DRI development guidelines can encourage appropriately scaled energy generation facilities to minimize uncertainty while still protecting neighborhood character. Where possible, it would be desirable for such regulations to be standardized across the Island.

### **Strategy E7-3: Improve consumer education and protection by providing current information on products and practices.**

Provide an ongoing and updated list of available, tested products to improve consumer education and protection. For example: Provide information on products available that are appropriate in historic districts or new products that are ready for widespread application.



## 7.3

## **Solid Waste**

We should move to converting most of our waste into useful resources with an integrated, Island-wide program of waste management. The emphasis needs to be both on controlling and influencing what we generate as waste and on how we are maximizing potentials for reuse. Other communities have shown leadership in managing waste effectively with programs to reduce the generation of waste, to reuse building and other materials, to convert organic waste into compost, and to transform waste into energy. Converting our waste to useful local purposes rather than shipping it off-Island decreases energy and expenses used for



transportation of waste and provides resources of community value. Some communities, such as Nantucket, mine their old landfills for materials that can be recycled or converted to energy, thereby removing potential groundwater contaminants and restoring valuable real estate for new uses. Nantucket, which has a centralized composting facility, is now the top recycling community in the country, with only 8% of waste ending up in a landfill.

Four of the Island's six towns – Aquinnah, Chilmark, Edgartown and West Tisbury – are members of the Martha's Vineyard Regional Refuse Disposal District, jointly handling their waste management. Oak Bluffs and Tisbury are no longer members of the District, and manage their wastes together. These two towns are the most densely populated and are the only towns that provide curbside collection. In addition, several private companies are involved in collection, consolidation, and off-Island shipment of waste, independent of any governmental functions.

The addition of three components to our current waste system – a large-scale composting facility, a used building materials exchange, and a comprehensive recycling facility – may allow us to create both jobs and products (compost, mulch, biomass for heating, building materials, etc.) while reducing energy consumption and costs. Nantucket's integrated solid waste disposal system, encompassing landfill cleanup, recycling, and composting, has reduced waste by 86%. A thorough feasibility study looking at site considerations, material sources, collection methods, use options, and product resale is needed to develop an appropriate comprehensive approach for the Vineyard. The first objective below focuses on managing waste after it enters the waste stream while the second deals mainly with ways to reduce, reuse, and recycle so materials don't have to be treated or disposed of in the first place.

## **Objective E8: Convert most of our waste into useful resources with an integrated, Island-wide program of waste management.**

### **Strategy E8-1: Develop an Island-wide system for coordinated waste management.**

The fragmentation of current management systems – among towns and between the public and private sectors – increases administrative and operational costs, has resulted in varying disposal practices for people across the Island and within towns that present barriers to increasing recycling practices and reuse programs, and makes it harder to reach the critical mass needed for some kinds of processing. This inhibits opportunities to increase recycling and reuse programs and more sustainable processing practices. As transportation and processing costs continue to climb and population increases, an approach to waste management which integrates all handling systems would not only be more efficient, but the combined volume of waste resources could open up new opportunities such as composting and building materials recycling to draw us nearer to being a zero-waste community. A coordinated approach would facilitate dealing with increasingly complex and costly requirements and technologies, and would make it possible to more efficiently finance necessary infrastructure improvements.

# energy & waste

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## **Strategy E8-2: Construct an integrated Island-wide recycling/composting facility.**

A large portion of the Island's waste that cannot be recycled or reused in its present form can be "cooked," breaking down the volume of material and significantly reducing the amount of solid waste we need to ship off-Island. Sources for compostable materials could include sewage sludge, schools, restaurants, the hospital, senior housing, and individual homes. This facility would also allow towns to mine their capped landfills, harvesting useable contents of the buried waste and removing the threat to groundwater quality posed by the capped (impervious membrane on top) but not lined (no membrane underneath) landfills. Once all useable resources are extracted from the excavated waste, the remaining material would return to a lined area of the landfill and ultimately be capped. Such mining could also return portions of the current landfill acreages to alternative, active use. A thorough feasibility study must first be conducted.

## **Strategy E8-3: Use construction debris and available biomass (wood waste, leaves, and organic wastes) as a local resource.**

Under this objective, government or a private sector operator would create and/or operate a facility to accept and receive construction waste, demolition debris, and other unwanted or surplus building materials; essentially a supermarket for used building materials and processed wood waste – the latter for use as fuel, mulch, or compost supplements. The operator would conduct sorting, separation, storage, and inventory functions to make materials available for reuse. Fees and charges for materials would be expected but still represent a savings over disposal costs or purchasing items new. These efforts could be supplemented by ordinances requiring or incentives for on-site separation of materials during construction or prohibitions on disposal. On a more aggressive level, this facility could also become involved with processing forest and landscaping wood waste.

## **Objective E9: Pursue opportunities to reduce, reuse, and recycle waste materials.**

Many communities are attempting creative ways to manage waste in response to space limitations, regulations, financial considerations, and increased concern about the wasteful consumption of resources that still contain utility. People (not just Vineyarders) have long trolled landfills to salvage items still containing some utility. Salvation Army clothing deposit boxes and local thrift shops rely upon such gently used items. Unfortunately, such practices are plagued with the fear of insurance liability or unscrupulous people simply depositing unusable trash. Continuing public education is needed to overcome skepticism about whether carefully sorted glass and plastics are, in fact, ending up recycled.

## **Strategy E9-1: Reduce the amount of potential waste brought to the Island.**

The first step is to minimize the importing of unnecessary materials that will ultimately have to be disposed of. This can be done by educating consumers, retailers, and applicators of alternatives to continued use of hazardous and toxic materials, especially those that will cause disposal issues, and to assure availability of these alternate products. We should encourage hardware and grocery stores to discontinue the sale of toxic products. The use of packaging materials can be reduced by promoting the reuse of bags and packaging, and by adopting packaging polices for shipping goods to the Island and for on-Island retailers. We can



reduce Third-Class mail volume by providing education about ways to stop unwanted catalogues and junk mailings.

### **Strategy E9-2: Improve awareness of waste disposal processes.**

Reinstill the public's faith in the recycling programs already in place through periodic information in the newspapers or posted at disposal sites on the volume of materials recycled and the monetary savings to the community. Develop educational programs targeting businesses, institutions, and governments. A part of the education process should include encouraging the purchase of refurbished materials and products with recycled content, in order to support the demand for recyclables.

### **Strategy E9-3: Increase the number of recycling containers and satellite drop-off sites.**

In the past few years, the SSA has placed recycling containers aboard ferries. We should look at all public trash receptacles as potential locations for recycling containers with multiple compartments for sorted materials. Consideration might also be given to additional drop-off sites for paper and other recyclables.



### **Strategy E9-4: Provide for the reuse or repurposing of materials.**

Work with existing thrift stores and the Dumptique to address operational barriers to expanded use. Work with the municipal waste stations to address legal concerns with people picking through discarded materials, examining practices of other communities. Similar to the reuse of construction materials, entire programs might be created around particular materials; e.g. an independent entity could collect used latex paint and then mix and redistribute (sell) it.

### **Strategy E9-5: Adopt mandatory recycling.**

In order to increase recycling, some communities throughout the United States have made participation mandatory.

### **Strategy E9-6: Minimize demolition of homes.**

Promote alternatives such as restoration, improvement, relocation and deconstruction of buildings for reuse and recycling. Provide incentives to not demolish. Institute town demolition delay by-laws that require buildings be offered for reuse for a certain time frame before they are allowed to be demolished.

### **Strategy E9-7: Consider septic tank dewatering.**

The use of residential septic tank dewatering systems could lessen the transport costs associated with septic tank pumpouts as well as reducing the volume of waste to be transported and disposed of.

### **Strategy E9-8: Generate biodiesel from waste cooking oil.**

Construct a biodiesel generation facility using waste cooking oils.

# SECTION 8

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# HOUSING

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**GOAL: Provide a full range of housing options by significantly increasing the number of affordable housing and community housing units on the Vineyard, by prioritizing those residents with the greatest need, and by emphasizing the creation of rental units.**

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TARGET: Make 10% of our year-round housing stock permanently affordable to people earning less than the area median income, and another 10% affordable to those earning from 81-150% AMI (about 650 dwelling units in each category for the modest growth scenario).

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**IN THE PAST DECADE, the cost of Vineyard housing has soared to such levels that many year-round residents and seasonal workers are unable to find adequate housing. Businesses have increasing difficulty retaining the workforce they need. To maintain a healthy and economically diverse society we need to continue to provide a full range of housing options for the year-round population, including housing geared for low-income families, rental housing, and housing for the elderly, as well as summer workforce housing.**

This section focuses on three types of housing needs not met by the current private housing market.

- **Affordable housing and community housing:** Rental housing and home ownership that is affordable for year-round residents. The Island Plan uses the terms “affordable housing” and “community housing” to refer to permanently restricted (deed or ground-lease), year-round housing (and includes year-round workforce housing). “Affordable housing” is directed to those earning up to 80% of Area Median Income (AMI). “Community housing” is directed to people earning up to 150% AMI (i.e. affordable plus 81-150% AMI).
- **Seasonal workforce housing.**
- **Housing for seniors and those needing assisted living:** This includes a range of assistance for the elderly as well as for people who are mentally or physically challenged.

# housing

It may seem odd that a place where one house exists for every resident man, woman, and child could have an affordable housing crisis. But the fact that only 44% of the houses on Martha's Vineyard are occupied year-round is testament to the tremendous demand for seasonal homes in a highly desirable vacation and retirement destination.

This strong demand equates to high housing costs. The median home sale prices from 1997 to 2006 more than tripled to \$695,000. While the economic recession in 2008 caused the median sales price to dip to about \$650,000, this price would still require a purchaser to have an income of \$132,000. That is more than twice the Vineyard's median income of \$57,553. The simple fact is that second-home buyers from off-Island can typically outbid Vineyarders for housing. The housing affordability gap is still too wide for those seeking to enter the Vineyard housing market.

Rental housing – which includes single-family homes, homes with one or more apartments, and multi-family structures – tends to provide lower cost accommodations than single-family dwellings, providing a stepping stone towards home ownership and a place for older people who want to downsize from home ownership.

Since the majority of homes are not occupied the year round, the 29% of Vineyard householders who rent must also compete with high-priced, short-term seasonal rentals, which creates another problem – unstable living arrangements. Homeowners rent out their homes at high rates during the summer to vacationers or to the estimated 5,000 seasonal workers.

As a result, many year-round residents are forced to do the "Vineyard shuffle," vacating their winter rental housing between May and September to look for temporary shelter such as an overcrowded house, tent, or even a car.

This voracious demand for short-term summer rentals also induces resident homeowners



to voluntarily do the Vineyard shuffle, capitalizing on the influx of cash. This ability for homeowners – Vineyarders and off-Islanders alike – to derive rental income from their homes is part of their home purchase calculations, further pushing upward the cost of housing on the Vineyard.

Given the high housing costs, affordable housing and community housing projects generally receive some form of direct or indirect subsidy investment. The creation of affordable housing, community housing, and other non-market housing involves many challenges: the cost of

financing the development and operation of these projects, competition for land with other land uses such as market rate housing and open space protection, the limited amount of available land in areas where zoning and wastewater infrastructure allow higher-density projects, as well as regulatory and permitting processes that are sometimes compounded by NIMBY (Not In My Backyard) lawsuits.

In recent years, the towns and nonprofit organizations have had great success in addressing various segments of Island's nonmarket housing needs. Currently there are more than twenty housing organizations. Several hundred rental and home ownership units were created or are in the process of being created, and will be available to future generations in perpetuity. The following are some efforts by state and Island entities to address the housing situation:

- Massachusetts enacted the Comprehensive Permit Law (Chapter 40B) in 1969, setting a target for each municipality to have 10% of the year-round housing stock designated for low and moderate income residents earning up to 80% AMI. The Comprehensive Permit Law allows developers to supersede local zoning regulations in towns that have not met the 10% low and moderate housing target, provided that 25% of the project's housing units are used for low and moderate income housing. Aquinnah is the only Vineyard town that has met the Commonwealth's 10% goal.

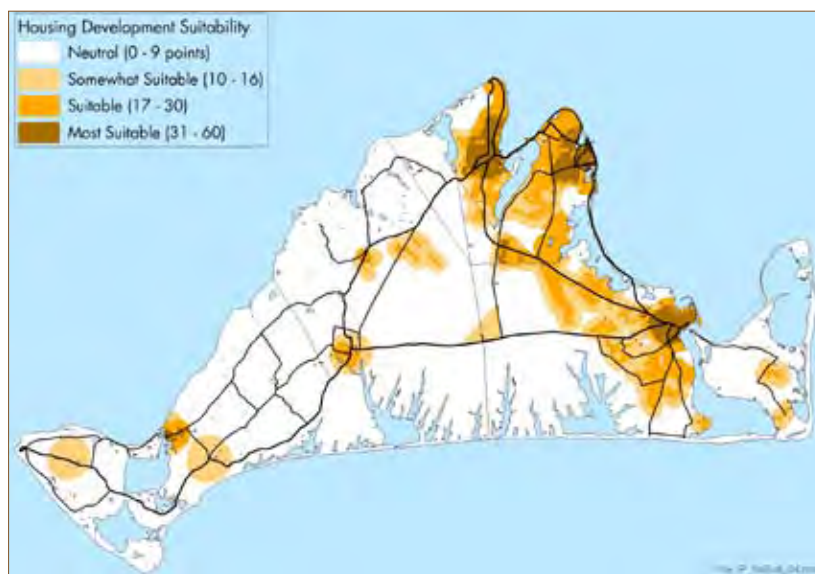
- Over the last 25 years, 608 subsidized housing units were created, of which 404 housing units still qualify for the Commonwealth's Subsidized Housing Inventory.

- Since 1999, there has been a strong grassroots effort on the Vineyard to address the Island's housing needs by providing rental and ownership opportunities for Island families. This includes efforts of town affordable housing committees and organizations such as the Dukes County Regional Housing Authority (which owns and manages rental properties), the Island Housing Trust (which stewards land and develops affordable and community housing), the Island Affordable Housing Fund (which raises funds to help support the DCRHA and IHT), and Habitat for Humanity of Martha's Vineyard. Generous support from towns and the broader community has funded professional staff for the Dukes County Regional Housing Authority, a Housing Needs Assessment for the Vineyard in 2001 (updated in 2005), and extensive public education and outreach.

- In 2004, the Legislature adopted special legislation for Martha's Vineyard and Nantucket allowing for perpetual deed restrictions for those earning up to 150% AMI. In 2005, the remaining four Island towns adopted the Community Preservation Act, which adds a 3% surcharge to property taxes to be earmarked for affordable housing, open space preservation, and historic preservation.

- Island Elderly Housing has provided 165 rental units for elders of very low and low income on the Island, and the Wampanoag Tribal Housing Authority provides 31 rental units.

- The Dukes County Regional Housing Authority's Rental Assistance Program provides 75 rental units for year-round residents.



**Housing Suitability:** The optimum locations for additional community and general housing based on factors such as availability of services and proximity to jobs and stores.

Much has been accomplished since the Island Plan process began a few years ago. There have been 35 new home ownership opportunities, the Town of Edgartown developed 60 rental units in the Morgan Woods project, and the Rental Assistance Program that facilitates property owners' ability to rent on a year-round basis was expanded. There are now more housing options for working people that didn't exist a few years ago. But while

there are more market and subsidized rental and ownership opportunities available, many households are unable to take advantage of these opportunities because of the economic recession. Some individuals and families have reduced or more unstable income and are unable to meet lenders' and potential landlords' requirements. This is especially true for those with fixed, very low, or no incomes who are in increasingly distressing situations trying to meet housing and basic life needs on Martha's Vineyard.

Continuing effort is still needed to allow the Vineyard to respond to the pressing housing needs that are simply not met by the private market. This should favor creating more community housing units, either with existing housing stock or through new construction. New projects should preferably be located in the growth areas outlined in the Land Use Guidance Plan (see section 2), but the challenge is so great that we have to be prepared to accept appropriate projects throughout the Island. Also, as discussed in section 2, we should look for ways to help community housing projects, and especially affordable housing projects, deal with the costs of meeting the wastewater treatment, energy efficiency, and other objectives outlined in the Island Plan, such as by using mitigation fees on market projects to fund these measures for affordable housing projects.

The provision of community housing is essential to preserving the social fabric of the Island community and to maintaining an adequate workforce to sustain the Vineyard's economy.

# housing



## 8.1

### Affordable/ Community Housing

In order to meet the long-term housing needs of the Island's year-round population, we should aim to meet and surpass the Commonwealth's target of 10% of the Vineyard's year-round housing stock to be permanently affordable to Island residents earning up to 80% AMI (referred to as affordable housing), and to create an additional 10% permanently affordable to Island residents earning between 81% and

150% AMI. Currently, this would be about 650 units in each category.

It is important to place the greatest effort on those that have the greatest need, namely the under 100% AMI level, while also seeking to address the needs of the full range of income levels that has difficulty finding housing on the open market. Also, at least half of these units should be rental housing, since this is the greatest need because it is available to people who don't have the equity for home ownership, and because it means that the housing will be available to future generations; however, it takes additional financial resources to implement and operate rental housing.

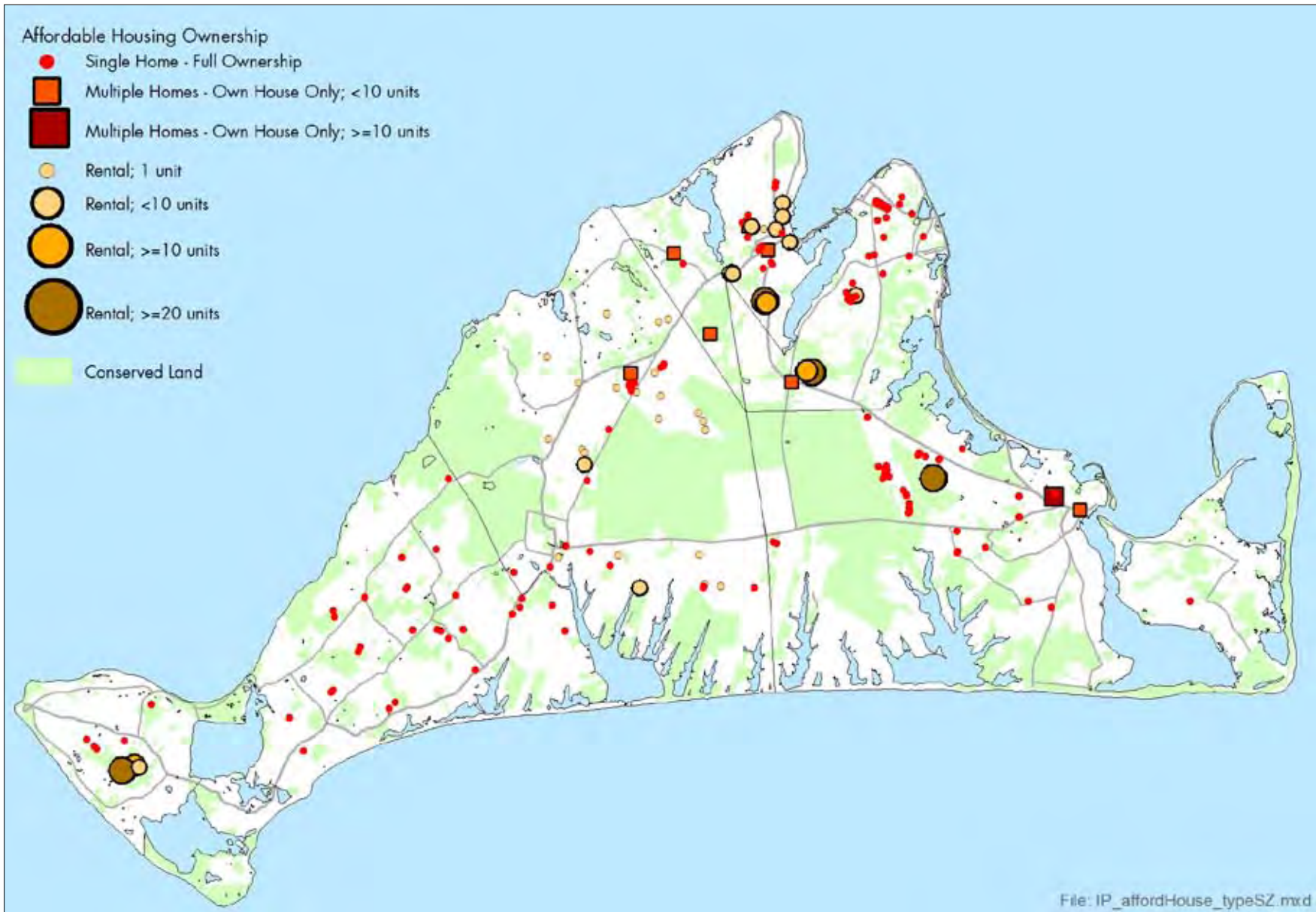
Since significant public and private investment is usually involved in the creation of affordable housing units – either directly with land and/or financial support or indirectly by allowing greater density – it is appropriate that there be permanent income restrictions to ensure that this resource is available into the future by people with significant need. It should also be possible to create additional units that are restricted to year-round use; to the extent that this is done with little or no subsidy, they could also be without income restrictions (though this doesn't seem to be possible under current laws).

#### **Objective H1: Allow additional density for new community housing in appropriate locations.**

Allowing additional density – provided all extra units are used for affordable housing or other community housing – can be an effective way to address the Island's housing needs. Examples include additional accessory units such as West Tisbury's Accessory Unit By-law, and multi-family housing in specific areas such as Island Elderly Housing's Aydelberg in Oak Bluffs. In all cases of additional density outlined below, the additional units should meet Board of Health regulations and any additional construction should be designed to meet zoning dimensional limits, the building code, and wetlands restrictions, and to fit the neighborhood.

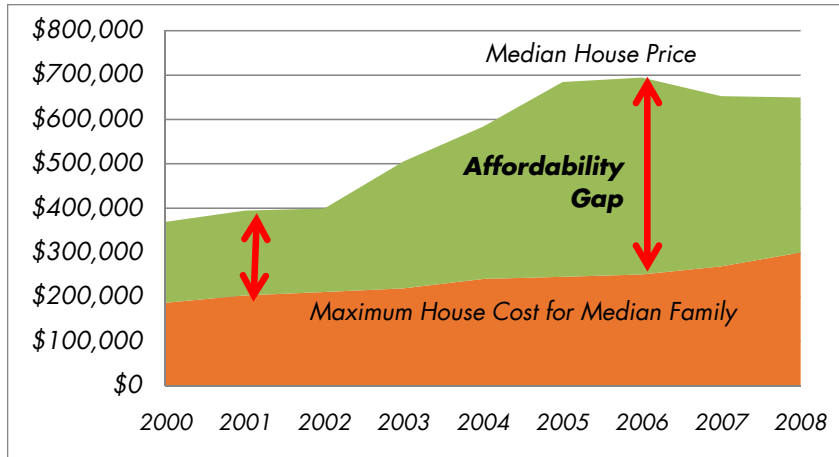
#### **Strategy H1-1: Allow an additional accessory affordable housing unit on appropriate properties.**

The idea is to allow one accessory unit on a residential property provided it is deed-restricted to be affordable housing or to be used by members of the owner's immediate family. This unit could either be within an existing home, as an addition to an existing home, or where permitted in zoning, in a guest house or garage apartment. Only one unit on a property should be allowed to be rented. (A similar provision in West Tisbury resulted in the creation of about 30 units since 2003.) To address concerns that this could lead to an excessive increase in development, this provision could be implemented in a gradual way, starting out by allowing it only with a special permit in growth



**Existing Affordable Housing:** Properties with both rental and ownership affordable housing can be found across the Island (as of 2009).

# housing



**Affordability Gap:** Over the past decade, the gap between what the median Islander can afford and the median house price has increased threefold.

areas. If it is effective and doesn't lead to an unsustainable number of additional housing units, it could later be extended to the whole Island or made an as-of-right zoning provision. Consideration could also be given to also use a provision similar to one recently adopted in Nantucket to allow guest houses to be sold provided they are permanently deed restricted to be affordable.

## Strategy H1-2: Allow multi-unit community housing in certain areas.

Currently, only 9% of the Island's housing stock is multi-family, and zoning only allows it on a small part of the Island. This makes it difficult to supply housing for certain sectors: singles, young couples, and empty nesters wanting to downsize. The zoning should be changed in growth areas to allow multi-unit housing – such as duplexes, triplexes, quadraplexes, or small apartment buildings – provided all additional

units beyond the base zoning are used for community housing (including affordable housing). Growth areas are in or close to towns, close to services, and where town water and sewers are available, as defined in section 2: Land Use Suitability Plan. (For example, if current zoning would only allow one unit on property A and four units on property B, this provision could allow a second unit on property

A and 2 extra units on property B, provided they were restricted as year-round housing under 150% AML.) The general provision of more areas allowing multi-unit housing, even if not income restricted, would provide additional housing options for the Vineyard including buyers or renters at the low end of market rate housing. Community housing units within market rate developments generally are required to pay their fair share of expenses including property taxes, utilities, and road and septic fees. It is important to assess these fees in an equitable way – and to avoid fees for nonessential services (such as recreational amenities) – to avoid making monthly housing payments unaffordable.

## Objective H2: Prioritize use of existing housing stock for affordable housing and community housing.

Efforts to address housing needs should look for opportunities to use existing buildings instead of new construction, to avoid the possible negative impacts (wastewater, traffic, neighborhood disruption, etc.) related to new development.

### Strategy H2-1: Adopt demolition delay by-laws to encourage house preservation or reuse.

Demolition delay by-laws, similar to Edgartown's, should be implemented Island-wide to promote keeping existing houses in place, or when they must be removed, to encourage relocation of structures for use as community housing, or, at least, deconstruction to recycle building materials. The demolition delay should be until the owner arranges to have the house moved to an alternative location, or deconstructed if moving is not feasible. Experience on the Vineyard has shown that to make moving houses donated for community housing financially feasible, owners need to pay for the move by donating their cost savings, namely the cost of demolition that is avoided and the tax refund from donating the building. One or more locations should be established for temporary staging of homes and the storage of reusable house materials such as doors, windows, and floors (see section 7).



### **Strategy H2-2: Establish amnesty programs to address the issue of illegal apartments.**

Work with town boards and building officials to establish amnesty programs to allow property owners with illegal apartments to be brought up to code for the health and safety of tenants. Create a subsidy program that will provide financial assistance to property owners to upgrade illegal apartments.



### **Objective H3: Increase funding for community housing and related infrastructure and services.**

It costs a great deal to create and operate community housing projects. Although private fundraising efforts have been quite successful in recent years, it would be best to create a steady stream of funding for various housing programs and projects. The first stage in achieving this was the decision of all six Island towns to adopt the Community Preservation Act. It is a continuing challenge to identify and pursue all state, federal, municipal, and private funding sources.

### **Strategy H3-1: Encourage each town to adopt a Municipal Affordable Housing Trust Fund.**

This allows towns to place Community Preservation Act funds and other municipal funds in the trust fund earmarked for affordable housing, where it can be accessed more quickly to take advantage of opportunities such as property available for purchase. Chilmark, West Tisbury, and Edgartown have already adopted a MAHTF. Another option is to have the Island Affordable Housing Fund create a separate account for town-specific projects as done in Aquinnah.

### **Strategy H3-2: Create the Martha's Vineyard Housing Bank.**

The proposal to create the Martha's Vineyard Housing Bank, financed by a 1% fee on the portion of property sales over \$750,000, was endorsed by all Island towns in 2005, but the legislation stalled in the Legislature. Passing this legislation could be an effective way to generate a steady stream of funding for affordable housing.

### **Strategy H3-3: Provide tax incentives to property owners who rent housing units on a year-round basis.**

In addition to continuing to support the Dukes County Regional Housing Authority's Rental Assistance Program that provides subsidies to property owners who rent to qualified tenants on a year-round basis, towns should consider providing tax incentives to property owners who rent housing units on a year-round basis.

### **Strategy H3-4: Provide infrastructure for community housing.**

Encourage collaboration between boards of selectmen, town housing committees, and wastewater commissions to allocate a percentage of sewer capacity for community housing projects. This was done successfully with projects such as Jenney Way and Morgan Woods, whereas other opportunities were missed. Town water and sewer infrastructure should be extended where possible.

# housing

## **Strategy H3-5: Seek Island-wide cost-sharing methods for infrastructure and services.**

The people of all Island towns benefit from having people with mixed income levels living here. In the past, most community housing has been built in down-Island towns, where density is higher and property tends to be less costly. It would be more equitable if there were Island-wide funding mechanisms to allow all Vineyard residents to contribute their fair share to the costs associated with providing community housing, notably the cost of education, infrastructure (water, wastewater, roads), and services (schools, police, fire, public works, etc.).

## **Strategy H3-6: Require inclusion of community housing units, or community housing financial mitigation, in market development projects.**

The construction of commercial projects and of market housing directly or indirectly adds to the need for people to build, operate, and take care of these properties, thereby adding to the need for affordable and other community housing. This can be offset by three regulatory measures related to new development projects. First, towns should adopt inclusionary zoning to require that housing projects or subdivisions larger than a given size include one affordable housing unit for each of a given number of housing units or lots (such as one in ten or one in six). Second, towns could require inclusion of housing in commercial projects (e.g. housing above stores) when possible. Third, home rule petitions could allow towns to set up “linkage” programs, requiring financial mitigation for commercial

projects and certain residential projects (such as subdivisions of a certain size or the construction of large homes) to be used for affordable and other community housing projects (as is done in Cambridge and Brookline). The MVC should revise its Affordable Housing Policy, continuing to seek mitigation by having one in ten, or perhaps six, units or lots in a housing project or subdivision reserved for affordable housing, but also seeking an equivalent number of community housing units in the 81-150% AMI range.

## **Strategy H3-7: Consider taxing or imposing a registration fee for weekly housing rentals.**

It has been argued that short-term housing rentals result in costs to the community, but are not paying the additional income or municipal taxes related to these rentals. Possible taxes are the Room Tax, which would be shared between the Commonwealth and the town, and a town’s business tax. This would require a home rule petition, and is currently being considered on Cape Cod. An alternative would be to require property owners whose properties are rented on a weekly basis to register with the town and pay a fee. These proposals, which have been the object of debate for many years on the Vineyard, could generate revenue for the development of community housing projects, seasonal workforce housing, and other services that benefit visitors, though there are concerns about enforcement.

## **Objective H4-1: Streamline the planning and management of community housing efforts.**

### **Strategy H4-1: Coordinate the application process for affordable and other community housing.**

Establish one Island-wide application process for all town affordable and other community housing programs in addition to all other private and public housing programs that will be administered by the Dukes County Regional Housing Authority. Establish Island-wide local preference standards using a point system instead of town-by-town standards for community (including affordable) housing recipients.

### **Strategy H4-2: Regularly assess the impact of zoning and the permitting process on housing affordability.**

There are many regulations on the books to promote affordable/community housing and the Island Plan proposes others. In order to understand which ones are effective and which aren’t, there should be an evaluation of all regulations every two years, looking at the number of community housing units that were created by each by-law and identifying the possible reasons why some measures were or were not effective. The successful ones can be adopted by other towns, and the problematic regulations revised or taken off the books. Best practices off-Island should be considered for possible adoption. This analysis should include working with local and regional permit-granting boards to identify impediments in the regulatory processes to community housing projects and

possible ways to streamline them, without compromising other requirements.

### **Strategy H4-3: Adopt Housing Production Plans.**

The Commonwealth has outlined a procedure that encourages towns to prepare Housing Production Plans setting out how each town proposes to achieve the Commonwealth's target of 10% of the town's year-round housing units being affordable housing. If a town adopts such a plan and makes steady progress towards achieving this goal, it can exercise greater control over hostile 40B Comprehensive Permit Projects. Related to this, the Island Housing Needs Assessment Study should be updated every five years in support of the Plan, and also to serve as a base document required when pursuing state or federal grants.

### **Strategy H4-4: Consider measures to reduce legal challenges to community housing projects.**

In order to reduce the number of legal challenges that can considerably delay locally approved community housing projects, by-laws could include language similar to Chapter 40R that shifts the housing developer's litigation expenses to the party appealing a local approval if the appeal is unsuccessful; this would require an Act of the state legislature under a home rule petition. An alternative approach would be to ask the Commonwealth to modify its recently adopted fast-track procedure in Land Court providing for settling appeals within six months in order to include all community housing projects (it is now limited to projects with more than 25 units).

### **Strategy H4-5: Ensure permanent income-protection with affordable and community housing.**

In the past, various types of affordable housing were created that end up becoming market housing because affordability provisions were allowed to lapse. Given the high public investment required to create affordable housing, it is important that they be permanently locked in as affordable or other community housing, so they serve the needs of future generations. Permanent affordability can be ensured by using the Island Housing Trust's Ground Lease or by adopting the Martha's Vineyard Housing Covenant By-law in each town, providing for permanent deed restrictions on ground leases for households earning up to 150% AMI. Effective permanent affordable restrictions involve both a legal mechanism (deed rider or ground lease) and a public or private entity with the capacity to monitor and enforce the restrictions in perpetuity.



## **8.2**

# **Seasonal Workforce Housing**

### **Objective H5: Encourage public-private partnerships to address seasonal workforce housing needs.**

The Vineyard's year-round housing needs are compounded by the needs of the estimated 5,000 seasonal workers who come to the Vineyard during the summer. Some of the larger employers do provide temporary housing for their staff, but the Vineyard is made up mainly

# housing

of small businesses; more than 70% employ one to four workers. It could be useful to look to public-private partnerships to address seasonal workforce housing needs. (Of course, the need to accommodate seasonal workers would be reduced if we used more year-round employees such as retirees and high school students.)

## **Strategy H5-1: Conduct an education and outreach campaign to raise awareness about seasonal workforce housing needs.**

The Martha's Vineyard Chamber of Commerce in collaboration with Island housing entities and regional entities can encourage owners of private residences to rent rooms to seasonal workers. Other benefits could include fundraising opportunities that could help assist in addressing the seasonal workforce housing needs like purchasing existing housing that will be transformed into boarding houses.

## **Strategy H5-2: Create dormitory housing for seasonal workers.**

Encourage the private sector take the lead in financing and building units to be used by their employees. The public sector can assist by advancing zoning measures to facilitate the construction of dormitory housing in addition to helping to procure land. Dormitory housing could be in new or existing structures, or perhaps even in an old cruise ship if dock space could be found.

## **Strategy H5-3: Consider revising zoning to allow recreational camping.**

Recreational vehicles and campground facilities could provide an alternative form of safe, decent, and temporary housing.



8.3

## **Elderly & Assisted Living Housing**

### **Objective H6: Increase the supply of housing for independent retirees, seniors, and others needing assisted living housing.**

In 2000, the Cape and Islands were not only the fastest growing communities in the Commonwealth but was also the oldest regions in the state. The Vineyard's year-round and seasonal population already has many retirees, and projections indicate that the elderly population will grow dramatically as the baby

boomers hit retirement age. It is predicted that one of the fastest growing segments of the nation's housing market will be independent retirees (empty nesters) looking to scale down.

There are varying categories of people who need special types of housing. Many people just need some assistance so they can age at home, including medical support, universal access retrofits, and help with chores. Many independent retirees looking to downsize only need smaller, perhaps rental, housing, preferably not too expensive, and close to services. Some elderly need assisted living facilities which would provide a higher level of services, and others need 24-hour specialized care such as a nursing home. In addition, there are the housing needs of the mentally and physically handicapped, rehabilitation facilities for substance abuse, and homeless people and others in need of emergency shelter.

The following are some strategies that begin to look at some of these challenges.

**Strategy H6-1: Quantify and plan for future housing needs for the elderly and those requiring specialized housing.**

Currently, it would appear that the 165 units in Island Elderly Housing, the 28 units in Havenside and other smaller housing projects for seniors, and the 86 beds in Windemere (both assisted living and continuous care), generally meet current demand. However, population projections suggest that the coming decades will bring a significant increase

in needs. Housing and human services organizations with the MVC should estimate current and future needs in various categories – independent retirees, home care, elderly housing, assisted living, continuous care – and plan for how these needs can be met. (See also section 5, Social Environment.)



**Strategy H6-2: Create additional elderly housing and assisted living communities for seniors.**

The creation of one or more additional assisted living communities would help the Island's growing number of seniors. Many of these communities provide a continuum of levels of care, from independent units to degrees of assisted living, and sometimes even continuous care nursing. It is desirable that this housing be located in pedestrian-friendly, in-town locations, or at least along public transportation routes, to allow individuals to remain active and connected to the wider society.

# SECTION 9



# TRANSPORTATION

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**GOAL: Reduce dependence on private automobiles and promote alternate modes of travel – especially bus, bicycle, and walking – for both residents and visitors.**

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TARGET: Expand the use of alternative means of transportation to absorb a major portion of future growth, so there is minimal increase in car use.

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**TO ACCOMMODATE** the increasing number of people coming to and moving around the Island – including the summer influx – without altering the network of two-lane rural roads so essential to the Island’s character, Martha’s Vineyard must focus on alternative solutions such as expanding transit, improving bicycle and pedestrian facilities, and making the most efficient use of our roadways.

This section focuses on three aspects of transportation getting to, and mostly getting around, the Island.

- **Buses, Taxis, and Ferries:** deals with various forms of public and private group transportation.
- **Pedestrians and Bicycles:** deals with improving accommodation for non-motorized means of transportation, both in and between towns.
- **Road Network, Cars, and Trucks:** deals with the challenge of moving motorized vehicles around the Island on the network of historic two-lane roads.

# transportation

Transportation on Martha's Vineyard faces special challenges. As an island, it is only accessible by boat or air. As a summer resort, it experiences a four-fold fluctuation in population, leading to seasonal congestion and safety problems, and straining infrastructure capacities. As a predominantly rural or semi-rural area, it is especially challenging to offer alternative means of transportation to the car, especially outside of town centers. The impact of traffic threatens the unique environmental, scenic, and historic qualities of the Vineyard.

The Island's network of narrow, generally two-lane roads is the backbone of its transportation network, carrying the 25,000 cars registered on the Island, plus almost 10,000 additional vehicles during the peak summer period. The Steamship Authority carries more than 2 million passengers and almost 500,000 vehicles each year. There are also close to 300,000 passenger trips on private ferries and another 250,000 by air. However, even at the peak of summer, traffic is largely year-round residents, at least in the down-Island towns.

The Island's explosion in popularity over the past generation has resulted in rapid growth – both population and traffic and transportation – that threatens the very qualities that many find so attractive. Although roadway, ferry, and air traffic has leveled in recent years, off-season and up-Island automobile traffic is still rising. Given the Island's largely scattered population, the motor vehicle will probably continue to be the dominant form of transportation. As the population continues to grow, the challenge will be how to avoid increasing congestion while also avoiding inappropriate physical engineering solutions that undermine the Vineyard's scenic

beauty. The main way to do this is by strengthening alternative modes of getting around.

There have been many recent successes in this direction.



- The Martha's Vineyard Transit Authority (VTA) has grown from a limited, seasonal shuttle service transporting 71,000 people in 1997 to an Island-wide, year-round, bus service that carried 769,000 people in 2005, and more than 1,000,000 in 2008. Imagine if all those trips had been made by cars further clogging up the roads.
- Use of Tisbury's park-and-ride tripled between 2004 and 2008 and Edgartown recently revamped its park-and-ride lot; both services allow people to leave their cars on the edge of town.
- Since 1997, the Steamship Authority has limited summer car capacity, discouraging short-term visitors from bringing cars across.

- In the last few years, West Tisbury created a mile of pedestrian paths beside the road and Edgartown added two more miles of bike path to the Island's 37-mile network.

This section includes a summary of some key elements of the 2007 edition of the Martha's Vineyard Regional Transportation Plan (RTP), and readers are encouraged to refer to that complete document. The RTP also looks at issues not dealt with here, such as access to the Island, water transportation, intermodality, air travel, and freight. The next revision of the RTP will incorporate the new proposals outlined in this section of the Island Plan.

The RTP's overall goal is to establish and maintain a transportation system that is safe, reliable, convenient, accessible, economical, affordable, and is consistent with the Vineyard's scenic, historic, and natural resources.

Many proposals in other sections of the Island Plan have a strong relation to transportation. The recommendations in section 2 (Development & Growth) favoring consolidation of mixed-use, pedestrian-friendly village areas within the limits of already developed areas, would enable people to meet many of their daily needs by walking or biking rather than taking a car. For development outside village areas, encouraging development within walking distance of bus stops and increasing telecommuting, home offices, and the availability of convenience stores across the Island would reduce the need for many car trips into town. Section 7 (Energy & Waste) deals with proposals to increase the use of energy-efficient vehicles.



## Objective T1: Promote and fund alternative modes of transportation.

The following two strategies affect the objectives in each of the other sections, which deal with specific modes of transportation.

### Strategy T1-1: Increase promotion of alternative forms of transportation.

A campaign could demystify and emphasize the environmental benefits of taking the bus or bike (such as the pilot project this summer of videos on ferries, explaining transit use and bike safety). This could include programs encouraging students not to drive to school.

### Strategy T1-2: Set out the use of mitigation fees to fund alternate transportation.

In many localities, new development projects that have significant impacts on traffic are now asked to mitigate these impacts by contributing to a road improvement fund for things like widening roads or installing turning lanes and traffic lights. The MVC now does this for Developments of Regional Impact. The MVC should clarify its policy for transportation mitigation, directing the funds to alternate means of transportation, especially those that are difficult to finance in other ways such as special transit services or bicycle path design and maintenance (funds are more easily available for construction). Towns could consider whether it is desirable or feasible to do this at a town level.



9.1

## Buses, Taxis, and Ferries

When moving a lot of people from one place to another, it is easier, cheaper, and causes fewer traffic problems when there are many in each vehicle. This is why having a strong system of group transportation is important. Even seasonal visitors who don't take public transit at home could be induced to do so here as part of the Vineyard experience. Having a good transit system is especially important to those with limited access to cars, including school-age children and people unable to drive because of disabilities.

The VTA, the Island's regional transit authority, operates a fleet of 28 fully accessible vehicles that carry 18-37 passengers on fixed routes (14 in the high season and 12 in the off-season) which cover all major roads and all parts of the Island. The VTA also runs a series of paratransit and other services known collectively as "The Lift," using five vans carrying 10-16 passengers. Fare-box revenues provide about one third of the required funding, with the balance coming from federal, state and local sources.

The Martha's Vineyard Regional School District owns, and the VTA maintains, 21 school buses for regular on-Island trips to school, as well as several other vehicles on and off-Island. Local tour buses provide an estimated 2,000 tours, charters and transfers each year, with an average of 30 passengers per trip.

# transportation

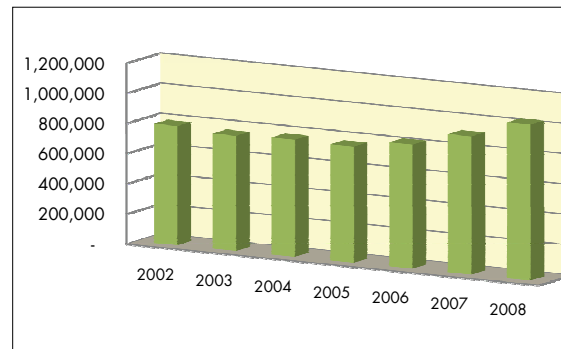
## Objective T2: Improve the efficiency and promotion of the Island's buses, taxis, and ferries.

### Strategy T2-1: Create public-private alliances to improve and promote alternative transportation.

Town business associations, the VTA, and citizens can collaborate to deal with business-related transportation issues. Setting up programs (education, incentives, enforcement) to have in-town retail-restaurant-bar employees use park-and-rides would free up scarce in-town parking spaces for customers and other visitors. Familiarizing hospitality employees with the transit system would not only encourage them to use it, but would also let them encourage and assist visitors to use it. Instituting rideshare promotion, car sharing, staggered and flexible work hours, telecommuting, and employer commute programs would also help relieve traffic. The Chamber of Commerce, hotels, inns, rental agents, the Steamship Authority, and other carriers should strengthen efforts to encourage visitors not to bring a car for a short visit, or to bring only one car for a longer visit by clearly explaining the availability of alternate forms of transportation (bus, taxi, bike).

### Strategy T2-2: Maintain and expand bus service.

In the short term, it is important to maintain the current levels of service in the face of the current financial difficulties. Since the bus system is operating at or beyond capacity on key routes during the summer, it would be desirable to expand capacity during these periods, recognizing the difficulty of getting additional buses and drivers for short periods of time. In the



**VTA Ridership:** In 2008, the number of riders on the Vineyard Transit Authority surpassed the million mark for the first time.

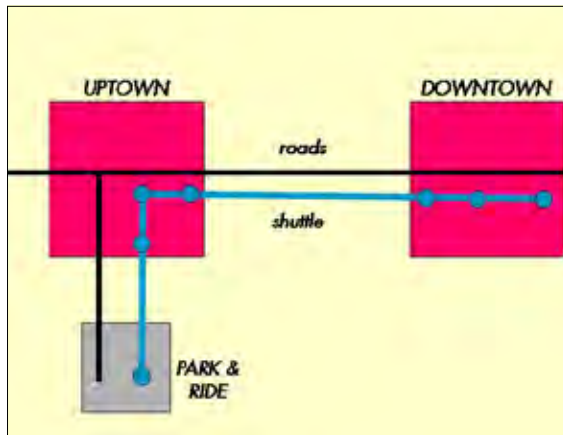
longer term, it would be desirable to increase the level of service, both during the summer and off-season. This will require additional capital and operating funding.

### Strategy T2-3: Create uptown-downtown shuttles.

A free, high-frequency, hop-on/hop-off shuttle linking the uptown and downtown areas of each of the three down-Island towns (Upper Main and Main Streets in Edgartown; Upper State Road and Main Street in Tisbury; and possibly, Circuit and Dukes County Avenues in Oak Bluffs) would link the main employment, hotel, and shopping areas of each town. This would allow people to easily go from one area to the other throughout the day without driving, and would also encourage people to park in the park-and-rides at the edge of town. This shuttle already exists in the form of park-and-ride shuttles in Edgartown and Tisbury, and needs only rebranding. Additional funding such as public-private partnerships could allow greater frequency and capacity. These shuttles would be most functional if there were a separate bus-only route so that shuttles are not slowed by traffic, such as a route in Vineyard Haven proposed by the Tisbury Planning Board.

### Strategy T2-4: Implement hybrid taxi/bus service.

Trip-planning software could make it possible to reconfigure taxi/bus service, offering a hybrid service in low-density areas that combines the best features of taxi and fixed-route buses, with better service at a lower cost. In the longer term, this could include splitting the current taxi service into two services: moderate-cost group shuttles and higher-cost, single-client service.



**Uptown-Downtown Shuttles:** These could help the two commercial areas in each down-Island town work more effectively together.

### **Strategy T2-5: Better integrate the Steamship Authority into Island transportation planning goals.**

The Vineyard community wants the Steamship Authority to be financially sound, yet it is concerned about increasing revenues by increasing the number of vehicles brought to the Island. A better integration into Island transportation planning goals would include working more closely with the Steamship Authority and having a greater influence on the SSA's policies in order to minimize number of vehicles carried to the Island (e.g. maintaining the cap on vehicle-carrying capacity), to encourage seamless integration of Steamship Authority website and trip planning information with the VTA, to distribute information on buses, taxis, bike rentals, etc. when reservations are fulfilled, to establish variable pricing to encourage a more even daily and monthly distribution of ridership, to lower mainland

parking rates to reduce the financial incentive for people to bring their cars to the Island, and to encourage charter buses to coordinate with Vineyard tour companies and leave their vehicles in Woods Hole.

### **Strategy T2-6: Offer detailed trip planners.**

We can make it easier to use transit by offering integrated trip planners online and in key public locations such as ferry terminals and the airport. They would show connecting regional and local transportation services, allowing people to develop and print itineraries for transit trips to and from Island destinations as well as on-Island trips. Ideally, this would be coordinated with national trip-planning software (MapQuest, Google). It could include sale of combination tickets, to make it even easier for users.

### **Strategy T2-7: Consider rebranding the transit system.**

To make our buses more appealing to visitors who are unfamiliar with or have a negative view of public transportation and transit authorities, we could make our buses more of a fun, special experience. This could include the name of the system, the design of buses, signs, maps, etc.

### **Strategy T2-8: Improve taxi regulations, training, quality, and dispatching.**

Because each town licenses taxis individually, fares and policies differ in each town, creating confusion for customers. It would be desirable to standardize taxi regulations and rates among towns, and post rates at main stands and on vehicles. We should improve driver training (e.g. Island knowledge, visitor courtesy) and taxi quality standards (e.g. vehicle condition and cleanliness). Setting up a coordinated dispatching system using trip-planning software could promote higher vehicle occupancy (reduce empty one-way trips), improve service, lower costs to users, and improve driver/owner revenue. The fact that taxis taking people from one town to another are not allowed to pick up fares in the second town results in less efficiency and in empty taxis traveling unnecessarily, so it would be desirable to move to Island-wide licensing.

# transportation



## 9.2

### Pedestrians and Bicycles

Walking and biking – both as means of transportation and for recreation – offer benefits such as physical fitness, fresh air, experiencing the Vineyard’s natural beauty, reducing demand on road infrastructure, and best of all, they are free. The compact nature of the down-Island town centers makes them conducive to walking and cycling, which holds great promise for alleviating traffic congestion there.

The Vineyard’s pedestrian and bicycle accommodations, both on road (sidewalks and shoulders) and off-road (trails and shared-use paths or SUPs) are often incomplete and not in the best of condition.

Many seasonal visitors are unfamiliar with the local roads and are unaccustomed to being in close proximity to high-volume traffic when cycling or walking and ill-prepared to deal with roadside hazards such as sand on the road shoulders. Many residents and visitors are elderly and may have particular difficulty with uneven sidewalks.

Town centers, particularly down-Island, see heavy pedestrian activity, especially in summer. The dense, historic layouts of the downtowns of Vineyard Haven, Oak Bluffs and Edgartown make it difficult to accommodate large volumes of pedestrians, bicyclists, and motor vehicles.

Many sidewalks are only four feet wide, are obstructed in many places with utility poles, signs and mailbox posts, or have uneven surfaces. Pedestrians often spill out onto the roadway and cause automobile delays. In some downtown areas, pedestrian ways are merely indicated with lines painted on the asphalt, are not delineated at all, or don’t even have a right-of-way sufficient to dedicate a pedestrian area. This absence of a continuous pedestrian pathway network presents a safety concern by forcing pedestrians to walk in the roadway. In other areas, such as Upper State Road in Tisbury and Upper Main Street in Edgartown, sidewalks exist but the area is oriented to the automobile, with large parking lots, poorly

defined sidewalks, and frequent curb cuts. Such layouts are not conducive to walking.

When it comes to cycling, we need two systems to accommodate the range of users. The Island’s off-road shared use paths (SUPs) – physically separate from motor vehicle traffic – are preferred by many users such as cyclists uncomfortable riding in the roadway, and they also accommodate inline skaters and pedestrians. Many experienced cyclists prefer to ride on the road, as is their right even when there is a nearby bike path, because they travel at relatively high speeds and do not mix well with slower-moving cyclists and pedestrians on SUPs. Also, the multi-use paths are less likely to be clear of surface debris that is hazardous for narrow bike tires at high speed.

The Vineyard has a large network of unpaved paths and trails that provides walkers and cyclists another important alternative to the roadways and greatly expands the ways to get around, connecting neighborhoods to one another and to public lands, or providing shortcuts to nearby destinations. The trails vary considerably in surface material, grade, and width – from narrow grass-covered footpaths to overgrown 8-foot-wide dirt roads – even along the length of a single trail. This variability limits the paths’ utility for some handicapped users, for strollers, and for road cyclists.

### Objective T3: Make town and village areas more pedestrian and bicycle friendly.

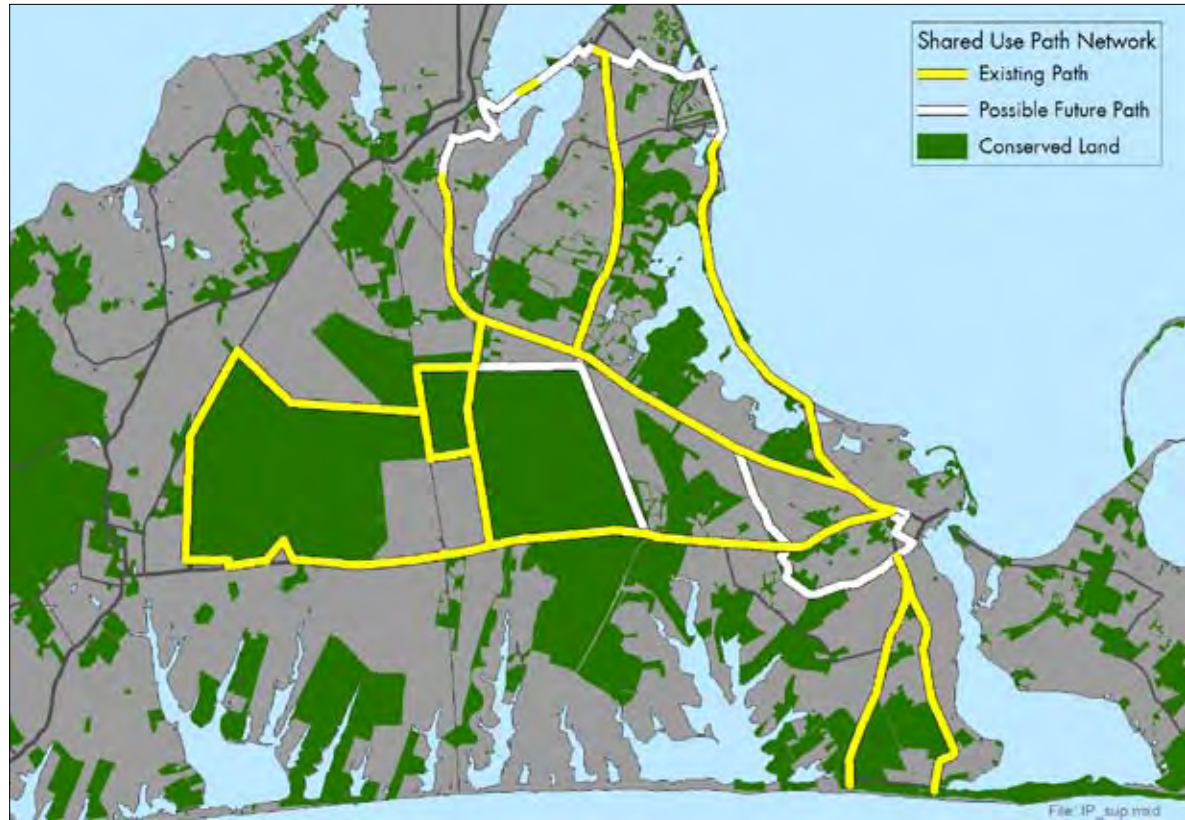
If we want to encourage people to walk and bike, we should do a lot more to make sure that our town centers have a complete network of safe and attractive accommodations for pedestrians and cyclists, starting with good sidewalks. This is especially important in areas of high pedestrian activity, such as on shopping streets, in town centers, and close to schools and other public institutions.

#### Strategy T3-1: Create a working group in each town to focus on pedestrian and bicycle improvements.

Several strategies to improve pedestrian/bicycle facilities are outlined below. In order to make them happen, we should set up working groups involving selectmen, business associations, parent-school associations, DPWs, planning boards, and interested citizens to spearhead the effort. The MVC can offer technical assistance. The working groups in each town should identify deficiencies with in-town pedestrian and bike facilities (sidewalks, crosswalks, shoulders, bike racks, etc.) and should outline and spearhead improvements.

#### Strategy T3-2: Outline and implement a pedestrian/bicycle improvement program.

Each town's working group should identify the problem areas and outline improvements to increase the safety and appeal of the pedestrian environment, particularly in village



**Shared Use Paths:** Filling the gaps in the Island's 37-mile network of offroad bike paths would connect the highest density commercial and population centers with each other and with the State Forest.

and commercial areas. Providing continuous and adequately-dimensioned sidewalks will require repairing sidewalks and ensuring minimal lighting, installing sidewalks or walking paths, widening sidewalks in areas of heavy pedestrian traffic, installing crosswalks with safety islands or sidewalk projections to shorten crossing distances. Other desirable improvements include bike racks, comfortable places to sit, shelter from the weather, directional and informational signage, information centers, water, restrooms,

plantings, lighting, trash receptacles, and rest areas. It would be best to prioritize main streets and high pedestrian and bike activity areas. Improvements can be incorporated into street repair projects as they come up, or special funding – public or sponsorships – might be needed.

# transportation

## **Strategy T3-3: Require public review of road repair and improvements.**

In these times of limited resources, it is especially important, when a road is repaired or improved, that the project be done right, so it accommodates all needs. We should adopt or review our procedures, both at a town and state level, to make sure that the public has plenty of opportunity to provide input before decisions are made. There are several examples on the Island of roads being excessively widened with little public input.



## **Objective T4: Expand and enhance a safe and efficient network of off-road bicycle paths (Shared User Paths), on-road bicycle routes, and walking trails.**

### **Strategy T4-1: Extend the network of off-road bike paths and improve the safety of existing ones.**

Major gaps remain in the 37-mile network of SUPs, forcing cyclists back onto the road at the very places where the roadways are the most congested. We should prepare and implement a plan to complete the missing links in the network of off-road bike paths, starting with those that connect the main population centers – central Edgartown, Oak Bluffs, and Vineyard Haven – to each other and with the State Forest. Many of the existing SUPs are too narrow for the volume and variety of users, have an inadequate buffer from the roadway, are interrupted with frequent vehicle crossings (roads and driveways), and are often littered with debris and overgrown vegetation. This could be remedied with a comprehensive improvement and maintenance program including better signage and the installation of barriers (low shrubs or wooden barriers) separating SUPs from adjacent roads.

### **Strategy T4-2: Carry out safety improvements for on-road biking.**

Bicycle safety on the roads can be improved by widening shoulders (within overall pavement width), by improving pavement markings and safety signage, and by ensuring proper maintenance including prompt removal of sand and debris.

### **Strategy T4-3: Extend the network of trails.**

The towns, the Land Bank, conservation organizations, and the MVC have been working for many years to expand and maintain the Island's network of trails. This work should continue until we have a complete network of trails linking all significant destinations across the Island. Some of these trails will be in the proposed greenway network described in section 3.3.



## 9.3

# Road Network, Cars, and Trucks

Martha's Vineyard's 177 miles of mainly two-lane, public, paved roads – conceived for an Island of about 5,000 people – now must handle more than 10 times that in peak summer months.

Some of these roads, such as State Road in Vineyard Haven and Upper Main Street in Edgartown, carry about 20,000 vehicles each summer day. Peak season down-Island traffic levels have held relatively steady for the past decade, perhaps because these roads are already at capacity, though up-Island and off-

season traffic continues to grow. Summer traffic surveys at busy down-Island locations indicate that over 95% of drivers are either year-round residents – the clear majority especially on weekdays – or seasonal residents and long-term visitors. Short-term visitors make up only a small part of the total traffic.

An increase in traffic in critical locations will have an impact on congestion far out of proportion to the general increase in traffic. As traffic volumes on main roads approach their design limits at peak hour, more and more traffic is being channeled on to local roads in order to avoid congested intersections. Since there are few alternative routes, congestion can be especially problematic for unavoidable trips, such as heading to the ferry or the hospital.

A referendum and several surveys indicated that people want to preserve the character of our rural roads and don't want to expand Island roads or build new ones; however, there continues to be a gradual deterioration of rural character, with new curb cuts and new roadway and roadside development.

Extensive surveys show that about three quarters of visitors staying a week or more brought their vehicles on the ferry. Of the visitors staying three to six nights, fewer than one third brought vehicles, and of those staying only or two nights, only five to ten percent had their vehicles with them. This reflects the fact that short-term visitors, particularly those staying in town centers (hotels, inns, bed & breakfasts) are the easiest to accommodate without having a vehicle on the Island, since they have ready access to

most visitor destinations on foot or by bus. Also, they are most impacted by the inconvenience of bringing a car on the ferry for only a few days, especially the difficulty of getting a car reservation that fits their travel plans and the cost of a ferry ticket that may not be justified for a short stay.

The challenge is how to deal with increases in population and traffic with a historic road network, and keep congestion within bearable levels. In surveys, four times more permanent residents disagreed than agreed with the statement, "Martha's Vineyard road system should be expanded to handle increased traffic," as did almost twice as many seasonal residents.

Since so much of the Vineyard is rural or semi-rural, a large number of people have no alternative but to travel by car or truck for at least part of their trip. This makes the availability of parking, either near the destination, or outside of town and linked to town with an efficient transit system, of primary importance. But there is often great difficulty in finding parking in town centers during the summer season. Physical constraints related to existing buildings or natural conservation areas make it difficult to add parking areas, particularly in town, so the need to provide parking on the outskirts of town with an efficient shuttle into town will become increasingly important.

# transportation

## **Objective T5: Use physical traffic calming techniques to slow traffic and improve safety in neighborhoods.**

There is a general concern about the excessive speed of traffic, especially on roads that pass through neighborhoods. Roads rebuilt a few decades ago to conform to engineering safety standards seem to have the highest number of serious accidents, perhaps because the straight, wide roads induce people to drive faster. Traffic calming uses physical changes to roadway design to slow traffic down.

### **Strategy T5-1: Create traffic calming work groups.**

Create working groups in each town to identify locations with excessive traffic speed in neighborhoods, to outline a program of improvements, and to spearhead their implementation. These groups could be similar to or the same ones proposed above for pedestrian/bicycle improvements.

### **Strategy T5-2: Implement traffic calming measures to slow traffic in neighborhoods.**

In the short term, install simpler traffic calming techniques such as: planters to narrow roads; feedback speed signs; curb extensions, speed tables, and safety islands at crosswalks and gateways to towns as well as speed limit reductions. When major improvements are needed, efforts should be made to reconfigure excessively wide roads, in order to narrow roadways, shoulders, and cleared roadside areas, and to introduce gentle curves.

## **Traffic Impacts of Population Growth**

The amount of traffic is expected to increase at about one half the rate of population growth, because of various factors. With increased traffic, peak-periods delays at critical locations will be longer, and there will be congestion in locations that presently flow smoothly.

- At present, drivers encounter congestion for about 12 hours per week in July.
- With a population growth of 37%, the number of hours per week with delays increases to 59, or 70% of all hours in a week between 8 a.m. and 8 p.m.
- With a population growth of 50%, it is estimated that there would be 97 hours with delays, and 94% of all hours in a week between 8 a.m. and 8 p.m. will be congested with substantial delays.

In August, conditions will be almost as bad, and congestion will extend into June as well.

### **Strategy T5-3: Address problems at the Island's most dangerous and congested road locations.**

The general aim is to minimize congestion and improve safety at critical roads and intersections by emphasizing traffic management over major physical modifications (more roads, wider roads, traffic lights) that would degrade the character of the Island. The Regional Transportation

An additional analysis was made to calculate the hours where there will be substantially prolonged delays. In July, there is currently 1 hour a week when conditions produce prolonged delays. With population growing 37%, the number of hours with these highly congested conditions increases to almost 50. With a 74% population growth the number is close to 90, with 90% of all hours in a week between 8 a.m. and 8 p.m. severely congested.

The frequency of severely congested conditions at specific locations may well be less, but there will be other serious consequences. When traffic delays start approaching these severe levels, drivers look to other routes, change their travel habits and/or avoid driving or being in the vicinity of the problems. For the Vineyard, this would mean that many other routes that are not now congested will become clogged and restricted driving could cause major economic impacts as visitors will look to vacation at other places.

Plan has outlined, and towns are working on a series of modest improvements to the road locations with the greatest safety problems and/or congestion. Some of these projects are already under construction or in an advanced stage of planning, such as the reconstruction of Lake Avenue in Oak Bluffs to improve pedestrian and bicycle accommodation, the construction of a roundabout at the intersection of Barnes





**Congestion Locations:** These are the seven locations identified.

Road and the Edgartown-Vineyard Haven Road, and the construction of a system of connector roads to relieve traffic at the State Road and Edgartown-Vineyard Haven Road intersection and to structure the future redevelopment of the area. The towns and the MVC are looking at what might be done at the Edgartown Triangle, Five Corners, and Upper State Road. (More detail is provided in the Regional Transportation Plan.)

**Strategy T5-4: Address the shortage of parking in town centers during the summer.**

The lack of parking leads to additional traffic and frustration among drivers, and increases traffic congestion as drivers look for an available space. It will be difficult to significantly increase the number of in-town spaces, but we can better manage existing spaces. Preparation of a parking plan would involve preparing an



**Road Network:** The Island's 177 miles of public roads have changed little despite considerable population growth.

inventory of in-town parking spaces, analyzing their use, and proposing specific improvements. It could include the following elements:

- For on-street in-town parking, the use of residents-only permits would ensure that spaces are available, especially overnight. A dilemma is how to favor short-term parking (which maximizes use of downtown spaces) without resorting to measures such as parking meters or excessively strict policing that could be incompatible with the welcoming of visitors.
- Off-street, in-town parking lots could be managed more effectively, such as by allowing use on evenings and weekends when many are hardly used. There might be some limited possibility for increasing the number of off-street spaces in town centers.
- Since opportunities for increasing the number of parking spaces in town are limited, we will have to look to the edges of town to provide additional parking. Towns can continue to develop and encourage use of park-and-ride facilities, especially for employees and longer term parkers.

# SECTION 10

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# WATER RESOURCES

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## GOAL: Ensure that the quantity and quality of water resources remain sustainable.

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TARGET: Restore the health of our coastal ponds by limiting growth in sensitive watersheds, by improving wastewater treatment through increased use of public sewers or small-scale neighborhood treatment systems, and by increasing pond water circulation through dredging and more frequent openings to the sea.

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**T**HE MOST SERIOUS WATER QUALITY CHALLENGE facing the Vineyard is the deterioration of the water quality in our fragile coastal ponds as a result of excessive nitrogen, coming largely from wastewater. Dealing with this will require a major public effort and significant investment.

This section examines four areas that require our attention to assure long-term sustainable, high quality water resources.

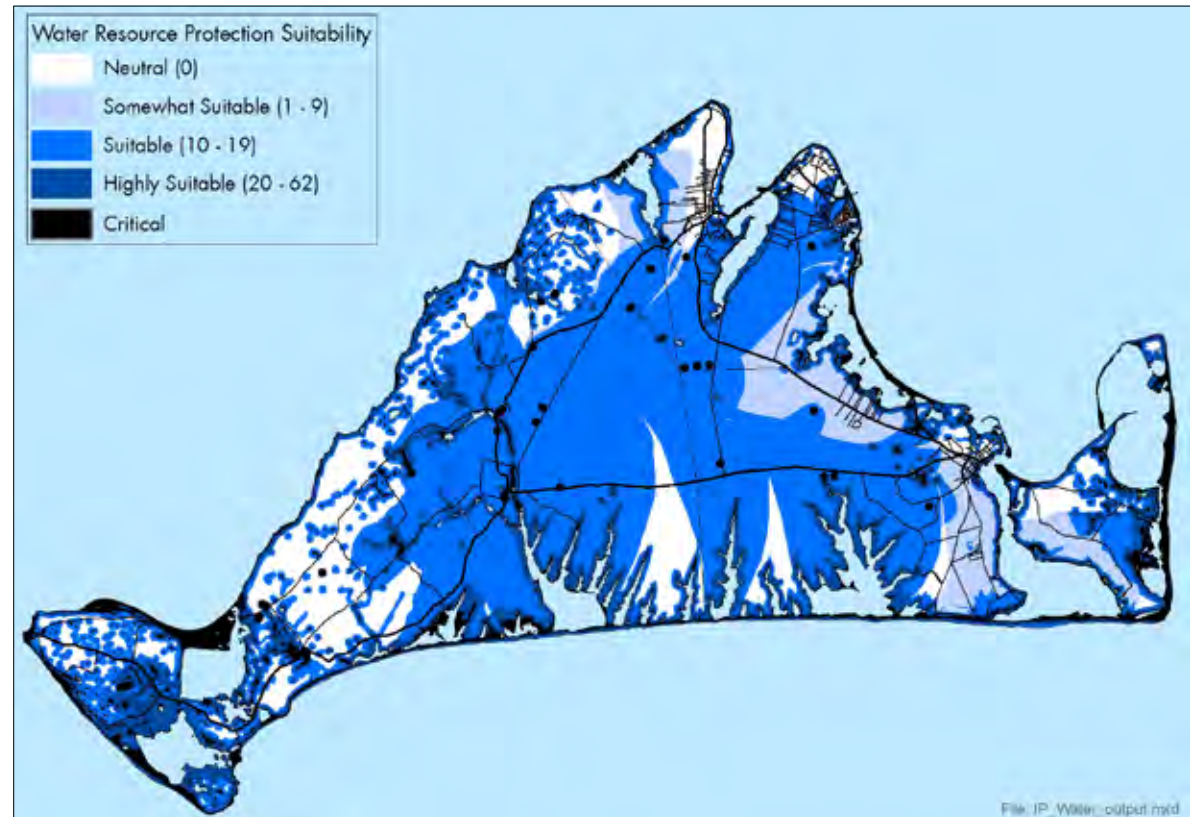
- **Water Supply:** The Vineyard's main aquifer greatly exceeds our present-day and projected drinking water needs. Our focus should be on protecting groundwater quality where we draw drinking water and ensuring that public water supply pumping and distribution infrastructure keeps pace with demand.
- **Wastewater:** This is the largest source of nutrients that may impact our waters, and of other pollutants that can impair our drinking water. Current protective measures largely address public health concerns, but we need additional actions to reduce the nitrogen flow that threatens our surface waters.
- **Stormwater:** This source of water quality degradation can be largely addressed by recharging runoff to the ground, which will replenish groundwater resources instead of running it directly into coastal waters.
- **Coastal Ponds:** The water quality in these fragile resources has declined noticeably in the last 20 years. Nitrogen impacts are complex, slowly evolving phenomena that can be confounding to voters and politicians. However, corrective actions taken now will lead to their restoration in a relatively short time.

# water resources

The Vineyard is blessed with an abundant supply of clean groundwater that greatly exceeds our present-day and projected drinking water needs. Surface waters ring the perimeter of the Island and include fragile great ponds, fed by streams in the Western Moraine and cut off from the sea by barrier beaches. Tidal ponds are important sources of shellfish and finfish and provide significant aesthetic and recreational value, supporting the Island's tourism industry. Both groundwater and surface waters are susceptible to pollutants that can threaten the health of these systems and our human community.

Over the past generation, rapid growth on the Vineyard has heightened concerns about how to ensure that the quantity and quality of the Island's water resources remain sustainable. Though many variables are involved, one conclusion is inevitable: if we do not act to protect Island water resources, what we now take for granted will be forever lost.

Everyone needs clean drinking water and protection from wastewater's health hazards. The Vineyard faces the added challenge of protecting our fragile coastal ponds and other surface waters, key to our economy and quality of life. All of our water resources – wetlands, streams, groundwater, fresh and coastal ponds and estuaries – are intimately connected by the hydrological water cycle that links them so closely that impairment to one component impacts the others. The future sustainability of our waters as high quality resources is dependent on good management of our watersheds and coastal resources. Even the slightest degradation to these natural resources



**Water Resource Protection:** This map, based on a combination of other maps in this section, shows how critical each area is for the protection of water resources.

has a direct impact on our economy, recreation, and daily appreciation of our surroundings.

Our water quality will be determined by the way we manage growth, by how we deal with existing development, and by our ongoing activities, as discussed in other sections of the Island Plan. For example, in watersheds where nitrogen already exceeds, or is projected to exceed, the safe load levels for coastal ponds, we should attempt to limit new housing (which generates nitrogen from

wastewater) or row-crop farming (which generates nitrogen from fertilizer), or put in adequate treatment and mitigation measures. On the other hand, these watersheds are good places to be preserving open space, which avoids additional nitrogen loading. Similarly, we should consider the ecological impacts when planning water activities or resolving water use conflicts, such as by favoring shellfish aquaculture that benefits water quality over jet skis that have negative impacts.

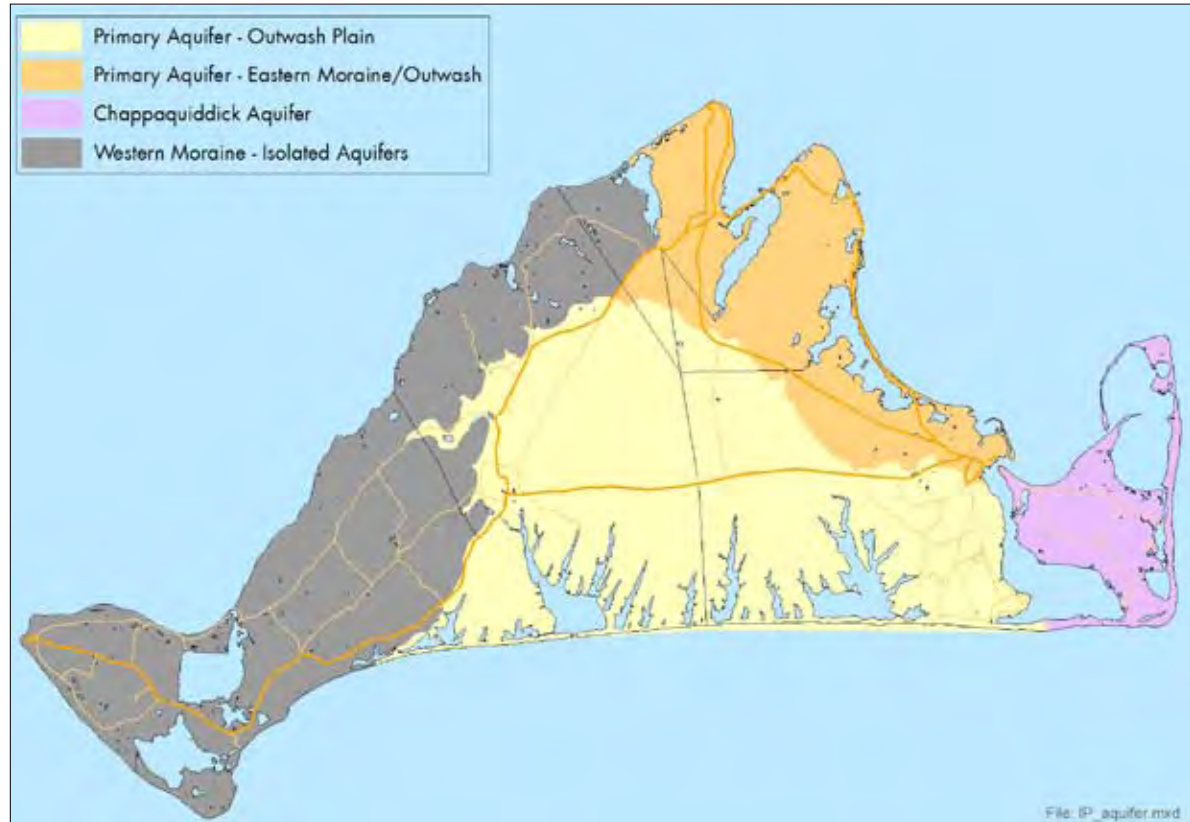


## 10.1

# Water Supply

The Vineyard's groundwater is abundant and if carefully managed will provide for our foreseeable needs. The geological deposits that hold our groundwater supply are very different in the Outwash Plain and in the Moraine.

- **Outwash Plain Aquifer:** Most of the Island, including all town wells, draws its drinking water from one main aquifer located in the Outwash Plain, where glacial ice deposited layers of sand and gravel as it melted, creating porous deposits that readily absorb rainfall, which percolates down into the water-saturated zone known as an aquifer. The entire Island has been designated by EPA



**Aquifers:** Each of the Island's four major aquifers has different characteristics.

as a Sole-Source Aquifer, since groundwater is the Island's only source of drinking water. There is a plentiful supply of potable water, provided it is properly protected from contamination.

We currently draw about 1.5 billion gallons per year from the main aquifer, of which about 70% finds its way back into the aquifer after wastewater treatment. Rainfall replenishes the aquifer by about 24.5 billion gallons each year, so even if our use went up to 3.9 billion gallons

per year (projected by the USGS), it would still be well below the suggested maximum safe withdrawal level of about 16.7 billion gallons (estimated by the MVC).

- **Chappaquiddick Aquifers:** Smaller aquifers lie under Chappaquiddick Island that are not connected to the main aquifer and are replenished only by rainfall. In general, the quantity of water recharged to a 3-acre lot as required by zoning is more than adequate to meet water needs for a home and guest house.

# water resources

- **Western Moraine Aquifers:** In the hilly Western Moraine, the glacial deposits are very different, displaying a wide range of sediment types ranging from compact, almost impermeable, clay to porous sand. The sandy deposits make good aquifer materials while the clayey deposits may hold some water but do not yield it. As a result, there are numerous aquifers in this area that may or may not be connected with other nearby aquifers. Finding a good source of well water is sometimes difficult.

We get the water from the aquifer to our taps in two ways.

- **Public Water Supply:** Nearly two thirds of Vineyard homes get their water from a public well and distribution system (Edgartown, Oak Bluffs, Tisbury, Menemsha, and Wampanoag Tribal Housing, the last two being privately owned). The groundwater quality in supply areas, or zones of contribution, of existing public wells is already protected. We also have to make sure that our public water systems have the pumping and distribution capacity to meet future demand.

- **Private Wells:** For the rest of the Island, private wells will be the source of drinking water for the foreseeable future. There is some concern that existing minimum separations between wells and septic fields are not adequate where groundwater flow direction is uncertain.

## Objective W1: Assure a plentiful supply of high quality drinking water.

We need to focus our efforts on protecting the existing recharge areas for public and private wells and those sites that are appropriate for future water supplies.

### Strategy W1-1: Expand public water supply.

Expand public supply systems into areas where housing density does not assure water quality protection (such as Ocean Heights, Arbutus Park, Edgartown Meadows, and Mattakeset).

Public Water Supply Withdrawal from the Outwash Aquifer			
Water System	Customers	Withdrawal (million gallons)	
		2007	2008
Oak Bluffs	4,122	395.2	376.6
Edgartown	2,700	357.8	308.1
Tisbury	2,557	275	240.4
<b>Total Drawn from Aquifer</b>	<b>9,379</b>	<b>1028</b>	<b>925.1</b>

Increase public supply system capacity in accordance with projected demand to avoid shortfalls in seasonal delivery of water. We expect the existing withdrawal limits will need to be increased by Massachusetts DEP in order to meet future demand. To provide emergency support, linkages between the three public supply systems are important and we need to update agreements for mutual support in the case of water supply emergencies.

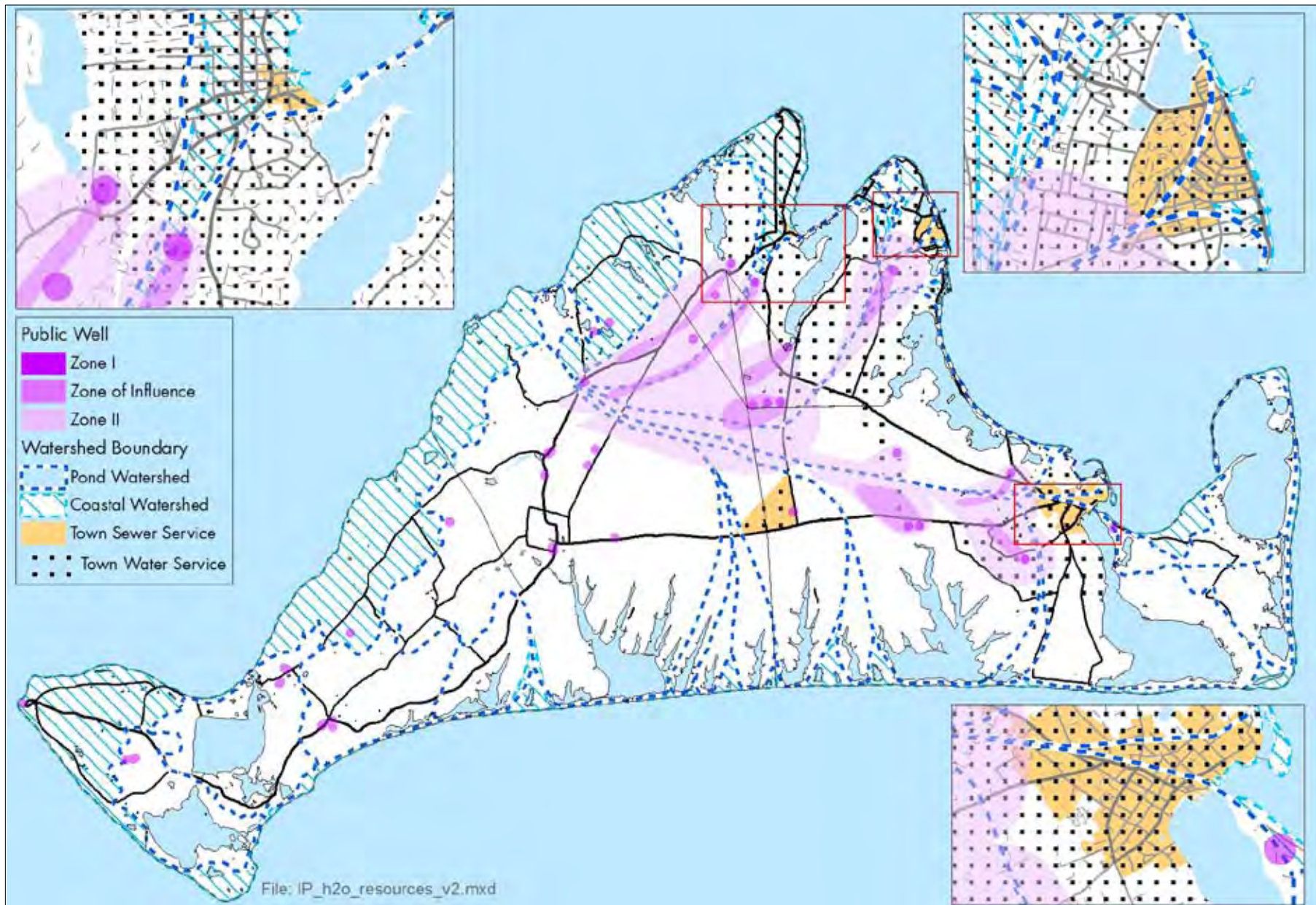
### Strategy W1-2: Plan for and protect future public well sites.

Towns should identify and protect future municipal well sites targeting the area down-gradient from the Correllus State Forest in Edgartown and Oak Bluffs. These areas are to the north, south, and east of the Forest and can be protected with an expansion of the existing Zone 2 zoning overlay districts or with a new overlay similar to the Greenlands Water Resource Protection District. A District may limit the housing density, discharge of large volumes of stormwater, the use of hazardous materials, and other land use activities that are likely to impact water quality.

Towns should identify future municipal well sites and protect these supply areas by buying land or conservation restrictions, or by enacting zoning overlay districts. As an alternative, the Massachusetts DCR should be brought into discussions about future use of the Correllus State Forest as a drinking water supply site. Current policy is that they will not consider such a use unless there are clearly no other options for needed supply sites.

### Strategy W1-3: Strengthen regulation of private wells.

In areas where private wells will be the source of drinking water for the future, assure that lot sizes and well placement are protective of water quality by allowing dilution of nitrogen to below the drinking water standard (5 ppm is the suggested goal to assure the standard is met; 10ppm is the safe drinking water limit). Well-to-septic separations may need to be increased where groundwater



**Water Supply:** This map shows the zones of protection around public wells and areas served by public water supply, as well as areas served by sewers.

# water resources

flow direction is unknown. A minimum of 150 feet is suggested for all sites with the possible exception of those sites where groundwater flow direction is known and the well can be sited up-gradient from adjoining septic systems.

Adoption of private well resource protection overlays is suggested for all areas identified as long-term private well resource areas. The main goal of the overlay is to assure appropriate land use development for continued high quality drinking water and to regulate or prohibit commercial uses that generate wastes that might impact the aquifer. The West Tisbury Greenlands Water Resource Protection overlay (and the overlays prepared for all Town public well Zone 2 protection areas) is suggested as a model.

## **Strategy W1-4: Improve monitoring of private wells.**

Set up a program to encourage private well owners to test their water periodically to ensure that their water quality remains acceptable. This could involve education and possibly incentives such as a discount on the cost of testing. Build a database of private well test results with the Wampanoag Tribal lab to identify the groundwater quality in private well areas. (If necessary to avoid identifying specific owners, reference the test results to neighborhoods rather than Map and Lot numbers.) This data will help identify other areas that may need public water. Avoid overuse of small aquifers in the Western Moraine, particularly to irrigate large turf plantings, to ensure that nearby wells are not impacted by lowered water tables or intrusion of poor quality water. Limit water extraction by private wells near the shore, which leads to saltwater intrusion.

## **Strategy W1-5: Promote limiting water consumption.**

Though the aquifers could provide all the drinking water we could need, there are several reasons for trying to limit water consumption on the Island: it would reduce the need to build additional water supply infrastructure (wells, tanks, distribution pipes), it would reduce the energy consumed for well pumps and water distribution, and it would reduce the need to expand the capacity of wastewater treatment facilities.

## **Strategy W1-6: Minimize the impact of hazardous materials on groundwater.**

Facilitate proper disposal of hazardous materials by homeowners through outreach, education, and continued support for hazmat pickup days.



# 10.2

## **Wastewater**

Treating wastewater properly is essential to both human and environmental health. The average house produces between 60,000 and 65,000 gallons of wastewater each year or about 170 gallons per day. In addition to the pollutants we regulate in wastewater — nitrogen and pathogens (viruses and bacteria) — it now includes an increasingly complex cocktail of pharmaceuticals, personal care products, and hazardous chemicals flushed into the system. Wastewater from each residence annually releases about 13.5 pounds of nitrogen into the groundwater and the down-gradient ponds, unless we act to reduce it or to intercept it before it arrives.



The Massachusetts Department of Environmental Protection regulates wastewater treatment in the Commonwealth, setting standards for the installation and operation of facilities at all scales, focusing mainly on public health. Local Boards of Health may adopt more restrictive regulations.

Wastewater is the largest locally controlled source of nitrogen pollution to our groundwater and surface waters. Coastal salt ponds are more sensitive to nitrogen than people, so we need additional measures to limit nitrogen pollution beyond the requirements in place to ensure human health.

Wastewater leaving the septic tank contains about 35 parts per million of nitrogen. Natural nitrogen uptake and bacterial conversion to nitrogen gas lowers the septic system nitrogen by about 25% by the time it reaches a coastal pond.

There are four basic approaches to treating wastewater, which all meet state health protection requirements, but have very different levels of effectiveness when it comes to removing nitrogen.

- **Centralized wastewater treatment facilities** fed by sewage collection systems are most suitable for higher density areas and can remove about 90% of the nitrogen.
- **Satellite treatment plants** are most suitable for outlying, higher density areas, and remove up to 75% of the nitrogen.
- **Cluster treatment facilities**, for groups of homes, typically offer treatment to remove about 50% of the nitrogen, but can have nitrogen-removal equipment added which will remove 75%.

- **Individual on-site treatment systems**, as regulated by Boards of Health under Title 5, remove about 40% of the nitrogen through biological treatment.

Currently, wastewater from about 1,800 properties is treated in one of the Island’s five wastewater treatment plants (Edgartown, Oak Bluffs, Tisbury, Airport, and Wampanoag Tribal Housing), while over 14,000 Vineyard properties (more than 90%) treat wastewater on site — in cesspools, in older septic systems, or in newer Title 5 septic systems.

Wastewater Treatment Systems				
Facility	Number of connections	Design Flow gallons/day	Average Peak Flow gallons/day	Average Low Flow gallons/day
Edgartown	950	750,000	342,000	83,100
Oak Bluffs	633	370,000	170,000	55,000
Tisbury	112	104,000	35,000	~20,000
Wampanoag Tribe	34	15,000	2,700	1,700
MV Airport (commercial)	70 to 75	37,000	13,000	7,500

Town Boards of Health enforce Title 5, the State Sanitary Code, to ensure wastewater disposal by septic systems protects human health, although Title 5 is not focused on the impact to surface waters. Protective measures include system design, location, distance to groundwater, and separation from down-gradient wells. The amount of potential nitrogen entering the groundwater from wastewater disposal is only regulated when

systems exceed 10,000 gpd, in areas where there are private wells or within the Zones of Contribution for public supply wells or in projects reviewed as Developments of Regional Impact by the MVC.

Centralized treatment is quite costly to build and maintain. When the cost is calculated over the lifetime of the system — including construction, operation and maintenance — the cost is \$20,000 per residence if an existing sewer and a treatment plant with available capacity are nearby, and \$75,000 to \$100,000 per residence if a new treatment facility and sewers must be built. However, if nitrogen reduction is necessary, the cost of individual on-site treatment could be equally high for two reasons: the systems are not very effective so about three houses would need these systems to offset the nitrogen from each house that is over the nitrogen-loading limit for its location (see also section 10.4), and because these systems have high operating and maintenance costs. It is a real dilemma for the Vineyard that, for a large part of the Island, the density is so low that individual, on-site wastewater systems may be the only possible treatment.

Wastewater regulations often serve to limit number of buildings, or at least the number of bedrooms, that can take place in certain areas. A major concern with improving wastewater treatment is that this could then open up these areas to additional development. Therefore, we must carefully consider the need for wastewater treatment to be “growth neutral” and for zoning regulations to ensure that inappropriate development does not take place.

# water resources

## **Objective W2: Treat and dispose of wastewater in a manner that will support sustainable drinking water supplies and protect public health and surface water resources.**

Managing wastewater to reduce nitrogen is one of the greatest challenges the Vineyard will have to face in the coming generation. It is essential to protect our drinking water. It is also the most important way to improve water quality in our coastal ponds, so we can restore eelgrass and maintain shellfish and finfish resources. This will involve major investments in infrastructure and management.

In drinking water quality protection areas, the target should be a nitrogen concentration of 5 parts per million or less. This requires about 1.5 acres per residence to achieve. For the watersheds of nitrogen impaired coastal ponds, the target for nitrogen reduction will be developed by the Massachusetts Estuaries Project, and will likely be much lower. It is likely that significant nitrogen reduction will be required in many watersheds.

The solutions will be costly and we need to identify creative ways to approach funding them, including impact fees, betterments, real estate tax add-on (a nitrogen tax), real estate tax abatement for private solutions, low interest/no interest loans, bonding, etc.

## **Strategy W2-1: Prepare a summary Wastewater Management Plan.**

A first, general evaluation of current and potential wastewater management options is being carried out by the MVC Wastewater Management Committee in relation to the Island Plan. It should become the core of a more detailed plan to limit the impact of present-day and future wastewater disposal, which can be prepared after the Massachusetts Estuaries Project (see section 10.4) has set nitrogen-loading limits for each coastal pond. The components needed include identifying the most likely ways to treat and manage wastewater, addressing water quality and eelgrass habitat restoration goals for each pond system, their associated levels of required nitrogen reduction, and the potential to achieve this through improving tidal circulation by dredging. The Plan will then identify various strategies that may be appropriate to protect water quality, based on factors such as housing density, water quality in the pond fed by the watershed and distance from wastewater treatment facilities.

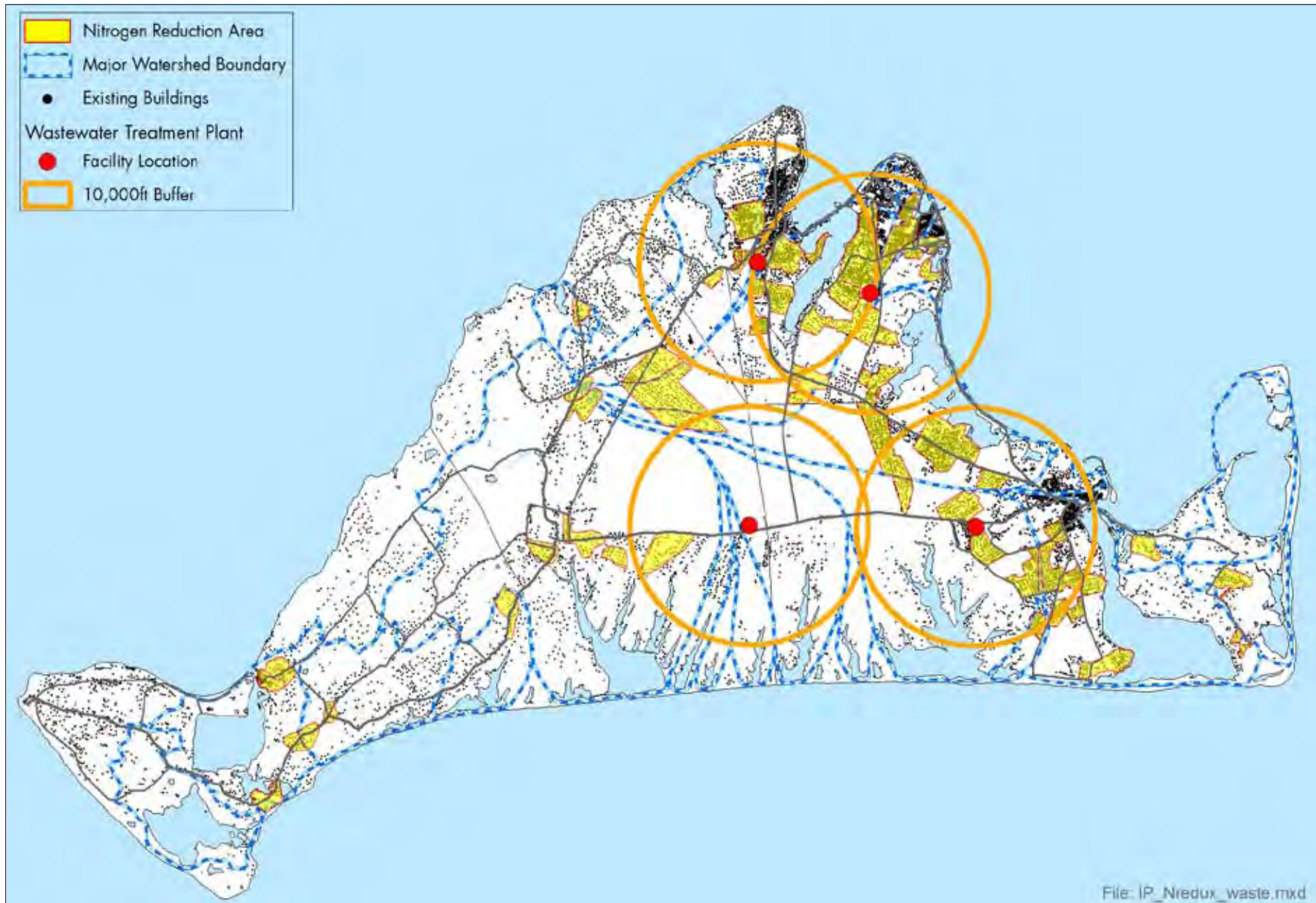
It will likely be necessary to prepare more detailed plans for areas that will be considered for sewage collection and treatment. The Plan should identify who will oversee the management program components and how it will be funded. A first step is an inventory and evaluation of existing septic systems to determine their position, type and condition. The Plan should include freshwater pond systems, which need to be protected from phosphorus loading, especially from wastewater disposal systems within 300 feet; this can be done with drip systems or disposal systems that utilize the soil uptake capacity.

## **Objective W3: Develop and implement nitrogen reduction on a watershed or Island-wide basis.**

Since the watersheds of most coastal ponds straddle town boundaries, we need to find ways to reduce nitrogen in a watershed-wide or an Island-wide way. This could involve agreements between Boards of Health to implement a common, Island-wide policy. We could create watershed districts, an Island regional Wastewater Management District, or utilize intermunicipal agreements, in order to lower nitrogen loads in the watersheds of specific, impaired ponds. If necessary, we could use the Martha's Vineyard Commission Act to allow towns to implement regulations beyond current capability. (Other actions to address nitrogen reduction are described in the Coastal Ponds section.)

## **Strategy W3-1: Expand sewers and centralized or package wastewater treatment in higher density areas.**

The map on page 10-9 shows a first identification of higher density residential areas within each watershed, showing which are within 10,000 feet of existing treatment facilities. Wastewater treatment in these areas is the most cost-effective way to reduce nitrogen loading. Inducements for tying in to a nitrogen-reducing system could include an impact fee and rebate program, a real estate tax reduction, and a low interest loan program. The outfalls from future sewage treatment facilities should, whenever possible, be sited within those watersheds where the wastewater is generated or in a location that is



**Potential Nitrogen Reduction Areas:** Higher density neighborhoods close to sewage treatment plants could be tied in to sewer systems, resulting in a reduction of nitrogen in impaired watersheds.

# water resources

more tolerant of the nitrogen loading that will result from disposal of the treated effluent. In some areas, it may be desirable to limit facility capacity to existing flows to minimize growth stimulus effects.

## **Strategy W3-2: Facilitate the installation, monitoring, and operation of cluster and individual on-site systems with advanced nitrogen removal.**

Promote the use of cluster wastewater treatment systems over individual treatment where feasible, since they are more effective. A requirement for new systems to achieve a low nitrogen concentration at the parcel boundary is appropriate to protect drinking water and nearby surface waters. In watersheds with low housing density where wastewater collection and treatment is very costly, we need identify and use new individual systems and approaches that are lower cost and that have minimal maintenance requirements such as urine-separating systems, composting toilets and effluent disposal in the root zone. Development of a regional denitrification program for inspection, sampling and maintenance programs would reduce homeowner costs and assure that systems operate as advertised. A computerized reporting system such as that used by Barnstable County (Carmody) is suggested. Such a system may be done as part of an intermunicipal agreement, as a county government program, or as part of a wastewater management district.

## **Strategy W3-3: Set growth control regulations related to expansion of wastewater treatment.**

Improved wastewater treatment could allow additional development which would cancel out any improvements to the ponds. Therefore, regulations should be adopted to limit the increase of existing wastewater flow, particularly in nitrogen-sensitive watersheds. These regulations may include limits to increase in flow, increase in bedrooms or house footprint that sewerage often induces. Other approaches include use of checker boarding or growth-neutral regulations that limit development wastewater flow from new sewage service areas to pre-existing or otherwise permitted levels.



# 10.3

## **Stormwater**

Stormwater is the water generated from impervious surfaces when it rains. Unless it is dealt with in some other way, stormwater generated near surface waters drives silt, organic matter, bacteria, nutrients, metals, and petroleum products into fresh and coastal waters. The bacteria carried to our coastal ponds contribute to shellfish bed closures that impact our way of life. Stormwater is a visible, often easily corrected source of water pollution.

This source of water quality degradation can be eliminated or at least reduced by having rain and runoff infiltrate directly into the ground, instead of letting it flow into coastal ponds and other surface

waters. In the ground, it is filtered, treated, and then replenishes groundwater resources.

The use of nonstructural, natural approaches is preferred. Low Impact Development (LID) is an innovative stormwater management approach that avoids costly conventional techniques to pipe, treat, and dispose of stormwater. Instead, it replicates the pre-development hydrology of the site by using design techniques modeled after nature, to infiltrate, filter, store, evaporate, and detain runoff close to its source. Techniques include porous pavers, pervious asphalt, bioretention swales, grassed infiltration areas and rain gardens. LID guidelines should be incorporated into permitting and project approvals at town and MVC levels to minimize the generation of stormwater.

The following criteria are recommended to prioritize which stormwater systems to remediate.

- 1) Discharges to surface waters that contain shellfish resources, especially discharges close to the shellfish waters (remove bacteria using vegetative treatment where possible and infiltration to the ground otherwise).
- 2) Discharges where nitrogen impairment exists (direct as much stormwater as possible to natural vegetated buffers or artificial vegetated bio-retention swales to reduce nutrients, bacteria and other pollutants; infiltrate as much of the remainder as possible).

Where no treatment is possible, the schedule of catch basin clean-outs should be evaluated to determine if a more frequent clean-out is required.

### **Objective W4: Eliminate or reduce direct discharge of stormwater runoff into sensitive water resources.**

It should be possible to achieve a one-third reduction of direct stormwater discharges from the downtown collection systems in Tisbury, Oak Bluffs, Edgartown and Menemsha.

#### **Strategy W4-1: Set up a program to identify and correct problematic stormwater discharges from roads and other public lands.**

The first step is for the towns and MVC to map the most problematic existing discharges into wellheads, wetlands, streams, ponds, harbors, and the ocean. Use the 2003 (CZM funded) Stormwater System Mapping Project report for Oak Bluffs and Tisbury as a model to devise a similar plan for the other towns. The volume of direct runoff to surface waters from current stormwater collection discharges in Tisbury, Oak Bluffs, Edgartown and Menemsha can be reduced by infiltrating up-gradient segments to the ground.

Discharges from town and state roadways where they cross streams should be identified, evaluated and corrected. The road surface at each crossing should be adjusted during repaving to divert as much runoff as possible into roadside vegetation or leaching catch basins before it reaches the stream crossing. Road salting activities near the stream road crossings and within the catchments of the stormwater collection systems that discharge directly to streams should be limited to using deicing products with the least impact.

#### **Strategy W4-2: Require development and redevelopment projects to maximize treatment and infiltration in order to retain all stormwater on site, favoring use of Low Impact Development techniques.**

Stormwater management on private property can be improved through education, incentives, and regulations aimed at maximizing retention and infiltration of stormwater on the property where it is generated in a manner that maximizes the removal of bacteria, metals and nutrients. New stormwater discharges that will add runoff to existing collection systems that now discharge to surface waters should be prohibited. Stormwater systems should capture and treat at least the first half-inch of runoff. A 24-hour, 25-year return storm is suggested as the goal and a 10-year return storm as the minimum acceptable for on-site disposal design. Stormwater management will also benefit groundwater supply by maximizing recharge. Require private-project stormwater system management plans and adherence to maintenance schedules to assure optimum system performance. Within the Zones of Contribution of public water supply wells, impervious surface areas should be limited to less than 2,500 square feet or 15% of the lot; similar limits should be implemented within private drinking water well areas.

# water resources

## Strategy W4-3: Put in place system design and maintenance programs to limit stormwater problems.

Utilize natural vegetation, and if natural infiltration is not possible, use systems that offer some nitrogen removal capability for projects in the watersheds of nitrogen-sensitive coastal ponds. All stormwater systems must have an operation and maintenance plan and a system to ensure that regular maintenance of catch basins and vegetated systems is carried out and for optimum performance of the runoff treatment system over time. Any stormwater systems that have the potential to discharge hazardous materials to ground or surface waters must have an emergency shut-off system that will prevent such contamination. In areas where there are drinking water wells or for impervious areas that contribute to surface water discharges, oil-absorbing pads or stormwater treatment units that remove oil should be used.



## 10.4

### Coastal Ponds

Martha's Vineyard is ringed by saltwater ponds that are vital to the Island's environment, character, and economy. The 13 tidal and brackish pond systems — including 21 individual ponds — constitute more than 13 square miles of waters. Their watersheds (the land that drains into the pond, either through runoff or groundwater flow) include 64% of the Island. The ponds are productive sources of shellfish and fin fish, important to our commercial fishing industry. They offer a wide range of recreational opportunities, including boating and sport fishing, so important to the Vineyard's visitor-based economy. They have more than 290 miles

of shoreline, important environmental resources, favorite spots for beach activities, and prime locations for real estate and viewsheds for many to enjoy. The future health of our ponds is dependent on maintaining water quality.

Our saltwater ponds are in trouble. All of our saltwater ponds are fragile, nitrogen-sensitive waters. Their quality has declined noticeably in the last 20 years as watershed development has occurred — in particular from wastewater disposal from housing and commercial development. Growth has led to deterioration in the water quality in the Vineyard's coastal ponds, starting the process whose ultimate result can be an odorous, unattractive pond devoid of eelgrass, valuable fish and shellfish, thereby threatening the Vineyard economy.

In limited amounts, nitrogen is important to supporting life in a pond. But when excessive nitrogen is released in a coastal pond's watershed — from acid rain, septic systems, and fertilizer — it ends up in the pond where it can destroy important aquatic habitat. With excess nitrogen in a coastal pond, microscopic plants in the water, called phytoplankton, increase dramatically, causing the water to become cloudy and, in extreme cases, green or brown; slime algae increase on the surfaces of pilings, rocks, and eelgrass blades; and drift algae grow to excess, break loose, and wash in to shore, or into eelgrass beds where they collect in unhealthy and unsightly piles. The growth of all these aquatic plants reduces light penetration to plants like eelgrass, which can no longer photosynthesize and therefore decline, beginning in the deeper water. In

addition to reducing light, the excess plant material takes oxygen out of the water, both at night during respiration and as they die and decay; this lack of oxygen leads to loss of habitat quality that lowers shellfish populations and causes chemical reactions in the bottom sediment that release even more nutrients stored there. Finally, the pond's ecosystem shifts to one where filter feeders (clams, oysters and scallops) are replaced by organisms that eat decaying plants (worms and snails), destroying recreational and shellfishing opportunities.

Eelgrass beds provide an essential habitat for young fish and shellfish, and their presence is an excellent indicator of good water quality. In high-quality systems, eelgrass beds should be found wherever water depth is less than about eight feet. Presently, eelgrass beds cover about half the 6,000 acres in our ponds and near shore coastal waters where it once existed. In the past 20 years, eelgrass beds have declined significantly in Edgartown Great Pond (with a modest return in the last two years) and Sengekontacket Pond, and have decreased by over 50% in Tashmoo and Lagoon Ponds. Eelgrass coverage is the primary indicator of water quality, and its health should be the goal of our actions in both the watersheds and in the surface waters themselves.

Water quality is adversely affected by nitrogen when the amount reaching a pond exceeds a threshold called the nitrogen load limit. Existing health code regulations for wastewater are designed to protect human health, but do not adequately protect coastal ponds. Wastewater

coming out of a septic tank may have a nitrogen level of 35 parts per million (ppm) or more that is diluted on site to the point that it meets DEP Drinking Water Standards (10 ppm), yet still exceeds the lower limit required to protect the health of coastal ponds as the watershed builds out.

Nitrogen Load Limits in Pond					
System	Nitrogen Load (kilos/year)			Load Reduction Required	
	Limit	Current	Projected	Current	Projected
Cape Poge	45,500	11,200	12,600	0%	0%
Chilmark	2,050	5,000	6,200	59%	67%
Edgartown Great	11,860	14,600	22,100	18%	46%
Farm	750	1,840	2,100	59%	65%
James	200	600	1,050	67%	81%
Katama	54,700	23,200	30,800	0%	0%
Lagoon	15,000	20,700	28,400	27%	47%
Menemsha	31,600	12,950	16,860	0%	0%
O.B. Harbor	3,660	5,150	5,900	29%	38%
Oyster	1,800	3,600	5,200	50%	66%
Pocha	5,680	2,500	3,300	0%	0%
Sengekontacket	17,500	19,300	25,100	10%	30%
Squibnocket	3,400	3,920	4,400	13%	22%
Tashmoo	13,000	12,000	16,900	0%	23%
Tisbury Great	12,500	14,600	18,200	14%	31%

The Martha's Vineyard Commission has calculated interim nitrogen-loading limits for most coastal ponds and watersheds, based on factors such as the watershed area, the volume of the pond, and the tidal circulation. These indicate that for many coastal ponds, the annual nitrogen produced by the current development

already exceeds, and in some cases is double or triple, the acceptable nitrogen-loading limits. With projected future development, the problem will be even worse.

The MVC has also categorized the ponds, based on water quality data, eelgrass bed coverage trends, and other factors.

- **Good** means that the water quality indicators are almost always in the acceptable range and eelgrass beds have suffered only small losses.
- **Somewhat Impaired** means that water quality indicators are not acceptable some of the time or only in some parts of the system or that eelgrass coverage loss has exceeded 50%.
- **Impaired** means that the water quality indicators are almost always unacceptable in a substantial part of the system, nitrogen loading significantly exceeds the limit or eelgrass is no longer found in the system.

The already deteriorated conditions do not include the impacts of nitrogen from development that occurred in the last 20 to 30 years in more distant parts of pond watersheds, since their nitrogen plumes have not yet reached the ponds.

In watersheds that have surpassed their natural ability to deal with nitrogen, every new house will need to have all its nitrogen reduced or offset with costly wastewater treatment.

In many ponds, the nitrogen load is already at or over the acceptable limit to maintain good water quality, and there are many acres of open, developable land available for even more development. Some ponds with good tidal circulation (e.g. Cape Poge, Menemsha,

# water resources

Katama Bay) have very large limits to nitrogen loading. Others (e.g. Squibnocket and James Ponds) are over their limits even before nitrogen from wastewater is entered into the budget. For some coastal ponds where the tides are severely restricted (e.g. Farm Pond, Trapp’s Pond, south shore great ponds), the nitrogen limit may be substantially increased by improving tidal flow to flush out the nitrogen. However, in most cases where a pond surpasses its limit, some other

means of reducing the nitrogen must be found and, as the main substantial source manageable at the local level, wastewater is the prime candidate.

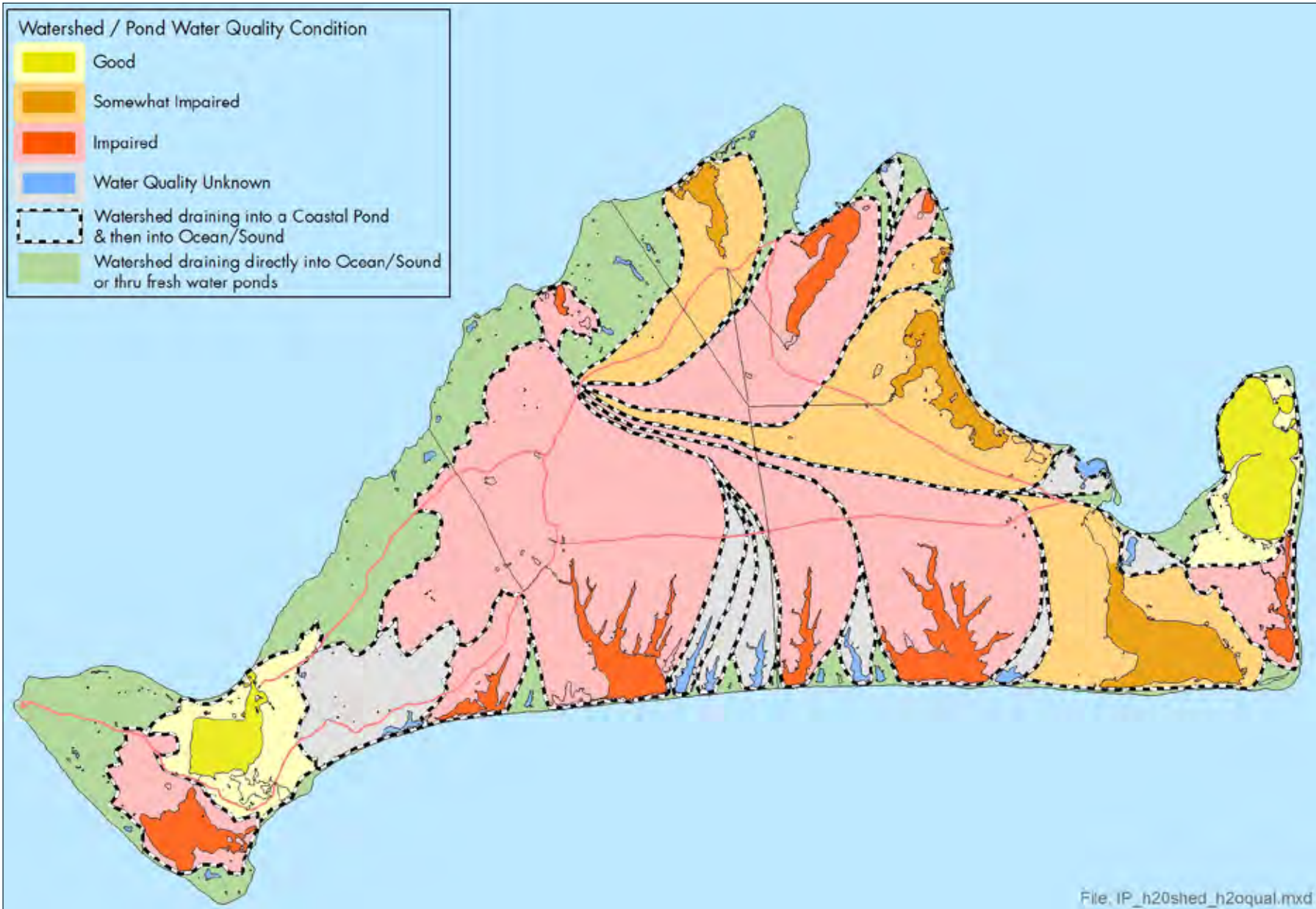
The cost of dealing with this excess nitrogen to clean up our coastal ponds — as will likely be required to comply with the federal Clean Water Act — will be staggering, likely in the hundreds of millions of dollars. There are already an estimated 3,600 houses beyond the number

which would maintain clean water in ponds, and with present zoning and available land, there could be an additional 4,600 houses (based on interim nitrogen load limits). If it ends up costing an average approaching \$50,000 to deal with the excess nitrogen from each house, including capital and operating costs, this would translate into \$142 million just to deal with the excess nitrogen from existing development, and an additional \$230 million to deal with the possible additional development. (Note: these are preliminary estimates, ±50%.)

After wastewater, the second most significant source of nitrogen pollution that we can control is fertilizers used in farming and landscaping. Unfortunately, we have little local control over one serious source of nitrogen pollution to our coastal ponds — acid rain (from gases produced when fossil fuels are burned by automobiles, power plants, and industries, often hundreds of miles to our west). Water quality is also affected by limited tidal circulation and by pond management activities. The periodic breaching of the great ponds brings clean ocean water to flush nitrogen and other pollutants from the pond, or at least dilute them. Summer inlets are vital to water quality in the great ponds.

Pond System Water Quality Description				
System	Eelgrass	Other Conditions/ Symptoms	Score (1 to 100)	Overall Rating
Cape Poge	Fair	Eelgrass coverage fluctuating.	86	Good
Chilmark	None	Poor tidal exchange. Over its nitrogen limit	51	Impaired
Edgartown Great	Poor	Eelgrass coverage fluctuates. Poor tidal exchange. Oyster disease. Over its nitrogen limit	51	Impaired
Farm	Fair	Eelgrass declining. Poor tidal exchange. Over its nitrogen limit	63	Somewhat Impaired
James	None	Periodic blue-green algae. Excess algae. Poor tidal exchange. Over its nitrogen limit	31	Impaired
Katama	None	New breach, better flushing. Large mooring fields.	85	Somewhat Impaired
Lagoon	Poor	Deep water hypoxia. Southern end is eutrophic. Over its nitrogen limit	79	Impaired
Menemsha	Good	Eelgrass cover decreases in Stonewall.	85	Good
Oak Bluffs Harbor	None	Heavy recreational boat use. Stormwater discharges. Over its nitrogen limit	58	Impaired
Oyster	None	Poor tidal exchange. Oyster disease. Over its nitrogen limit	47	Impaired
Pocha	None	Highly organic bottom sediment.	70	Somewhat Impaired
Sengekontacket	Poor	Excess large drift algae. Eelgrass not re-colonizing. At nitrogen limit.	75	Somewhat Impaired
Squibnocket	None	Poor tidal exchange. Over its nitrogen limit	51	Impaired
Tashmoo	Poor	Southern basin is eutrophic. Large mooring fields. Under nitrogen limit.	75	Somewhat Impaired
Tisbury Great	None	Poor tidal exchange. Oyster disease. Over its nitrogen limit	49	Impaired





**Pond/Watershed Water Quality:** The ratings of ponds and their associated watersheds are based on a combination of factors shown in the tables on the opposite page. Nitrogen must be controlled throughout the entire watershed since it will eventually flow into its pond.

# water resources

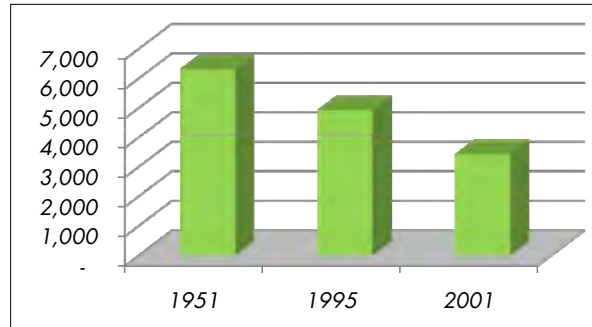
## Objective W5: Ensure appropriate management of coastal ponds and their watersheds, including improvements to water circulation.

The target is to restore eelgrass to 75% of suitable habitat (as indicated by the 1951 eelgrass coverage), a clear indicator of improving water quality and restoration of pond habitat. The return of eelgrass to Katama Bay following the huge increase in tidal circulation that came with the breach across South Beach in 2007 demonstrates how quickly eelgrass can return with improved water quality. Continued monitoring of surface water quality is vital to responsive management.

### Strategy W5-1: Complete the Mass Estuaries Project (MEP) studies of coastal ponds.

We need strong scientific support to minimize, and win support for, the expenditure of funds that will be needed to solve these problems. The MEP uses a rigorous scientific approach to determine each pond system's tolerance limit for nitrogen, using computer models of pond system water quality, circulation, and watershed land use. The model allows towns to project the pond response to various nitrogen-reducing solutions.

At this time, Edgartown Great, Lagoon, Sengekontacket, Farm, and Tisbury Great Pond are in the program. We need to build community support to get the local cost share for the other eight pond systems.



**Eelgrass loss:** Eelgrass in coastal ponds and nearshore waters has declined by about 50% in the past fifty years and now only covers about half its potential habitat areas.

### Strategy W5-2: Set up management committees to prepare plans for each coastal pond.

The selectmen in each town should appoint committees or designate existing committees for each coastal pond — similar to the Edgartown Ponds Advisory Committee, the Joint Sengekontacket Pond Committee or the Tashmoo Management Committee — tasked with evaluating the needs of each pond system in light of the Massachusetts Estuaries Report and preparing a plan to ensure the long-term sustainability of each pond. This will likely include measures to improve circulation, to increase wastewater treatment, to set nitrogen-loading limits on new developments, to manage boating and fishing, and possibly to limit growth. Implementation is crucial, and each pond needs an ongoing water quality monitoring program to track water quality changes. The creation of zoning overlay (town or DCPC “water sheet” zoning) for water bodies is an option to provide an added layer of protection.

### Strategy W5-3: Improve pond circulation through dredging, removal of tidal restrictions and carefully managed openings to the sea.

The MEP should help identify potential to achieve required nitrogen reduction through improving tidal circulation by dredging. Measures to optimize tidal flow into coastal ponds might include maintenance dredging to remove shoals and channel fill; removal of culverts currently restricting tidal flow (Trapp's Pond, Farm Pond under Beach Road), and identification of other possibly restrictive structures under roads (e.g. Hariph's Bridge, north inlet into Sengekontacket Pond). If indicated by the circulation computer model, permits should be put in place to allow maintenance dredging to remove tidal flats that obstruct or impair tidal flow both at the entrance to the system and within the system. If economically feasible, acquisition of dredging equipment would allow timely dredging and minimize costs. The opening of the great ponds should be managed to maximize shellfish production by improving overall water quality while retaining oyster spat when they are in the water column in July; a summer opening is critical to overall pond system health.

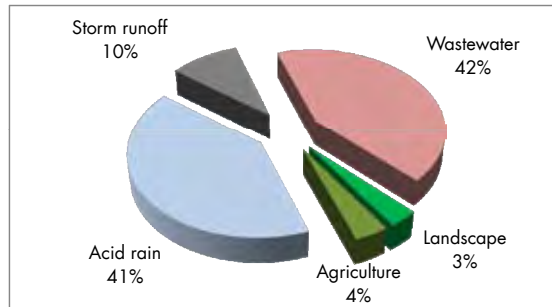
### Strategy W5-4: Set regulations limiting nitrogen from new projects in sensitive watersheds.

New projects in impaired coastal salt ponds (see preceding page) should be required to comply with nitrogen-loading limits, using the MVC's interim limits until definitive limits are calculated by the Mass Estuaries Project.

The MVC already requires this for projects reviewed as Developments of Regional Impact. The towns should set up procedures to enact this for all projects within these watersheds. Similar review should take place with respect to phosphorus in fresh-water ponds, and could include mandatory review by Conservation Commissions of all projects within 300 feet of wetlands. It would be desirable to set up a system of impact fees, so that projects that are unable to adequately mitigate their impact on their property could pay a fee that would then be used to help finance an appropriate project that offsets at least an equivalent amount of nitrogen elsewhere in the watershed. In addition, broader watershed-based growth control may be needed to limit the addition of future new nitrogen loads from presently vacant land by rezoning to limit density and intensity of use, or by focusing growth within the reach of sewage collection systems.

### **Strategy W5-5: Increase shellfishing in coastal ponds by increasing habitat area and quality.**

The presence of shellfish, particularly oysters, quahogs and mussels, in a pond improves water quality by filtering water and removing nitrogen. Oysters remove nitrogen from the water and deposit it in the bottom sediments. When harvested, even more nitrogen is removed in their tissues and shells. To take advantage of these services, we need to improve habitat for wild populations and increase the opportunities for private shellfish aquaculture ventures. An expanded shellfishery will further improve water quality immediately, unlike a sewerage project back in the watershed that might take years to



**Sources of Nitrogen:** The average of sources of nitrogen in the Vineyard's coastal ponds. The proportion in each pond varies considerably based on factors such as population and the relative sizes of the pond and watershed.

have a positive impact. Growing techniques that minimize the visual and recreational impacts — such as bottom-culture and suspended mid-water column culture — are preferred. Adequate financial support is needed for public shellfish management and propagation efforts. The possibility should be explored of developing a system of nitrogen trading rights that would allow developers to purchase rights from aquaculture operations that remove nitrogen from the water column.

### **Strategy W5-6: Identify sources and reduce bacterial contamination that closes shellfish beds.**

Bacterial closures of shellfishing beds may reduce the potential for aquaculture, compounding the nitrogen-loading impact. Sources of bacterial contamination include stormwater runoff and waterfowl. Septic systems are a potential limited source due to active enforcement of the Title 5 health code. In all cases, the sources of bacteria should be identified and plans devised to reduce the sources.

The nonmigratory goose population and the recent invasive double-crested cormorant are primary candidates for the Sengekontacket Pond bacterial closures based on source identification technology. It is highly likely that fecal bacterial contamination in other systems has a similar source. A comprehensive, humane approach addressing the waterfowl source (such as adding eggs) is needed. Stormwater runoff reduction is discussed in section 10.3. More frequent testing is needed by DMF or by other certified labs to acquire more data and to seek out a test that will identify truly pathogenic problems that require closure to protect public health.

### **Strategy W5-7: Manage boating and fishing to limit the impact on water quality.**

The committees should work with existing town committees, Shellfish Departments and Harbor Masters to map piers and mooring fields relative to shellfish and eelgrass beds to identify reasonable limits to their expansion based on knowledge of shellfish habitat, presence of eelgrass beds (now or historical) and capacity of systems such as water, wastewater, dock space, etc. The goal should be to limit the scale of mooring fields, pier construction, and recreational boating use to support quality shellfish habitat. Utilize environmentally sound mooring systems, such as elastic moorings, that do not impact eelgrass beds. Limit recreational use of motorboats and personal watercraft in fragile areas. Public education on appropriate boat maintenance practices (e.g. safe bottom paints) will help limit impacts on resources.

# SECTION 11

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# IMPLEMENTATION

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**T**HE ISLAND PLAN reflects the direction in which the Vineyard community has indicated it wants to move, and lists the 207 most promising strategies for getting there. Implementation of these proposals will involve many different parts of the community: individuals, entrepreneurs, and nonprofit organizations, as well as public entities such as town boards, the County, and the MVC.

This section discusses how to turn the Island Plan vision into reality.

- **Implementing Strategies:** how we can move forward with the strategies, including a discussion of the particular roles of the Island Plan and the Martha's Vineyard Commission.
- **Regulating Development:** how development is regulated on Martha's Vineyard, including how the Island Plan could be used to alter the relationship between the towns and MVC.
- **Monitoring Progress:** how the Vineyard community can monitor ongoing progress in implementing the Island Plan.

# implementation



## 11.1

### Implementing Strategies

The 207 strategies outlined in the Island Plan vary widely. Some are already underway. This section discusses how we might get moving on the others.

To start out, the Island Plan Steering Committee, Work Groups, and MVC staff looked at each strategy to understand what its nature is and who might be well placed to take it on. The table starting on the next page describes each strategy in more detail, with respect to the following criteria:

- **Type:** Strategies include awareness activities, incentives, programs, projects, regulations, services, and studies.
- **Timing:** For many strategies, it is clear that the idea is sound and work could start right away. For others, additional effort is required to determine whether the proposal is really a good idea, perhaps by carrying out a feasibility study. Once an initiative gets underway, some are straightforward and could be implemented quickly whereas for others, it might take decades to be fully operational.
- **Cost:** The magnitude of costs can vary widely. For some proposals, such as modifying regulations, there is no direct cost. For others, such as dealing with excessive nitrogen in wastewater or offsetting our energy consumption by producing renewable energy, the cost might be in the tens, or even hundreds of millions of dollars. However, such projects could be funded through user fees, and end up resulting in cost savings.
- **Who Could Do It?:** Some of the proposals are primary government responsibilities – such as regulatory change or public improvements. For others, the leadership would naturally fall to the nonprofit or private sectors. The summary table identifies which broad category each proposal falls in, lists potential partners, and makes an initial and nonbinding suggestion as to who appears to be best-placed to lead the effort.

Some of the proposed strategies can be implemented without being dependent on or influencing other strategies outlined in the Island Plan. For others, the ability to proceed depends on other proposals also going ahead, or the initiative might impact other efforts.

The following table lists and categorizes all the strategies, presenting them in the same order as the Island Plan. A technical bulletin organizes the strategies by type and by lead entity (e.g. town boards, MVC, nonprofits, etc.). The list of strategies will be used as a basis for meetings with town boards to identify the highest priorities for each town. While all the strategies merit being undertaken soon, a prioritization of proposals will indicate the most promising strategies with which to start.

## Strategies

### Type of Intervention

A	Awareness – An educational program to try to influence behavior. Since there is an awareness aspect to virtually all strategies, this will only be noted if it is the main thrust of the initiative.
I	Incentive – A program or regulation trying to encourage people to make certain decisions by providing financial incentives or other benefits.
M	Program – An ongoing effort, usually non-governmental, e.g. a Buy Local campaign, an agricultural land-protection program or a Heritage Tourism program. A program might include specific actions that are other types of intervention.
P	Project – A specific physical intervention in a specific location, e.g. installing a sidewalk, widening a culvert, building a bike path, or building an assisted-living complex.
R	Regulation – A bylaw or other legal requirement as well as the process by which this regulatory requirement is administered.
S	Service – Assistance provided on demand, such as at-home nursing care or an energy audit.
T	Study – Research or further investigation about background information, feasibility, etc.

### Timing

I	Immediate – 1 year or less
S	Short Term – 2-5 years
M	Medium Term – 3-20 years
L	Long Term – 21-50 years
NW	Needs Work – Needs further effort, such as analysis or building partnerships, before getting going.

### Cost

L	Low – Under \$10,000, including regulatory changes
M	Medium – \$10,000 to \$1 million
H	High – more than \$1 million

# implementation

Strategy		Type							Timing					Cost				Who Could Do It?				notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	Business	
<b>DEVELOPMENT AND GROWTH</b>																						
D1-1	Limit significant new development in outlying areas.			X						X				X	X	X					planning board	
D1-2	Restore and improve areas that were developed in problematic ways in the past.				X			X					X	X	X				X		planning board, DPW, developers	
D2-1	Use the Vineyard Land Use Guidance Map to guide decisions affecting development on the Island.	X		X			X					X		X	X			X			planning board, ZBA, DPW	
D2-2	Change zoning regulations affecting density.				X				X			X			X						planning board	
D2-3	Revise subdivision regulations.				X				X			X			X						planning board	
D2-4	Increase tax incentives for land preservation.		X										X		X						planning board, state	
D2-5	Accelerate the rate of open space protection.			X			X							X	X		X		X		Land Bank, conservation groups	
D2-6	Set up redevelopment programs for opportunity areas.			X	X	X				X				X			X	X	X		planning board, DPW	
D2-7	Extend and finance infrastructure in growth areas, and limit infrastructure connections in conservation areas.				X					X					X		X				DPW, water board, wastewater commission	
D2-8	Consider setting up a system of Transfer of Development Rights.		X		X					X			X		X	X					planning board	
D3-1	Implement rate of growth regulations.				X			X					X		X	X					planning board	
D4-1	Require project review for sensitive projects.				X			X					X		X	X					planning board	
D4-2	Provide density incentives for desirable development.		X							X			X		X	X					planning board	
D4-3	Set up an equitable and cost-effective system to finance community improvements.				X			X					X		X	X					planning board	
D4-4	Set up a system of mitigation fees.				X			X					X		X	X					planning board	
<b>NATURAL ENVIRONMENT</b>																						
N1-1	Increase the rate of acquisition of open space, both outright ownership and conservation restrictions.			X				X						X			X	X				
N1-2	Establish clear standards for the MVC and local regulatory boards to require partial open space protection, or other mitigation, as properties are developed.				X			X					X		X	X						
N1-3	Work with property owners and public entities to restore and manage their lands in a way that furthers open space goals.			X					X					X					X		owners	



Strategy		Type						Timing				Cost			Who Could Do It?					notes	
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt		Non-Profit
N1-4	Give predictable tax abatements for open space preservation.		X								X				X			X			Legislature
N1-5	Establish a multi-organizational program allowing long-term voluntary undevelopment of critical natural properties.			X					X						X				X		
N1-6	Assist the Commonwealth in the restoration of the Manuel F. Correllus State Forest as a preeminent center for biodiversity, recreation and natural character			X					X						X				X		
N1-7	Define and adopt performance standards for nearshore ocean development.					X		X					X			X	X	X			EEA
N1-8	Cultivate a "culture of stewardship", a Vineyard community that understands the benefits of open space and a healthy ecosystem, and acts on behalf of its restoration.	X							X				X				X				schools
N2-1	Identify and adopt performance, standards for habitat protection and restoration.								X				X			X	X				
N2-2	Establish a program encouraging and facilitating Landscaping the Vineyard Way.	X			X	X		X					X			X			X		VCS, MVC, Polly Hill
N2-3	Increase the use of specialized management techniques such as prescribed burnings and wildlife underpasses.	X							X				X				X				
N3-1	Set up an Access Revival Initiative to re-establish public access to beaches and shorelines.				X				X					X					X		Land Bank
N3-2	Aquire new shoreline access.			X					X					X		X	X	X			Land Bank, town
N4-1	Extend the greenway/trail network from Gay Head to Chappaquiddick with cross connections to the north and south shores.			X							X				X				X		Land Bank
N4-2	Encourage landowners to allow access for those who would use the land lightly and respect the property.	X						X						X					X		
N5-1	Ensure that there is a public open space within a half-mile walk from in-town neighborhoods.	X	X			X					X				X	X	X	X	X		
N5-2	Bring the Island's greenway network close to denser village neighborhoods.			X						X					X		X	X	X		Land Bank

# implementation

Strategy		Type							Timing				Cost				Who Could Do It?					notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	Business	
N5-3	Provide continuous waterfront access in the centers of the Down-Island towns.	X	X	X							X				X		X			X		
N6-1	Revise regulations to protection scenic roads.					X			X				X				X				VCS, Mass DOT, DPW	
N6-2	Set up a Roadside Vegetation Initiative to protect and enhance rural road character.				X				X				X			X			X		VCS, Polly Hill	
N7-1	Set up a Martha's Vineyard Agricultural Commission.				X				X				X			X						
N7-2	Increase efforts to protect/increase farmland.	X	X		X				X							X			X	X		
N7-3	Increase food production.			X						X					X				X		Ag Society, IGI, AgCom	
N7-4	Increase agricultural infrastructure.			X						X				X					X		Ag Society, IGI, AgCom	
N7-5	Utilize value-added techniques in production.			X					X				X						X	X	business, farmers, IGI, Ag Society	
N7-6	Resolve issues of local supply and demand.			X			X			X				X					X	X	business, farmers, IGI, Ag Society	
N7-7	Promote and market local food.					X			X					X					X		Chamber of Commerce, IGI	
N8-1	Enhance shellfish stocks in coastal ponds.			X						X			X						X		Shellfish Group	
N8-2	Increase aquaculture.			X					X				X							X		
N8-3	Protect harbor facilities for commercial fishing.			X	X				X								X			X		
N8-4	Set up facilities for on-island fish processing.			X					X					X						X		
N8-5	Purchase community-owned fishing licenses.			X				X							X					X		
N9-1	Accommodate the homegrown lumber industry.			X					X					X						X		
N10-1	Identify lands / infrastructure most at risk to sea level rise.						X		X					X		X						
N10-2	Limit construction in areas at greatest risk and adopt measures to limit impacts.				X					X				X		X	X					
N10-3	Preserve lands that are susceptible to climate change impacts as open space.						X		X					X		X					con comms, emergency management	
N10-4	Carry-out pre-disaster mitigation to reduce impacts from storms and flooding.			X				X	X						X		X			X	state	

Strategy		Type						Timing					Cost			Who Could Do It?					notes	
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit		Business
N10-5	Minimize shoreline armoring.				X				X				X			X	X					
<b>BUILT ENVIRONMENT</b>																						
B1-1	Produce a publication for property owners and building designers on what defines the Vineyard's distinct built environment and how to protect it, on historic areas, and on green building.	X							X				X			X	X			X	planning board, historic commission, architects	
B2-1	Identify historic resources and area defining characteristics and prepare guidelines.				X				X				X				X				planning board, historic commission	
B2-2	Enlarge historic districts to protect all historic areas and traditional neighborhoods.				X					X			X				X				planning board, historic commission	
B2-3	Revise zoning in historic areas and traditional neighborhoods to conform to historic patterns.				X					X			X				X				planning board, historic commission	
B2-4	Improve the operation of historic districts.			X						X			X				X		X		historic commission	
B2-5	Designate individual structures outside historic districts.				X					X			X			X	X	X			state	
B2-6	Establish a revolving fund and a grant program to promote historic preservation.		X						X					X			X		X		planning board, historic commission	
B2-7	Make greater use of federal historic tax credits and other incentives.		X	X	X					X			X				X		X			
B2-8	Set up an advocacy organization promoting historic preservation and the quality of the built environment.	X							X				X						X			
B3-1	Set up project review processes along Scenic Roads and Public Waters Viewsheds.				X				X				X			X	X		X			
B3-2	Set up a project review process for high-impact buildings based on size or other criteria.				X				X				X			X	X		X		planning board	
B3-3	Revise zoning requirements in neighborhoods to conform to existing character.									X			X			X	X				planning board	
B3-4	Set up municipal tree-planting programs.			X						X			X			S	X					
B3-5	Plan and implement improvements to the "public realm".			X						X			X				X					
B3-6	Implement design excellence in public and utility buildings and facilities.			X						X			X				X		X		utilities, state	
B4-1	Set energy/green building standards for new construction and major renovations.				X					X			X			X	X	X	X		Vineyard Energy Project	

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Strategy		Type						Timing					Cost				Who Could Do It?					notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	Business	
B4-2	Set energy/green standards for existing buildings.				X					X				X			X	X	X		state, planning board, building inspector	
B4-3	Ensure that renewable energy facilities are compatible with historic and community character.				X				X				X			X	X		X		planning board, historic commission	
B4-4	Manage building construction processes.				X				X				X			X	X				planning board, building inspector	
B5-1	Require dark sky compliant lighting.				X				X				X			X	X				planning board	
B5-2	Limit the use of toxins.				X				X				X			X	X	X			planning board	
B5-3	Limit nuisances.				X				X				X			X	X				planning board	
B5-4	Curtail use of two-stroke engines.				X		X						X				X	X			state	
B6-1	Outline urban design plans for each Opportunity Area.						X			X				X		X	X				planning board	
B6-2	Revise zoning regulations in Opportunity Areas.				X					X	X		X			X	X				planning board	
B6-3	Make public improvements in Opportunity Areas.			X						X				X			X				DPW	
B6-4	Encourage development in Opportunity Areas.		X		X					X			X				X			X	developers	
<b>SOCIAL ENVIRONMENT</b>																						
S1-1	Improve coordination among institutions and town boards to deal with Social Environment issues.						X			X			X			X	X		X		County	
S1-2	Reach out to the immigrant community.	X							X				X				X	X	X			
S1-3	Provide information to new residents and visitors about Vineyard services and practices.	X							X				X				X		X			
S1-4	Increase volunteer opportunities for retirees.			X					X				X				X		X			
S2-1	Create a structure to address public health issues Island-wide.	X		X						X				X				X			Dukes County Health Council	
S2-2	Provide more support to family caregivers.			X					X					X							MVCS	
S2-3	Create walkable neighborhoods and communities less dependent upon automobiles.	X								X				X		X					planning board	
S3-1	Provide greater vocational training geared to employment opportunities.			X					X				X			X	X			X	schools	

Strategy		Type						Timing					Cost				Who Could Do It?				notes					
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit		Business				
S3-2	Provide more opportunities for community based education for school students.			X						X				X		X	X								schoools	
S3-3	Provide professional development programs.			X					X				X				X		X						schoools, Chamber of Commerce, town business organizations	
S3-4	Provide post secondary education for residents and visitors.			X					X				X				X								schoools	
S3-5	Improve availability of daycare and pre-kindergarten schooling.			X						X			X					X							MVCS	
S4-1	Create an Arts/Cultural collaborative.									X			X			X	X	X	X						County, Historical Society	
S4-2	Create a Vineyard Art/Cultural website.								X				X					X							County	
S4-3	Set up an Island-wide Arts Festival.								X				X					X							County	
S4-4	Foster an increased offering of courses/workshops.			X						X			X			X	X								schoools	
<b>LIVELIHOOD AND COMMERCE</b>																										
L1-1	Encourage the business community to lead the celebration and support of the Island's beauty and heritage, as well as its non-profit sector.	X							X				X					X								
L2-1	Provide entrepreneurial training , mentorship,and technical support to sole-proprietors and micro-businesses in the for-profit sector.					X			X				X								X					
L2-2	Create new financial mechanisms such as a revolving loan fund ("The Vineyard Fund") to promote investment in local enterprise.	X	X	X								X	X	X				X	X	X						County, local banks
L2-3	Facilitate remote work and telecommuting.				X					X			X						X	X						utilities, business
L2-4	Establish and market a Martha's Vineyard brand.				X	X				X			X					X	X							Chamber of Commerce
L3-1	Create a world-class "heritage" tourism program.				X	X			X				X					X	X	X						Chamber of Commerce
L3-2	Consider "formula" business impact on Island character and economy.						X			X			X			X	X									planing boards
L4-1	Encourage new opportunities for higher learning and continuing education.					X			X				X					X								ACE
L5-1	Increase the community's buying power to keep more dollars circulating within the local economy.					X	X			X			X					X								
L5-2	Establish an Island-based buying cooperative to provide Islander discounts for products and services that must be obtained off-Island.					X					X		X						X	X						

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Strategy		Type						Timing				Cost			Who Could Do It?					notes		
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt		Non-Profit	Business
L6-1	Keep retail activities and visitor services concentrated in vibrant, walkable town centers.				X				X					X		X	X					
L6-2	Ensure that each town center has a full range of essential anchor businesses.				X		X			X				X		X	X		X			business associations
L6-3	Ensure that there is sufficient land to satisfy the range of needed commercial activities.				X		X			X					X	X	X					
L6-4	Encourage development of small convenience stores.				X		X			X				X		X	X					
L6-5	Ensure that home businesses are compatible with their surrounding neighborhoods.				X		X							X		X	X					Planning Boards, Board of Selectmen
<b>ENERGY AND WASTE</b>																						
E1-1	Develop an Island-wide organizational infrastructure to sustain energy efficiency and generation initiatives.			X		X		X					X		X	X	X		X			Vineyard Energy Project (VEP)
E2-1	Adopt a Vineyard Energy Code requiring new construction to be more energy efficient.				X				X				X		X	X	X					
E2-2	Institute energy audits and upgrades upon residential property sales and for all commercial buildings.				X	X			X				X		X		X		X			Vineyard Energy Project, Cape Light Compact
E2-3	Create a revolving fund for energy improvements - the Island Energy Fund.			X					X					X					X			VEP
E2-4	Implement energy pricing structures that encourage energy efficiency.		X		X					X			X		X			X				
E2-5	Become an incandescent-free Island.	X			X			X					X		X				X			VEP
E2-6	Require new pools to be solar-heated.	X			X			X					X		X				X			VEP
E2-7	Convert to more energy efficient building HVAC systems.	X							X					X					X			VEP
E2-8	Publicize our energy challenges and opportunities for addressing them.	X						X					X						X			VEP
E3-1	Promote use of hybrid and other energy-efficient vehicles.	X	X					X					X					X	X			
E4-1	Use available technologies to lessen the impact of diesel fuel use on the Island.				X					X				X					X	X		Legislature
E4-2	Eliminate unnecessary vehicle idling.				X	X				X					X				X			
E5-1	Advocate changing state law to allow electricity distribution by local energy generation facilities.				X		X		X					X			X	X				state
E5-2	Establish an electrical cooperative or Island utility company.				X									X			X	X				Vineyard Power

Strategy		Type						Timing					Cost			Who Could Do It?					notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	
E5-3	Prepare a plan that identifies the best locations for renewable energy facilities.	X							X				X			X	X		X		Vineyard Power
E5-4	Explore renewable energy generation with site-specific sources.	X											X			X	X		X		VEP
E6-1	Identify sites with advantageous access to renewable energy sources.					X			X				X			X	X		X		Vineyard Power
E6-2	Require that new development provide for the incorporation of renewable energy.				X				X				X			X	X				
E6-3	Promote conversion to more energy-efficient building and hot water systems.	X				X		X					X						X		VEP
E6-4	Develop information and incentive programs for property owners to encourage on-site energy generation.	X						X					X			X	X		X		VEP
E6-5	Investigate renewable energy options specific to farmers.						X	X					X						X		
E7-1	Create training programs for workers needed to support the growing renewable energy industry.		X							X				X	X		X		X		schools
E7-2	Adopt development regulations that encourage renewable energy generation.			X						X			X		X	X	X				
E7-3	Improve consumer education and protection by providing current information on products and practices.					X		X					X						X		VEP
E8-1	Develop an Island-wide system for coordinated waste management.		X						X					X			X	X			refuse district
E8-2	Construct an integrated, Island-wide recycling/composting facility.			X						X					X			X			refuse district
E8-3	Use construction debris and available biomass (wood waste, leaves, and organic wastes) as a local resource.		X							X				X				X			refuse district
E9-1	Reduce the amount of potential waste brought to the Island.	X				X			X				X					X			refuse district
E9-2	Improve awareness of waste disposal processes.	X						X					X					X			refuse district
E9-3	Increase the number of recycling containers and satellite drop-off sites.					X		X					X					X			refuse district
E9-4	Provide ways for the re-use or re-purposing of materials.					X			X					X					X	X	
E9-5	Adopt mandatory recycling.				X				X				X					X			refuse district
E9-6	Minimize demolition of homes.				X			X					X			X	X				
E9-7	Consider septic tank dewatering.				X				X				X							X	
E9-8	Create biodiesel from waste cooking oil.			X					X					X						X	

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Strategy		Type							Timing					Cost			Who Could Do It?					notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	Business	
<b>HOUSING</b>																						
H1-1	Allow an additional accessory affordable housing unit on appropriate properties.				X					X			X			X	X		X		IAHF, planning boards, DCRHA	
H1-2	Allow multi-unit community house in certain areas				X					X			X			X	X		X		IAHF, planning boards, DCRHA	
H2-1	Adopt demolition delay bylaws to encourage house preservation or reuse.				X								X			X	X		X		planning boards, IAHF, DCRHA	
H2-2	Establish amnesty programs to address the issue of illegal apartments.			X	X					X			X						X		building inspector, housing committee, DCRHA	
H3-1	Encourage each town to adopt a Municipal Affordable Housing Trust Fund				X			X				X			X	X					housing committee	
H3-2	Create the Martha's Vineyard Housing Bank.				X					X			X						X		IAHF	
H3-3	Provide tax incentives to property owners who rent housing units on a year round basis.								X				X						X		selectmen, housing committee, planning board, DCRHA	
H3-4	Provide infrastructure for community housing.									X					X	X	X					
H3-5	Seek Island-wide-cost-sharing methods for infrastructure and services.				X					X			X					X			selectmen, County, school committee	
H3-6	Require inclusion of housing units, or community housing financial mitigation, in market development projects.				X				X				X			X	X					
H3-7	Consider taxing or imposing a registration fee for weekly housing rentals.				X					X			X					X				
H4-1	Coordinate the application process for affordable and other community housing.								X				X					X			DCRHA, housing committee	
H4-2	Regularly assess the impact of zoning and the permitting process on housing affordability.				X					X			X			X	X				planning board, housing committee	
H4-3	Adopt Housing Production Plans.			X						X			X								Housing Committees	
H4-4	Consider measures to reduce legal challenges to community housing projects.									X			X			X	X		X		DCRHA, Island Housing Trust, housing committee	



Strategy		Type						Timing					Cost			Who Could Do It?					notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	
H4-5	Ensure permanent income-protection with affordable and community housing.				X					X			X			X	X		X		DCRHA, IHT, housing committee
H5-1	Conduct an education and outreach campaign to raise awareness about seasonal workforce housing needs.	X				X		X					X		X	X	X	X	X		County, IAHF
H5-2	Create dormitory housing for seasonal workers.			X					X				X			X	X				CPC, County, planning board
H5-3	Consider revising zoning to allow recreational camping.				X				X				X		X	X	X				County, planning board
H6-1	Quantify and plan for future housing needs for the elderly and those requiring various kinds of specialized housing.			X					X					X	X	X		X			Island Elderly Housing
H6-2	Create additional elderly housing and assisted living communities for seniors.			X					X					X				X	X		
<b>TRANSPORTATION</b>																					
T1-1	Promote and fund alternative modes of transportation.	X	X					X					X				X			X	
T1-2	Set out the use of mitigation fees to fund alternative transportation.				X				X				X		X	X					
T2-1	Create public-private alliances to improve and promote alternative transportation.			X					X				X		X	X				X	
T2-2	Maintain and expand bus service.			X							X		X				X				VTA
T2-3	Create uptown - downtown shuttles.				X					X				X			X				VTA
T2-4	Implement hybrid taxi/bus service.								X					X			X				VTA
T2-5	Better integrate the Steamship Authority into Island transportation planning goals.			X					X				X					X			SSA, Joint Transportation Committee
T2-6	Offer detailed trip planners.			X					X				X					X	X		Chamber of Commerce, VTA, SSA
T2-7	Consider rebranding the transit system.	X							X				X					X	X		VTA, Chamber of Commerce, business associations
T2-8	Improve taxis regulations, training, quality, and dispatching.				X				X				X		X	X	X				County
T3-1	Create a working group in each town to focus on pedestrian and bicycle improvements.			X				X					X		X	X	X				planning boards, schools, DPW

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Strategy		Type							Timing					Cost				Who Could Do It?					notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	Business		
T3-2	Outline and implement a pedestrian/bike improvement program.			X					X				X			X	X	X				MassDOT	
T3-3	Require public review of road repair and improvements.					X		X					X			X	X						
T4-1	Extend the network of off-road bike paths and improve the safety of existing ones.				X	X			X						X	X	X					DPW	
T4-2	Carry out safety improvements for on-road biking.	X							X				X				X						
T4-3	Extend the network of trails.								X						X		X						
T5-1	Create traffic calming work groups.			X					X				X			X						planning boards, DPW	
T5-2	Implement traffic calming measures to slow traffic in neighborhoods.				X	X			X					X			X					planning boards, DPW	
T5-3	Address problems at the Island's most dangerous and congested road locations.					X	X			X				X		X	X					planning boards, DPW	
T5-4	Address the shortage of parking in town centers during the summer.				X	X	X		X					X		X	X						
<b>WATER RESOURCES</b>																							
W1-1	Expand public water supply.				X					X					X		X						
W1-2	Plan for and protect future public well sites.						X	X					X				X						
W1-3	Strengthen regulation of private wells.					X		X					X				X						
W1-4	Improve monitoring of private wells.	X				X		X					X				X						
W1-5	Promote limiting water consumption.	X				X		X					X	X		X	X			X			
W1-6	Minimize the impact of hazardous materials on groundwater.	X				X		X					X			X	X						
W2-1	Prepare a summary Wastewater Management Plan.						X	X					X			X	X		X			Water Alliance	
W3-1	Expand sewers and centralized or package wastewater treatment in higher density areas.						X	X							X	X							
W3-2	Facilitate the installation, monitoring, and operation of cluster and individual on-site systems with advanced nitrogen removal.		X				X				X				X	X	X						
W3-3	Set growth control regulations related to expansion of wastewater treatment.					X		X					X			X	X						

Strategy		Type							Timing					Cost			Who Could Do It?						notes
		Awareness	Incentive	Program	Project	Regulation	Service	Study	Immediate	Short-Term	Medium Term	Long Term	Needs Work	Low	Medium	High	MVC	Town	Other Govt	Non-Profit	Business		
W4-1	Set up a program to identify and correct problematic stormwater discharges from roads and other public lands.			X					X					X			X	X				MassDOT	
W4-2	Require development and redevelopment projects to maximize treatment and infiltration in order to retain all stormwater on site, favoring use of Low Impact Development techniques.				X				X				X			X	X					planning boards, DPW, con. comm.	
W4-3	Put in place system design and maintenance programs to limit stormwater problems.			X	X				X				X			X	X					planning boards, DPW, con. comm.	
W5-1	Complete the Mass Estuaries Project (MEP) studies of coastal ponds.						X	X					X					X				state	
W5-2	Set up management committees to prepare plans for each coastal pond.						X	X					X			X	X		X			Water Alliance	
W5-3	Improve pond circulation through dredging, removal of tidal restrictions and carefully managed openings to the sea.				X					X				X			X		X			state	
W5-4	Set regulations limiting nitrogen from new projects in sensitive watersheds.				X				X				X			X	X	X				state	
W5-5	Increase shellfishing in coastal ponds by increasing habitat area and quality.				X					X				X			X						
W5-6	Identify sources and reduce bacterial contamination that closes shellfish beds.				X		X			X				X			X						
W5-7	Manage boating and fishing to limit the impact on water quality.			X	X				X				X				X						

# implementation

Strategy Tracking Sheet						
<b>NAME OF INITIATIVE</b>					Date of Update:	
<b>STATEMENT OF NEED</b>	History and current status of challenge, constraint, imbalance etc. that the proposal addresses.					
<b>PURPOSE</b>	What the proposal is attempting to achieve.					
<b>DESCRIPTION</b>	What the proposal would do; the deliverable.					
<b>PARTNERS</b>	Who should be involved? Who appears best-placed to lead the effort?					
	Partner	Related past and current initiatives	Potential responsibilities with this proposal			
<b>SENSITIVE ISSUES / CHALLENGES</b>						
<b>BEST PRACTICES AND MODELS ELSEWHERE</b>						
<b>INTERRELATIONSHIPS</b>	How it is affected by or affects other strategies.					
<b>LOOKING TO THE FUTURE</b>	Long-term implications of strategy. Next steps after it is achieved. Related issues that also should be dealt with.					
<b>ACTIONS</b>	Specific projects, regulations, incentives etc. needed to achieve this initiative. They should be specific and measurable and attainable within a designated time period. Type of each intervention.					
	Action	Lead Partner	Resources	Timeline	Evaluation	Notes

**Strategy Tracking Sheet:** To flesh out these strategies in more detail and to let people know how efforts are coming along, a Tracking Sheet will be prepared for priority strategies, posted on the Island Plan website, and updated regularly. It will include more detail about the initiative, including the action steps needed to implement it and a description of best practices elsewhere.

**The Island Plan:** Since the Island Plan is not an ongoing entity, it cannot directly take on the responsibility of implementing proposals. The Island Plan Steering Committee may reconstitute itself as we move into the implementation phase. The structure set up for the Island Plan – the Network of Planning Advisors, the Work Groups, the website – could play several roles in the implementation of the proposals in this document.

- **Initiate:** For those priority strategies not already underway, the Island Plan Steering Committee and Work Groups or their successors can identify the key stakeholders and facilitate a series of working sessions, convening the possible stakeholders to discuss the strategy, to see whether the stakeholders believe that it is worth pursuing, and to identify who within the group is the likely leader.

- **Assist:** The Island Plan Steering Committee and Work Groups or their successors, with the help of the MVC, can provide technical assistance to towns and other entities in helping them move ahead with implementation of these proposals.

- **Track:** The Island Plan, supported by the MVC, will track implementation of strategies, to allow the community to monitor progress. The Island Plan Steering Committee has committed itself to meeting periodically to monitor progress in implementing the Island Plan.

Also, some of the Island Plan Work Groups might transform themselves into ongoing entities that take on coordination or implementation for their topics.

**Martha’s Vineyard Commission:** The MVC initiated the Island Plan and provided technical support for its preparation. The Commission should play an ongoing role in keeping the issues and goals of the Island Plan in front of the Vineyard community. Implementation of some of the strategies falls within the mandate of the MVC itself and the Commission can provide support to implementation of some of the others, while there might be some where it is not involved at all. Its efforts would fall mainly in two areas:

- **Regulatory:** The Commission can implement some of the policies and other recommendations in the Island Plan through its regulatory responsibilities, namely the review of Developments of Regional Impact and the creation of Districts of Critical Planning Concern. These are discussed in section 11.2.

- **Technical Assistance:** The MVC can provide technical assistance to towns and to the community at large to help implement the strategies that are primarily their responsibility. This can include carrying out studies, and doing GIS mapping. MVC staff is in the process of compiling information about best practices, model by-laws, contact information, and links to other resources, which will be available on the Island Plan website.



## 11.2

# Regulating Development

The Island’s system for regulating development has a range of types of review.

- The most straightforward projects are allowed in zoning “as-of-right,” meaning that as long as the project meets zoning and other regulations, issuance of a permit is automatic.
- Projects that are potentially more problematic are often subject to site plan review, or might need to obtain a special permit from the Planning Board or the Zoning Board of Appeal.

- More significant projects are also reviewed by the Martha’s Vineyard Commission as Developments of Regional Impact.

The adoption of the Island Plan provides a framework for the MVC and the towns to fundamentally review and possibly revise their regulatory frameworks, to achieve the objectives of the Plan and to provide greater guidance and predictability for applicants, while maintaining transparency and safeguards. For example, the MVC and towns can use the Island Plan maps to identify which projects need certain kinds of review, such as those located in nitrogen-sensitive watersheds, scenic road viewsheds, or other sensitive areas.

The following table outlines the proposed levels of review, based on how problematic a project might be and what its potential impact is.

Proposed Levels of Project Review	
Straightforward proposals	Allowed as of right.
Somewhat problematic	Site Plan Review by local board.
More problematic	Special Permit by local board.
Limited regional impact	Special Permit by local board after Town has adopted and MVC has approved relevant plan and/or policy.
Possibly significant regional impact	Referral to MVC for optional review.
Clear regional impact	Referral to MVC for mandatory review.

# implementation

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## MVC DRI Review

The MVC reviews Developments of Regional Impact, projects that could affect the people of more than one town. In order to further the goals of the Island Plan, the Commission could revise the DRI Checklist and prepare or revise the policies it uses in DRI review.

• **DRI Checklist:** This outlines the standards and criteria used by towns to determine which permit applications must be referred to the Commission for review. It includes threshold sizes for certain types of development that trigger town referral of a project. The MVC should revise the DRI Checklist to reflect the ideas of the Island Plan, so that proposals in clear conformity with the Plan are not reviewed by the MVC, whereas those that might be more problematic are reviewed by the Commission. The DRI Checklist could include specific mitigation measures which projects could include to offset problematic impacts, and thereby avoid MVC referral.

The MVC's current DRI Checklist has many anomalies which lead to MVC review of relatively minor projects, while other projects with potentially greater impact are not reviewed by the Commission, and sometimes are not even reviewed by any town board. For example, under the current Checklist, a small addition at the rear of a building that had previously been a DRI must be referred by the town board to the Commission for possible review, whereas a 400-foot wind turbine in a significant vista can be erected without any Commission review. Similarly, the addition of 1,000 square feet to a store, even in a commercial area, must be reviewed by the Commission, but the

construction of a 20,000-square-foot house in a traditional older neighborhood or a nine-unit apartment building in the countryside is not. Also, for most DRI Checklist items, the same standard applies across the Island, so 2,000 square feet of new commercial space is the threshold for MVC review, whether the store is located on a quiet rural road or in the heart of a commercial district.

The Martha's Vineyard Commission should consider the following revisions to the DRI Checklist.

- Ensure that it reviews projects of regional impact, but not require review of projects without regional impact by eliminating the need for referring smaller and less problematic projects.
- Allow for projects of limited regional impact to be reviewed at the town level only, where the town has adopted its own mechanism approved by MVC dealing with the critical issue, such as an area master plan, the requirement for special permits for critical projects, an energy code, or nitrogen-loading limits. This is similar to the current provision requiring MVC review of the major modification or demolition of a building more than 100 years old, unless it is in a historic district and will be reviewed by the Historic District Commission.
- In requiring that potentially problematic projects have MVC review, it could spell out how applicants could avoid MVC review by mitigating their regional impacts to meet specific established standards. For example, the Checklist could require that a building in a nitrogen-sensitive watershed be reviewed unless the nitrogen is reduced or offset so it meets an acceptable standard.

A few examples illustrate how this could work (with the quantities for illustrative purposes only).

- The size threshold for commercial projects – presently 2,000 square feet for the whole Island – could be revised to, say, 4,000 square feet for projects in town areas designated for commercial development, provided the project conformed to an area plan which had been prepared by the town and approved by the Commission. On the other hand, the threshold could be dropped to, say, 1,000 square feet for projects outside the commercial areas designated in the Island Plan.
- The threshold for a housing development – now ten lots or units for the whole Island – could be raised, say to 12, in growth areas, and dropped, say to 6, in conservation areas.
- The MVC could require that any house larger than, say, 6,000 square feet be referred to the Commission for review unless it provided pre-determined mitigation for anticipated impacts, such as demonstrating that its nitrogen-loading level was less than the limit established for that watershed, that its fossil fuel use was less than a given standard, that it submitted a construction management plan to the town, and that it was not in a critical watershed.
- **DRI Policies:** Over the past few years, the MVC has prepared policies on several topics to provide guidance to DRI applicants in preparing proposals and to the Commission in evaluating them. The Commission should revise these policies and draft new ones, to reflect the recommendations of the Island Plan.

## Town Regulations and Project Review

The structure of town review could be revised in the same spirit, making it easier to develop projects that conform to the objectives of the Plan, and prohibiting or at least requiring more review for those that don't. Each town may want to revise its Master Plan to work out more precisely how the principles of the Island Plan would apply to their territories.

Some of the strategies outlined in this report deal with regulations to be adopted by the towns. It would be up to each town's planning boards, conservation commissions, or boards of health to draft regulations and bring them to town meetings for adoption, if they see fit. Town officials have recommended comparing each town's existing regulations to the proposals in the Island Plan.

There are several advantages in having towns work together to draft regulations. They could share research into best practices and use of consultants in drafting the regulations. They could join forces in public information campaigns to explain the proposals. It would be easier for builders and members of the public if all towns used identical or at least similarly structured regulations.

If necessary, the MVC can create or enlarge Districts of Critical Planning Concern, special areas on the Island needing additional protection. Creating a district allows towns to create special regulations and by-laws to protect these special resources. All project applications are then processed by the town.



## 11.3

# Monitoring Progress

In order to move effectively in a direction, it is useful to take your bearings from time to time and make sure that you are on course. For Martha's Vineyard, periodic monitoring of the community's progress will allow us to make the necessary adjustments to reach our objectives, or to revise the objectives if they are no longer relevant.

The Island Plan website will be transformed to serve as a main focus for ongoing activity related to implementation of the Plan and for monitoring progress.

To help monitor progress, it is recommended that a list of indicators for each of the objectives in the Island Plan be prepared. The list should include a specific target that represents an optimistic but achievable attainment of each objective.

- **Indicator:** A way to measure achievement of an objective, say in percentage of food that is locally grown, or number of ponds that meet the good water quality standard.
- **Target:** Where we want to be 50 years from now, the equivalent of the sustainable situation that could continue indefinitely into the future, say 50% of the Island is protected open space.
- **Benchmarks:** The points we should reach on our way to reaching the target.

Some objectives lend themselves more to the use of measurable targets than others, in that they are inherently quantitative. Examples include: "10% of our year-round housing stock should be affordable to under 80% AMI and another 10% to 80-150%," and, "We should produce or offset as much energy as we use." It will be more difficult to come up with clear targets for those objectives which are inherently more qualitative and multifaceted, such as ensuring that new buildings harmonize with their context or that the Vineyard is a more healthy community.

# APPENDICES

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**A1 The Planning Process**

**A2 List of Island Plan Documents**

**A3 List of Participants**

**A4 Glossary**



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# A1 The Planning Process

The Island Plan process was publicly launched in the summer of 2006. The mission is to “chart a course to the kind of future that the Vineyard community wants and design a series of actions to help us navigate that course.”

The intention is to seek consensus on goals and identify achievable objectives for the plan as a whole and within specific topic areas, and to outline specific strategies to reach them. These include programs, incentives, regulations, and other actions to be carried out by the Martha’s Vineyard Commission, by the towns, and by other entities. The Martha’s Vineyard Commission adopted the plan on December 10, 2009.

## A1.1 Who’s Who

**Steering Committee:** A 16-person Steering Committee was set up by the Martha’s Vineyard Commission to oversee both the content and the process of the plan. It has been responsible for articulating the overarching, interdisciplinary vision, goals, and strategies; identifying and analyzing development and growth alternatives; coordinating interdependencies and trade-offs between topic areas; finalizing the planning documents and recommending them for adoption to the Martha’s Vineyard Commission; and helping initiate and monitor implementation of the Plan. The members of the Steering Committee are Jim Athearn (Chair), John Abrams, Tom Chase, Ann Floyd, Ray LaPorte, Ned Orleans, Kerry Scott, Linda Sibley, Elio Silva, Russell Smith, Bret Stearns, Henry Stephenson, Paul Strauss, Richard Toole, Woody Vanderhoop, and Susan Wasserman.

**Network of Planning Advisors:** More than 540 people, anyone who wished to participate, joined the Network of Planning Advisors in order to follow the planning process and give their input at key times by participating in work groups, by attending forums and other planning activities, by responding to surveys, and by commenting on draft documents.

**Work Groups:** Eight Work Groups were set up to focus efforts on specific topics. Their mandate was to identify goals and objectives and to outline strategies to achieve them. The first cycle of Work Groups

started in 2006 and included Energy & Waste, Housing, Livelihood & Commerce, Natural Environment, and Water Resources. The second cycle of Work Groups started in 2007 and included Built Environment, Social Environment, and Transportation. Because there were between 50 and 160 members in each Work Group, smaller cores for each group were set up to meet more often in order to prepare material for the larger group. Each Work Group prepared a Discussion Paper that summarized preliminary recommendations and held a public forum to get feedback. The efforts of each Work Group are summarized in sections 4 to 11 of this document.

**Public Information and Involvement:** Town boards, Island organizations, and members of the public were kept informed and given an opportunity to get involved in a variety of ways.

- An extensive website – [www.islandplan.org](http://www.islandplan.org) – provided access to all documents, surveys, and events. The website has already received about 40,000 visits from about 20,000 unique visitors, with over 1.2 million hits.
- An annual progress report summarizing key recommendations was distributed to all Island homes in the summers of 2006-2009.
- An annually updated summary exhibit was installed in the Vineyard Haven ferry terminal and in all Island grocery stores.
- An extensive series of surveys, with about 3,000 respondents, was held in the lead-up to and during the planning process.
- The Island Plan had a booth at the Agricultural Fair every summer at which people could get information and participate in surveys.
- Sixteen public forums, with attendance up to 140 people each, were held in the lead-up to and during the planning process.
- All Island Plan forums and many meetings were broadcast on MVTV.
- The newspapers carried many articles and op-ed pieces about the Plan.

**Staff:** The planning effort was supported by the expertise of the Martha’s Vineyard Commission staff. Outside expertise and assistance (consultants, facilitators, interns, etc.) was brought in as needed throughout the process.

**Funding:** The process was funded by the towns, by grants, and by donations from foundations and individuals.

# appendices

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## A1.2 About the Planning Process

**Guiding Principles:** Early in the process, the Steering Committee adopted the following guiding principles for the Island Plan.

1. Appreciate that in many areas much is being done, and has been, and incorporate all previous and current intelligence into the plan.
2. Break new ground while incorporating and learning from the best of the past and present.
3. Emphasize public commitment to bold, achievable, acceptable strategies, rather than mere consensus on goals and policies.
4. Emphasize the use of a broad range of incentives, projects, and programs, not just regulations.
5. Recognize that we can invent the future we want; the citizenry has the power to effect change.
6. Emphasize that all issues and solutions are interrelated, and tease out the connections between the various arenas of inquiry.
7. Position the Plan as an iterative process that constantly cycles back to re-imagine and adjust, rather than a static reflection of a moment in time.
8. Consider the long-term future we want and identify what we have to do in the short and medium term to get there. Look at 2050 as the target date for a fully sustainable community, with milestones at 2010 and 2025.

**Time Horizon:** The Plan looks at both short and long-term challenges and possible solutions. Taking a long-term view allows us to deal with the real impacts of changes that could seem inconsequential if looking at their effects over only a few years. Also, it lets the community look at taking on major new ways of doing things, which might seem impossible if they had to be implemented in only a few years. However, the aim of the Island Plan is very much focused on what we can do soon, some actions which would have quicker results, others which might take a generation to have a real effect.

**Changing Times:** This planning process took place during a period of great change for America and the world: the most important economic crisis since the Great Depression and global recognition that climate change is a

real phenomenon that must be dealt with. Both these factors reinforce many of the broad goals of the plan, such as the need for the Vineyard to be more self-reliant and diverse. When the economy recovers, we could go back to business as usual and face the same issues, or we could take advantage of this breather to make changes so we emerge from the crisis in even better shape.

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## A2 Island Plan Documents

### A2.1 Studies and Plans

- Visual Preference Survey
- Economic Profile of Martha's Vineyard
- Economic Leakage Study
- Extensions of Shared Use Paths
- Regional Transportation Plan
- Development Permitting on Martha's Vineyard
- Zoning for Affordable Housing on Martha's Vineyard
- Cost of Living and of Doing Business on Martha's Vineyard
- Wastewater Management Study
- Tisbury Urban Design Study
- Agricultural Self-Sufficiency
- Explanations of Island Plan Maps, Data and Growth Scenarios

### A2.2 Surveys

- Island and Ferry Surveys, 2003-4
- Business Survey, 2003
- Island Plan Beginnings, 2006
- Martha's Vineyard Past and Future, 2007
- Neighborhoods, 2007
- Development and Growth, 2008

### A2.3 Forums

- Smart Growth: Where Should the Vineyard Grow?, 2004
- View From The Road: How Can We Preserve Our Rural Roadsides?, 2004
- Trends In The Trades: How Will Changes Affect Our Businesses and Jobs?, 2004
- Clams And Kayaks: How Can We Protect Our Coastal Ponds?, 2004
- Backyards and the State Forest: What Role Should Natives and Exotics Play?, 2005
- Living and Working In Paradise: How Can We Make Housing Affordable?, 2005
- Paradise Lost? Are We Loving the Vineyard to Death?, 2005
- Gridlock in Paradise: What Can We Do About Traffic?, 2005
- Island Plan Kick-Off 1, 2006
- Island Plan Kick-Off 2, 2006
- Housing, 2007
- Energy and Waste, 2007
- Water Resources, 2007
- Natural Environment, 2007
- Development and Growth, 2007
- Livelihood & Commerce, 2007
- Transportation, 2008
- Building Environment, 2008
- Development and Growth, 2008
- Social Environment, 2009

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## A3 List of Participants

### Steering Committee

Chairman: James A. Athearn

Process Committee Chairman: John Abrams

Outreach and Communications Committee Chairman: Linda Sibley

Development and Growth Committee Facilitator: Henry Stephenson

Other Members: Tom Chase, Ann Floyd, Ray Laporte, Ned Orleans, Kerry Scott, Elio Silva, Russell Smith, Bret Stearns, Paul Strauss, Richard Toole, Woody Vanderhoop, Susan Wasserman

### Work Groups - Chairmen or Steering Committee Liaisons

Natural Environment: Tom Wallace

Built Environment: Henry Stephenson

Social Environment: Linda Sibley

Livelihood and Commerce: John Abrams

Energy and Waste: Sharon Strimling Florio

Housing: Richard Toole

Transportation: Jeff Parker

Water Resources: Bret Stearns

### MVC Staff

Executive Director: Mark London

Island Plan Team: Christine Flynn, Chris Seidel, Jo-Ann Taylor, Bill Veno, Bill Wilcox

Other Staff: Donna Stewart, Jeff Wooden, Paul Foley, Michael Mauro

Interns: Christine Brissette, Emily Lindsay, Fiona MacLean, Ed O'Connell, Sarah Raposa, Ana Sargent, Sam Slater, Zak Steele

Facilitation: Robert Leaver, New Commons

### Volunteers

The assistance is gratefully acknowledged of many volunteers who actively participated in work groups or contributed in many other ways. The efforts of Dan Greenbaum are especially recognized.

### Network of Planning Advisors

John Abate-Bolduc  
Maria Abate-Bolduc  
Nancy Abbott  
Chris Abrams  
John Abrams  
Karen Achille  
Joan Adibi  
Mercedes Agard  
Warren Agard  
Erik Albert  
Meredith Aldrich  
G K Allan  
Clarissa Allen  
Marie Allen  
Joe Alosso  
Joan Ames  
Lisa Amols  
Ina Andre  
Richard Andre  
Susan Angevin  
Terry Appenzellar  
Christine Arenburg  
James Athearn  
Annalei Babson  
Cheryl Backus  
Ken Bailey  
May Baldwin  
Michael Ball  
Renee Balter  
Jay Banker  
Jordan Baptiste  
Sally Barkan  
Sam Barnard  
David Barnicle  
Olga Barr

Harriet Barrow  
Kate Barry  
R.G. Becker  
Casey Bell  
Rocco Bellebuono  
Suzan Bellincampi  
Matt Bendle  
Bill Bennett  
Carole Berger  
Ali Berlow  
Sam Berlow  
Laura Bernard  
Robert Bernard  
Steve Bernier  
Harriet Bernstein  
Ann Beroy  
John Best  
Ellie Beth  
Harvey Beth  
Raye Bing  
Ron Binney  
Ken Blacklow  
Jack Blake  
Beverly Boardman  
D Bohan  
Tim Boland  
Marisa Boniface  
Paul J Boniface  
John Bossen  
David Bouck  
Jill Bouck  
Prentice Bowsher  
John Bradford  
Courtney Brady  
Dean Bragonier  
Emily Bramhall  
Peter Braun  
Robin Bray

John Breckenridge  
Christine Brissette  
Caryn Broitman  
John & Tim Brooks  
Christina Brown  
David Brown  
Pat Brown  
Polly Brown  
Jan Buhrman  
Julia Burgess  
K M Burke  
Abbe Burt  
Peter Cabana  
Marta Camargo  
Jim Cannon  
Charles Carlson  
Tracy Carpenter  
David Caseau  
Tom Chase  
Eve Chilton Weinstein  
Deborah Cini  
Leslie Clapp  
Alison Clark  
Peter Clark  
Bob Clay  
R Cloninger  
Matthew Coffey  
Linda Cohen  
Rhonda Cohen  
Sylvia Cohn  
Katherine Colon  
Frazier Colon  
Christine Conley  
Tim Connelly  
Brad Conover  
Barabara Conroy  
Norma Costain  
Corrine Costello

---

Leanne Cowley	Belinda Eichler	Alan Ganapol	Don Hatch	Chris Kennedy	Kenneth MacLean
Steve Crampton	Burt Eichler	Nancy Gardella	Adrian Havens	Ellie Ketcham	Bruce MacNelly
Martin Crane	Kelley Ellsworth	Thomas Gardos	David Hedley	Nis Kildegaard	Karen Magid
Judy Crawford	Andrea Engelman	Carlene Gatting	Renata Hejduk	Raye King	Linda Malcouroune
Tad Crawford	Steve Engh	Berta Geller	Phil Henderson	Sandra Kinston	Bill Maloney
Gail Croteau	Jean Entine	Henry Geller	Kristin Henriksen	Clara Kisko	Sylvia Malm
Paul Cruikshank	Steve Ewing	David Gendron	Rev. Robert Hensley	Richard Knabel	Patrick Manning
Wendy Culbert	Sam Feldman	Will Geresy	Bruce Herdman	Margaret Knight	Jim Martin
Kathleen Cuppi	Caroline Fenske	Miryam Gerson	Peter Hershey	Johanna Kobran	Lee Martin
Sherrie Cutler	Donna Fernandez	Rebecca Gilbert	Jason Hiller	Michael Kobran	Fred Mascolo
Zachary Cutler	Jeff Fernandez	Brian Giles	Doug Hoehn	Jeff Krystal	Fred D. Mason
Timothy Dacey	Michael Ferrone	Matthew Goldfarb	John Hoft	Sarah Kuh	Jonathan Mayhew
Joan Damora	Ann Fielder	Rob Goldfarb	Noli Hoye	Jonathan Laird	Gino Mazzaferro
Maria Danielson	Skip Finley	Sherman Goldstein	Sue Hruby	Suzanne Lanzone	Liz McCann
Candy DaRosa	Arnie Fischer	Liz & Jeff Gordon	Carol Hunter	Fred Lapiana	Jean McCarthy
Dennis Darosa	Judy Fisher	Barbara Gould	Mark Hutker	Ray LaPorte	Jerry McCarthy
Elizabeth Davis	Art Flathers	Plesser	Adam Hyaes	Joan Laramie	Kelly McCarthy
Nathan Davis	M Kay Flathers	Angela Grant	Tristan Israel	Stanley Larsen	Michael McCarthy
Mimi Davisson	Ann Floyd	Mimi Gratch	Miles Jaffe	Sarah Leaman	Penny McConnell
Barbara Day	Leslie Floyd	Eleanor Graves	Rex Jarrell	Robert J. Leaver	Janet McFadden
Bob Day	Christine Flynn	Dawn Greeley	Michelle Jasny	James Lengyel	Carol McGovern
Al DeVito	Sean Flynn	Bob Green	Diane Jetmund	Gus Lewis	Keith McGuire
Catherine DeVito	Sarah Foehl	Gerald Green	Peggy Jewett	Emily Lindsey	Sarah McKay
Ron DiOrio	Karen Fokos	Dan Greenbaum	Dick Johnson	Patrick Lindsey	Deborah Medders
Dave Diriwachter	Paul Foley	Emma Green-Beach	Kitt Johnson	Kanta Lipsky	Else Membreno
Cindy Dole	Phil Forest	Pat Gregory	Luanne Johnson	Donald Liptack	Roberta Mendelovitz
Michael Donaroma	Kendra Frakes	Dave Grunden	JJ Johnston	John Littel	Janet Messineo-Israel
Nan Doty	Angie Francis	Mark Hahn	Philippe Jordi	Ann Littel	Dick Mezger
Warren Doty	Stephen Francis	Christian Halby	Rick Karney	John Littel	Jim Miller
Marie Doubleday	Melissa Freitag	Phil Hale	Peter Karoff	Melinda Loberg	Marilyn Miller
Christine Doyle-Burke	Chris Fried	Ben Hall Jr.	Steven Katz	Margaret Logue	Monica Miller
Peter Dreyer	Dick Frisch	Nick Hammond	Delphine Keating	Sarah Lolley	Steve Mindel
Michael Drezner	Elaine Frost	Robert Hannemann	Mary Lou Keep	Mark London	Charlie Miner
John Dropick	Anne Gallagher	Marc Hanover	Allan Keith	Sam Low	James Moffatt
Peter Duart	Nicole Galland	Lincoln Hansen	Ben Kellews	Catherine Lowther	Greg Monka
Elizabeth Durkee	Robert Gallo	Gary Harcourt	Raymond Kellman	Fred Lucas	Carlos Montoya
Ann Edey	Zee Gamson	Susan V. Harris	Brian Kelly	Claudia Macedo	Adam Moore
Greg Ehrman	Joyce Ganapol	Warren Hartwell	Rob Kendall	Ron MacLaren	Ben Moore

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Kathryn Moore	Barbara Peckham	Christine Rose	Elizabeth Simison	Bruce Stuart	Bob Wheeler
Paddy Moore	Farney Pedler	Geoff Rose	Bill Skinner	Jo-Ann Taylor	Dave Whitmon
Mark Morris	Matt Pelikan	Pat Rose	Suzanne SlarskyDael	Susan Taylor	Dedie Wieler
Sidney Morris	B Peltier	Mark Rosenstein	Bart Smith	Connie Teixeira	John Wiener
Jim Morrissey	Steve Perlman	Bruce Rosinoff	Betsy Smith	Linda Thompson	Craig Wiggins
Siobalan Mullin	Joan Perrine	Macy Rosinoff	Evan Smith	Liz Thompson	Jane Wilbur
Alexander Muromcew	Deacon Perrotta	Dahlia Rudavsky	Gwyn Smith	Lynn Thorp	John Wilbur
Chris Murphy	Susan Phelps	Julie Russell	Joseph Smith	John Thurber	William Wilcox
Steve Myrick	Nancy Phillips	Steve Ruzanski	LB Smith	Gail Tipton	Laurel Wilkinson
Andrew Nanaa	Elizabeth Pickett Gray	Judy Salosky	Leah Smith	Richard Toole	Louisa Williams
Belleruth Naparstek	Dick Pierce	Ana Sargent	Russell Smith	Justin Tourigny	Paul Williams
David Nash	Ed Pierce	Craig Saunders	Mark Snider	Sandy Turner	Rez Williams
Robyn Nash	Deborah Pigeon	Donna Saunders	Gretchen Snyder	Patricia Tyra	Adam Wilson
Jane Naylor	Lys Pike	Christine Savini	Steve Soriano	Michael Vacante	David Wilson
Judith Neeld	Thomas Pike	Al Schackman	Ed Spalding	Julianne Van Belle	Ellen Wingard
Brian Nelson	Paul Pimentel	John Schaeffer	Matthew Stackpole	Pamela Vanderhoop	Arlan Wise
Nora Nevin	Sandra Polleys	Judith Scheur	Marnie Stanton	Woody Vanderhoop	James Wolff
Katherine Newman	Matt Poole	Louise Schiller	Myra Stark	Jane Varkonda	John Wolff
Diane Nicholls	Edith Potter	John Schilling	Craig Stead	John Varkonda	Maddie Wolff
Brandon Nygard	Robert Potts	William Schowalter	Elizabeth Stead	Barbara Vasaturo	Betty Wolfson
Barbara Norfleet	Jim Powell	Steven Schulman	Bret Stearns	Bill Veno	Jeff Wooden
Ellen OBrien	Lil Province	H.W. Schwarz	Alan Stein	Taza Vercruysse	Andrew Woodruff
Ed O'Connell	Nathaniel Putnam	Kerry Scott	Dave Stein	Donna Vose	Bob Woodruff
Donald Oliver	Tom Rancich	Lee Scott	Henry Stephenson	Tom Wallace	Wordrow Wordrow
Ed O'Melia	Beebo RantoulTurman	Peter Scott	Holly Stephenson	Jill Walsh	Bob Yantorno
Brendan O'Neill	Sarah Raposa	Douglas Sederholm	Carlos Stevenson	Russell Walton	Pamelah Young
Ned Orleans	Binnie Ravitch	Christine Seidel	John Stevenson	Charles Wardell	Stephen Zablotny
Megan Ottens- Sargent	Sandy Ray	Robin Shanus	Donna Stewart	Kate Warner	Ron Zentner
Elaine Pace	Dyan Redick	Sheila Shapiro	William Stewart	Bettina Washington	
Debbie Packer	Jonathan Revere	Casey Sharpe	Elizabeth Stocker	Susan Wasserman	
Peter Palches	Cynthia Riggs	Martha Shaw	Ann Stodder	Paul Watts	
Richard Paradise	Charles Robinson	Mark Shea	Kathleen Stoll	Bill Weber	
Christy Park	Tom Robinson	Susan Shea	Rick W. Stovall	Jamie Weisman	
Jackson Parker	Rev. Heather Rogero	Lucinda Sheldon	Arthur Strang	Jim Weiss	
Jeff Parker	Jordan Ronson	Gary Shriver	Paul Strauss	Barbara Welch	
Tony Peak	T Rooney	Linda Sibley	Bill Straw	Lori Welch	
Mary Jane Pease	Sally Rorer	Susan Sigel Goldsmith	Jack Street	Sean Welch	
	Camille Rose	Elio Silva	Sharon Strimling Florio	Jim Westervelt	

# A4 Glossary

**Accessory Dwelling Unit:** A residential dwelling unit with its own cooking and bathroom facilities that is attached to or separate from a parcel's primary single family dwelling unit.

**Affordable Housing:** Permanently deed-restricted year-round dwelling units that are deemed to be affordable to those earning no more than 80% of the Area Median Income for Dukes County. This is set each year by the Federal Department of Housing and Urban Development based on an individual or family not paying more than 30% of their gross income for housing (rent and basic utilities for rental housing; mortgage, insurance, and property taxes for home ownership).

**Annual Gross Domestic Product:** A basic way to measure the yearly economic performance; it is the market value of all goods and services made within the borders of the land (country, state, island).

**Area Median Income (AMI):** The average (median) income levels for individuals and families in Dukes County as determined annually by the Federal Department of Housing and Urban Development (HUD).

**Aquifer:** A geological formation containing or conducting ground water, especially one that supplies the water for wells, springs.

**Available Land:** Undeveloped parcels of land, or portions of parcels exceeding the minimum zoning requirements for additional

development, that are not protected open space or otherwise permanently protected from additional development.

**Biocide:** A chemical agent, such as a pesticide, that is capable of destroying living organisms.

**Biodiversity:** The variation of life forms within an ecosystem. Considered a measure of the health of the ecosystem.

**Biomass:** A renewable energy source; biological material derived from living organisms (ex. wood, waste) used as fuel.

**British Thermal Unit (BTU):** A unit of energy equal to 1.06 kJ (kilojoules); used in power, heating, air conditioning industries; in North America it is used to describe energy value of fuels.

**Build Out:** The theoretical point at which land that can be built on has been developed with the maximum number of dwelling units allowed by local zoning and development regulations.

**Building Density:** The concentration of building in an area, usually measured by the Floor Area Ratio.

**Built Environment:** Manmade surroundings that provide the setting for human activities, including buildings, structures, roads, and spaces.

**Bulkhead:** A manmade structure constructed along a shoreline with the purpose of controlling beach erosion.

**By-law:** A regulation made by a local authority; an ordinance of sorts.

**Carbon Emissions:** Polluting carbon substances that are released into the atmosphere.

**Carrying Capacity:** The amount of a unit (whether human, animal or carbon) which something can sustain.

**Climate Change:** A long term, significant change in the statistics of the weather over time.

**Commercial Area:** An area which engages with primarily commerce/business.

**Commission:** A group of people officially charged with a particular function.

**Community:** The group of people interacting on Martha's Vineyard including residents, visitors, business owners, and workers.

**Community Housing:** Permanently deed-restricted, year-round rental and homeownership housing for those earning up to 150% AMI for Dukes County (includes "affordable housing").

**Critical Habitat:** Geographic areas associated with particularly rare species; the Vineyard's frost bottoms are a good example.

**Density:** See Building Density and Residential Density.

**Development:** Manmade changes to the natural environment – usually buildings, re-grading, roads or utilities – and their associated lawns, storage areas, and managed rights-of-way.

**Easement:** The right to cross someone else's land for a specified purpose.

**Economic Leakage:** When money earned in an area is spent in another economy such as

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by importing goods and services that could be produced locally.

**Economic Multiplier:** The effect of a dollar of new spending within an economy on the total income or employment of all industries within a community.

**Eco-Regions:** Eco-Regions cover relatively large areas of land or water, and contain characteristic, geographically distinct assemblages of natural communities and species. The biodiversity of flora, fauna and ecosystems that characterize an Eco-Region tends to be distinct from that of other Eco-Regions.

**Ecosystem Services:** A multitude of resources and processes that are supplied without cost by natural ecosystems; such as the production of food and water, the control of climate and disease, nutrient cycles and crop pollination, spiritual and recreational benefits, and guarding against uncertainty through the maintenance of diversity.

**Edge Effects:** This term is commonly used in conjunction with the boundary between natural habitats and developed land. Edge effects may include intrusion of unwelcome species, impacts on availability of light, etc.

**Electrical Cooperative:** An entity that delivers electricity to its members, each of whom is a partial owner of the business with an equal say in operations. Profits are either reinvested for infrastructure or distributed to members.

**Energy Efficiency:** Using less energy to provide a similar level of energy service.

**Environmentally Sensitive Area:**

Geographic area where human developments need to be carefully managed and monitored, or even avoided, in order to keep the impacts from damaging a valuable natural resource

**Estuary:** A water body where salt and freshwater meet, resulting in brackish water.

**Eutrophic:** The condition of a surface water body containing an excessive accumulation of nutrients (generally nitrogen in saltwater and phosphorus in fresh water) that support a dense growth of algae and other organisms, the decay of which depletes the shallow waters of oxygen in summer and produces undesirable habitat and aesthetic conditions.

**Floor Area Ratio (FAR):** The total floor space on a parcel of land or in an area, divided by the land area of the parcel or area. (Also known as Floor Space Index.)

**Fossil Fuel:** A hydrocarbon deposit, such as petroleum, coal, or natural gas, derived from living matter of a previous geologic time and used for fuel.

**Fragmentation:** Fragmentation occurs when a large region of habitat has been broken down, or fragmented, into a collection of smaller patches of habitat. Fragmentation typically occurs when land is converted from one type of habitat to another.

**Geothermal:** Relating to heat energy extracted from the earth's interior.

**Global Warming:** A long-term, significant change in the statistics of weather over a period of time.

**Green Building:** A building, which yields environmental benefits, such as energy savings, reduction in waste, water consumption, or other resources, or creates a physically healthier structure within which to live, work or recreate.

**Greenhouse Gas:** A gas that contributes to global warming by absorbing infrared radiation (ex. CO<sub>2</sub>).

**Greenway:** A linear open space reserved for recreational use and/or environmental preservation, usually linked into an interconnected network, a giant circulating system serving as the natural counterpart of the a road network.

**High-Impact Building:** A building which has a greater than normal impact on the environment, because of its location (e.g. in a roadside viewshed), its size (e.g. larger than a given size), or for other reasons.

**Home Rule Petition:** The petition for self-government in the internal affairs of a dependent political unit (country, state).

**Hyperabundant:** A wildlife population is considered hyperabundant (too many) when its size clearly exceeds the upper range of natural variability that is characteristic of the ecosystem.

**Incubator Industry:** A start-up business.

**Infrastructure:** Water and sewer lines, roads, transit lines, schools, other public facilities needed to support development and people.

**Intertidal Area:** The intertidal area (also called the littoral zone) is where the land and sea meet, between the high and low tide zones.



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It is rich in nutrients and oxygen and is home to a variety of organisms.

**Invasive Species:** Non-indigenous species that take over habitats in an environmental or ecological fashion.

**Island Shuffle:** Moving twice a year because the cost of housing in the summer season is so high that a tenant is required, or an owner chooses, to move to less expensive accommodations so the dwelling unit can be rented at a higher rate to seasonal residents.

**LEED:** Leadership in Energy and Environmental Design; the US Green Building Council's ecology-oriented building certification program.

**Litigation:** The process of taking a legal case through the courts.

**Livelihood:** A means of securing the necessities of life.

**Low Impact Development:** An approach to land development which works with nature to manage and lessen its impact on the natural area; principles which preserve or recreate natural landscape features, create effective drainage.

**Micro-Business:** A small business subset; a small business that is independently owned and operated which has a small number of employees and a low volume of sales.

**Minimum Viable Landscapes:** Within each of the Island's five Eco-Regions, the area of ecologically functional land and surface water needed to sustain viable populations of native species.

**Mitigation:** A way to reduce the seriousness or severity of something.

**Mixed-Use:** A combination of commercial, residential, and business uses in one area to capitalize on interdependencies and interactions of uses, and to economize on services and utility infrastructure.

**Moraine:** A ridge of debris deposited at the end of the glacier. On the Vineyard, the moraines include a variety of rock, sand and clay material, in contrast to the more uniform sandy outwash plains in the center of the Island.

**Natural Resources:** Those resources which occur naturally within environments and can be used for economic gain.

**Net Growth:** An overall increase.

**Network of Planning Advisors:** People who chose to follow the Island Plan process and give their input at key times by participating in work groups, by attending forums and other planning activities, by responding to surveys, and by commenting on draft documents.

**Nitrogen Pollution:** An undesirable condition of water resources as a result of the presence of excessive amounts of nitrogen. In the aquifer, the condition where the concentration of nitrate surpasses 10 parts per million (ppm), the level which poses some risk to human health. In a coastal water body, the condition where the concentration of total nitrogen exceeds 0.5 ppm, the level that typically stimulates excessive growth of algae.

**Not-for-Profit Organization:** A group which doesn't use net gains for shareholders, but rather to further the goals of its cause.

**Open Space:** Undeveloped land, or land used for recreation.

**Opportunity Area:** Areas identified in the Island Plan (such as the Upper State Road, Edgartown Triangle), where substantial new development and re-development is anticipated which could positively transform their character.

**Photovoltaic Solar Panels:** Renewable energy devices which convert solar energy (sunlight) directly into electricity.

**Potentially Available:** Portions of developed parcels which exceed the minimum zoning requirements for additional development and are not permanently protected.

**Protected Open Space:** Land may be protected from development by a number of legal mechanisms; some permanent such as a conservation restriction, others providing tax relief while needed and disposable by the owner at any time.

**Public Realm:** The publicly owned streets, sidewalks, rights-of-ways, parks and other publicly accessible open spaces, and public and civic buildings and facilities.

**Public Waters Viewsheds:** The areas of land along the shores of ponds or the ocean that are highly visible from these public waters.

**Recharge Area:** An area where water soaks through the earth to reach an aquifer.

**Recreation:** Activity that engages the mind or body in a leisurely manner.

**Renewable Energy:** Generation of power

# appendices

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from naturally replenished resources, such as sunlight, wind and tides:

**Residential Density:** The number of dwelling units per acre of land. For parcels of more than one acre, usually expressed as number of acres per dwelling.

**Retrofitting:** The addition of new feature(s) or technology to an older unit.

**Revenue:** For business, it is income that a company earns from normal business activity.

**Revenue-Neutral:** When gains and losses are equivalent.

**Roadside Viewsheds:** The areas of land along or highly visible from the main Island roads.

**Rural:** On the Land Use Guidance Map, one of the two overall areas on the Island (the other being “town”; italicized in the Island Plan when used in this sense). In a general sense, of, pertaining to, or characteristic of the country, country life; non-urban.

**Site Plan:** Scaled plan showing proposed uses and structures for a parcel of land; shows layout of buildings, open space, parking areas, landscape features and utility lines.

**Smart Growth:** Well planned development that concentrates growth in or close to already developed areas to avoid urban sprawl; that protects open space and farmland; and that advocates compact, transit-oriented, walkable, bicycle-friendly land use, including neighborhood schools, complete streets, and mixed-use development with a range of housing choices.

**Socio-Economic:** This relates to the interaction of social and economic factors.

**Sole-Proprietorship:** A type of business which is owned and run by one individual.

**Source Area:** A source area is large enough to support viable breeding populations of a species and to export surplus to smaller patches of similar habitat.

**Steering Committee:** A 16-person group set up by the Martha’s Vineyard Commission to oversee both the content and the process of preparing the Island Plan.

**Stewardship:** Taking responsibility for the wise use and long-term management of natural resources.

**Subdivision:** Result of dividing land into lots for sale or development.

**Subsidize:** Financial support from an organization to a private sector (business, industry).

**Suburban Sprawl:** The spread of the village area through rural land at the fringe of the village.

**Sustainable Development:** Meets the needs of the present without compromising the ability of future generations to meet their own needs.

**Tax Abatement:** Tax incentive; reducing or lessening taxes.

**Telecommuting:** A work arrangement in which employees have flexibility in working locations and hours; working from home via computer; referring to a replacement of commute with telecommunications.

**Town:** On the Land Use Guidance Map, one of the two overall areas on the Island (the other being “rural”; italicized in the Island Plan when used in this sense). One of the six municipal administrations on Martha’s Vineyard (capitalized when used in this sense) or one of the six municipal areas on Martha’s Vineyard (not capitalized). Sometimes used to refer to the three higher-density areas, namely the central neighborhoods of Edgartown, Oak Bluffs, and Vineyard Haven.

**Traditional Neighborhood Development (TND):** Two goals: to reduce the destruction of habitat and natural resources, and to reduce dependency on automobiles and their associated impacts; and to reduce polluting emissions, excessive use of energy and fragmentation of the landscape.

**Traffic Calming:** Methods used to slow down traffic by means of physical surroundings.

**Transfer of Development Rights (TDR):** System that assigns development rights to parcels of land and gives landowners the option of using those rights to develop or to sell their land. TDR promotes conservation and protection of land by promoting more dense development in one area, and conservation in another.

**Undevelopment:** Removal of developments from properties which are then returned to open space conditions; may be done gradually through securing remainder interests from willing sellers who then remain in residence while living.

**Unsustainable:** Any practice which is considered to harm the environment in the long term.

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**Viewshed:** An area of land, water or other natural element that is visible from a fixed position.

**Village:** A smaller concentration of buildings within a town, such as Menemsha or the West Tisbury town center.

**Visually Critical Area:** An area such as a public vista or roadside viewshed which is highly visible or sensitive.

**Wastewater:** Sewage or water contaminated with human waste products. Water that has been adversely affected in quality by human influence.

**Watershed:** An area of upland and wetlands that contribute to either surface runoff or groundwater flow to a pond, stream or groundwater discharge point.

**Wetland:** Land that is permanently or intermittently covered with water; areas with shallow water and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.

**Zoning:** Classification of land in a community into different areas and districts. Zoning is a legislative process which regulates building dimensions, density, design, and placement use within each district.

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ISLAND PLAN  
c/o Martha's Vineyard Commission  
P.O.Box 1477, Oak Bluffs, MA, 02557  
508-693-3453  
info@IslandPlan.org  
www.islandplan.org

### **COMPREHENSIVE GOAL**

Make Martha's Vineyard a more sustainable, resilient, diverse, balanced, stable, and self-sufficient community, preserving the Island's unique natural, rural, and historical character and creating a better future for Vineyarders and the Island itself.

Use the Island and manage its development in ways that are compatible with the long-term sustainability and carrying capacities of our natural resources and community.

# ISLAND PLAN

CHARTING THE FUTURE OF THE VINEYARD