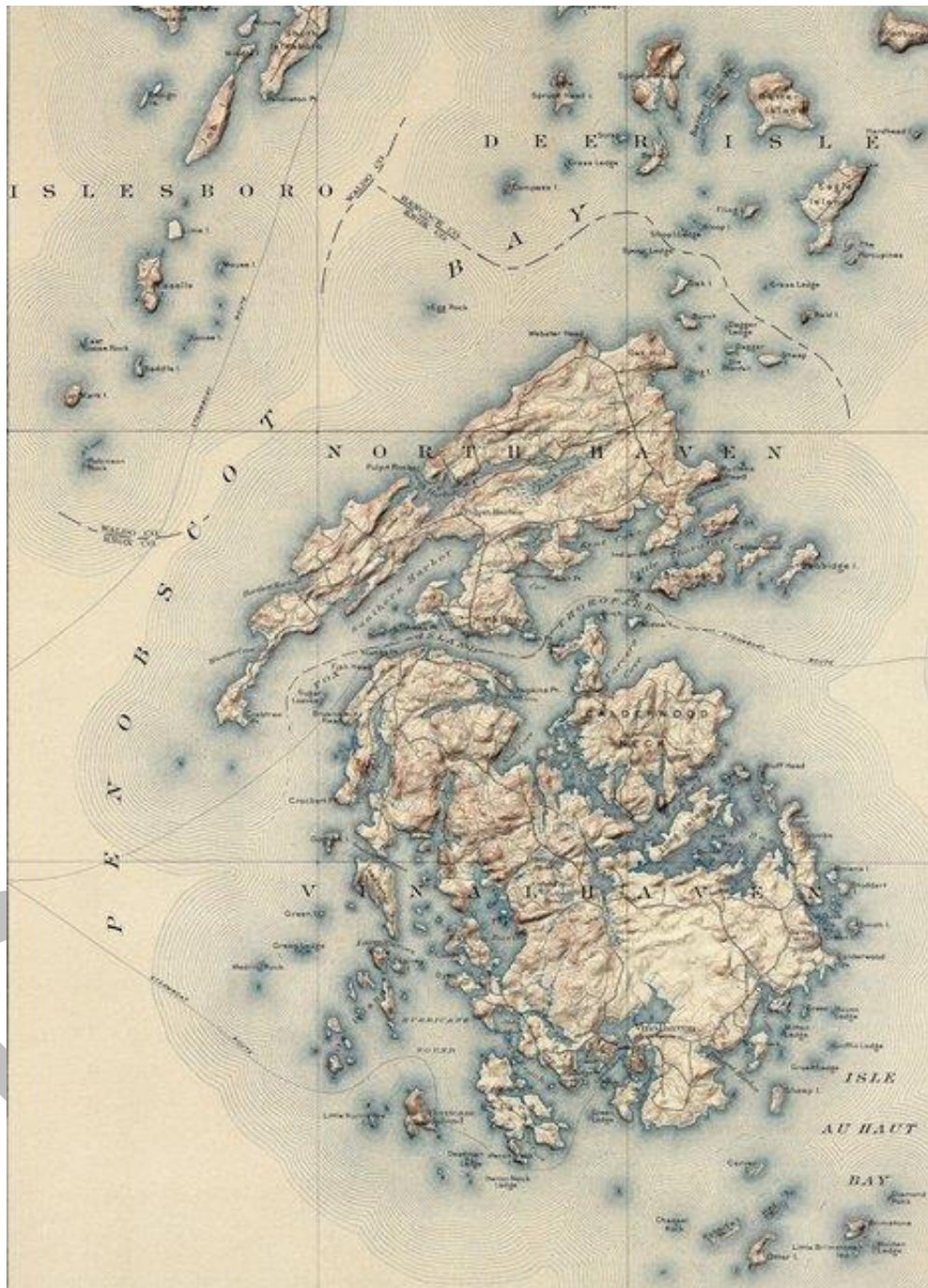


Town of Vinalhaven



A Comprehensive Plan for 2025

Inventory and Analyses

Prepared by Vinalhaven Planning
Commission; 2013
Vinalhaven, Knox County, Maine

This plan is dedicated to
Laura Hamilton
(1953 – 2013)
who served well on
the Planning Commission
and on the Planning Board.

Thank you, Laura, for your years of service to the Vinalhaven Community.

Acknowledgements

This Comprehensive Plan represents the thoughts and aspirations of an island community and represents hours of tireless work. This Plan is intended to guide the Town's future development while conserving, and in some cases preserving, our social, cultural, and natural resources. A special **Thank You** to all of those who made this plan possible.

Board of Selectmen

2011 - '13

Jack Olson; Chairperson

Penny Lazaro

Jessica MacDonald

Dennis Warren

Buddy Skoog (through June 2013)

Eric Gasperini (begin June 2013)

Planning Commission

Gigi Baas

Laura Hamilton

Wes Reed

Kathy Warren

Comprehensive Plan and Economic Development Fellow/Advisors

Andrew Dorr, Island Fellow

Kris Davidson, Advisor

Sue Lafricain, Advisor

Marjorie Stratton, Advisor

Kathy Warren, Advisor

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Resource Advisors and Focus Groups

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Linnell Mather

Chuck Gadzick

Addison Ames

Gigi Baas

Focus Group 2

Kris Davidson

Gabe McPhail

Tuck Godfrey

Laura Hamilton

Focus Group 3

Elizabeth Bunker

Dylan Jackson

Karol Kucinski

Jeff Aronson

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Local, State, and Regional Organizations with contributing information

Mid-Coast Regional Planning Commission

Maine State Planning Office

Vinalhaven Land Trust

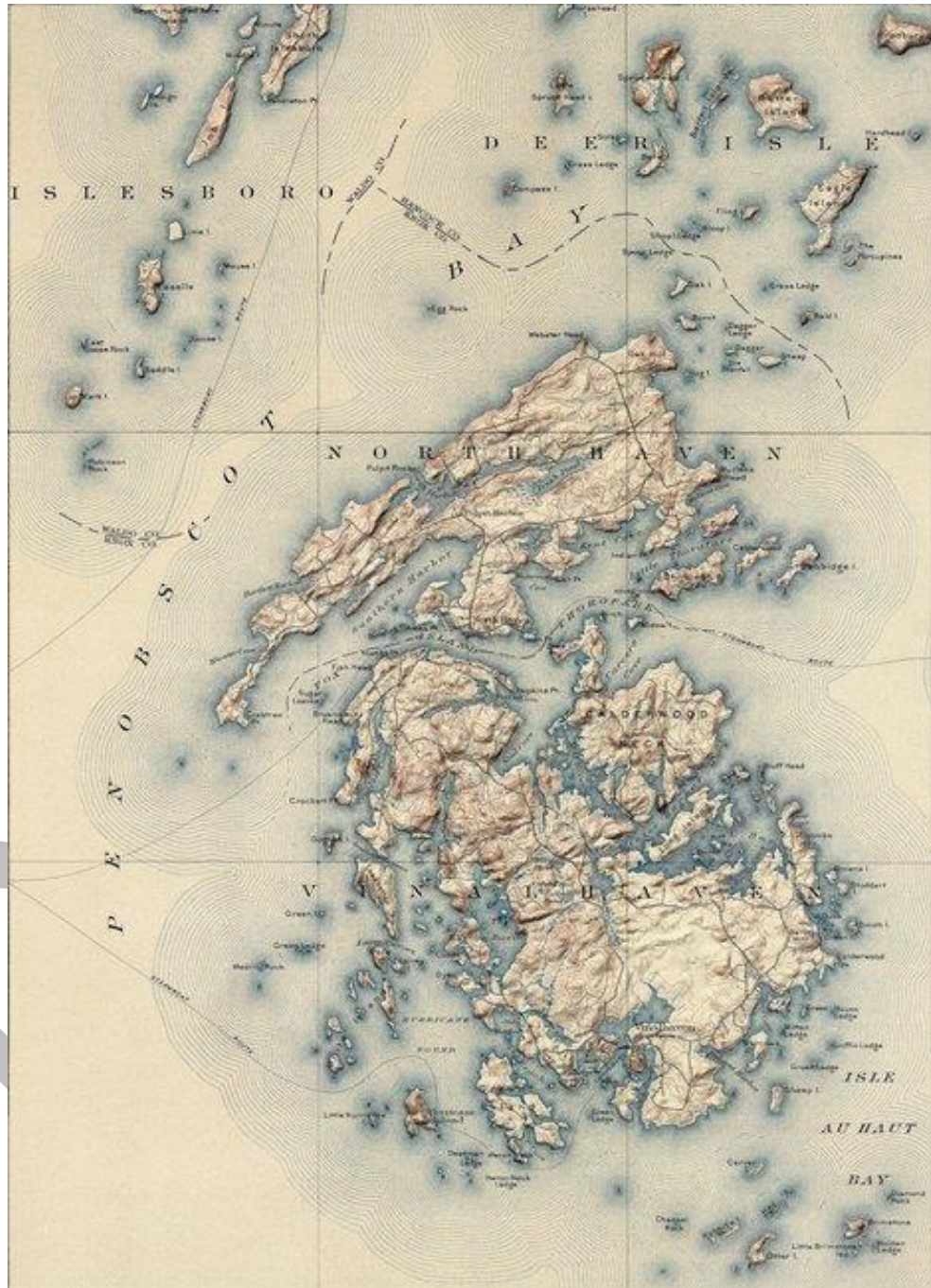
Vinalhaven Historical Society

Island Institute

Maine Office of Historic Preservation

Vinalhaven's Comprehensive Plan

Executive Summary



Prepared by the Vinalhaven Planning Commission

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Chapter Summary

- ***Historic and Archaeological Resources***

Incorporated in 1789, Vinalhaven still shows a lot of its granite and marine fishery roots. At its peak, Vinalhaven was home to over 3,000 people, mainly supported by the granite industry, with immigrants from various European countries. The rise of steel and concrete soon made granite obsolete and it was then that lobstering and other marine trades sustained the island population. Today, you can still see many artifacts and evidence of the past trades while lobstering and tourism support the island.

- ***Water Resources***

As a quasi-municipal corporation, the Vinalhaven Water District, formed in 1978, maintains the original public water system, constructed in 1910, bringing water to over 1,000 people annually. Round Pond is the primary source of the filtered drinking water while all those living beyond the Village Overlay District have primarily drilled wells. Some of the major concerns regarding water supply is the proximity of North Haven Road to Round Pond and overall water quality concerns for well owners. Improvements to the supply/distribution system could help reduce water loss, which was 5.9 million gallons in 2011.

- ***Natural Resources***

Vinalhaven is home to many unique plant and animal habitats. The island location is often flocked with sea nesting birds seasonally. The raw natural beauty of the island is one of a kind with nearly 2,000 acres in easement and approximately 1,200 more publicly owned. Vinalhaven should seek to continue to conserve unique and rare land so that all may benefit and ecological value will be sustained.

- ***Agricultural and Forest Resources***

The island's rich history in agriculture is still evident as old farms are still standing and pastures are left undeveloped. In recent years, social trends of eating local are resulting in small-scale farm operations. Forestry, while not in the traditional sense of commercial, is not prevalent, there are a few small-scale logging operations that continue seasonally. The island's old growth forests are in need of care as there is concern that the relative age will not be able to sustain itself beyond 15 or 20 years, at which point, it is believed the island will look similar to that in the late 1930's and into the early 50's.

- ***Marine Resources***

Accounting for approximately 10% of the state's total lobster catch, Vinalhaven is one of the largest lobstering fleets/harbors in the state. Fishermen are proud of their catch and the town continues to support lobstering in various ways, most notably through land use ordinances. Coastal water health has improved over the recent years with fewer overboard discharges and improvements on non-point source pollution. Vinalhaven should continue to protect and manage their harbors and shoreline from development.

- ***Population and Demographics***

With a year-round population of over 1,300 people, according to local records and upwards of 5,000 in the summer, Vinalhaven is the largest un-bridged year-round island community. The community supports a Pre-K – 12 school with an average class size of 10 students. Aging-in-place and sustaining/attracting young adults are expected to be some of the most important aspects of our island's population over the next 10 years.

- ***Economy***

The island is primarily supported by the lobster industry followed by tourism. The balance between these two economic drivers is instrumental in sustaining island businesses. There are approximately 35 businesses present between the ferry terminal and end of “Main St”. Many of these remain open year-round, but they largely depend on seasonal sales to keep doors open all year.

- ***Housing***

According to local records, approximately 52% of the parcels on the island are owned by people primarily residing in Vinalhaven. Over the last 10 years, 138 building (residential building) permits have been issued, 59% of those by year-round residents. There is a need for affordable house sales to support our younger populations. Rentals are not as large an issue as they were 10 years ago, but there are more and more late 20 – early 30 year olds looking to buy homes. With the rising population, it should also be considered necessary to explore housing opportunities for the elderly in the hopes of keeping them on the island.

- ***Recreation***

Vinalhaven is rich in recreational opportunities. There are various access points to the water around the island and most of those are accessible to the public. The island boasts over 600 acres of public parks and preserves and approximately 25 miles of maintained trails.

- ***Transportation***

There are nearly 40 miles of public roads on Vinalhaven and an additional 35-50 miles of private roadways. State Aid roads account for 5.5 miles, primarily running through town and extending about 2.5 miles outward from the town center. There is a strong reliance on the Maine State Ferry Service to transport people and supplies 15 miles to and from Rockland.

- ***Public Facilities and Services***

Updates to the town water supply and a recent addition of the Wastewater Treatment facility are just the beginnings of recent improvements to public facilities and services. The town provides Fire/EMS, Administrative, Road, Harbor, Solid Waste, and Library services to the island. In addition, there is also a Pre-K-12 school, Fox Island Electric Cooperative, Knox County Sheriff Deputy, and MSFS providing services to the residents of Vinalhaven. Ongoing maintenance of roads, sidewalks, and harbor access help keep the village area vibrant. These services are vital to sustaining our year-round island population.

- ***Fiscal Capacity and Capital Investment Plan***

Municipalities must be able to determine the expenditures necessary to provide basic services and the impact that this spending will have on townspeople. The primary funding source for municipal government is property tax revenue. In order to maintain a consistent mil rate year to year, town government must operate in a fiscally responsible manner. Large fluctuations in the tax rate can cause public outcry and can discourage economic development. Although the priorities of the Town may change from one election year to another, stable municipal finances are always a fundamental responsibility of Town government. It is important for Vinalhaven to budget diligently for the annual operating expenditures while at the same time plan for the Town’s long-term objectives.

- ***Existing Land Use***

The implementation of Shoreland Zoning in 1974 kick started the island’s zoning regulations. Following the state mandated zone, islanders recognized the importance of protecting the rest of the island’s

resources and created three districts, Resource Protection, Residential-Commercial, and Residential-Marine. In 1983, the ordinance was retitled to include shoreland and inland properties in efforts to protect freshwater supplies as well. Over the last 30 years, minor changes have occurred and include the classification of two major categories referring to the development districts, “Underlying Districts” and “Overlay Districts”. Development over the past 10 years has been slow and relatively distributed across the island with many new homes being built along North Haven Road and Round the Island Road.

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Vision Statement

“Preserving island life for another generation”, that is the mission or tag line adopted by this comp plan process. When we think about preserving island life and the next generation you have to wonder, “What will it take?” We asked our community, “What would you like to see in the future for Vinalhaven? What is your vision for the Town over the next 10 years?” Their responses are below and we feel they represent what this plan is about. Over the next 12 years, we hope strive for, provide, and ensure the following for our island and its residents.



Public Participation Summary

Various communication tools were utilized to inform and update the public as to the status of the Plan. It was important to consider the limitations as well as recognize the unique opportunity Vinalhaven has for public participation. In a working waterfront community, largely devoted to a marine resource economy, the efforts to reach out to the community need to take into consideration the schedule of that group, therefore many of the community meetings were held in the late fall – early spring months. Another large consideration of public participation includes the seasonal population, which is primarily here during the summer months. Efforts were also made to reach out and include the summer residents.

The following are some of the most substantial and effective forms of participation that worked for this process.

- *Focus Group Meetings* – Identify key community facets and hold informal meetings to discuss objects of a comprehensive plan, answer the question of how the plan will impact them, ask the group if they have any hopes or fears regarding their focus, and encourage participation throughout the process.
- *Survey Advisory Group* – The working group responsible for developing a community survey to gauge interests/needs of the community. This group will meet to discuss and decide on a survey design, administer said survey, and help compile the results.
- *Resource Advisors* – Community experts that will be responsible for each resource area in the Plan. These advisors are grouped by Focus Groups and should provide an opportunity for focused discussions on specific topics regarding inventory, analysis, and strategic planning. The Resource Advisors shall recommend policies and strategies pertaining to their respective topic.
- *Community Presentations* – An informal update of the Plan's progress and a chance for public discussion. This may be left for Planning Commission to decide when it is appropriate to hold such meetings and is encouraged to ensure a broad community view is represented throughout the Plan.
- *Online resources* - These are communication methods that may assist in communicating to the public and include using a Website, E-mail, Facebook, and/or Discussion Group.

COMPREHENSIVE PLAN SCHEDULE

Phase I	Background/Inventory	Fall 2011 – Winter 2012
Phase II	Analysis/Strategic Planning	Winter 2012 – Spring 2013
Phase III	Approval	Summer - Fall 2013
Phase IV	Adoption/Implementation	Continuous

Regional Coordination

While Vinalhaven has most of the time been seen as independent, there is also great regional support. That support is vital to sustaining the island's population, services, and economy that we maintain and investigate new associations. Our current regional coordination efforts include representing and/or working with advisory boards, regional commissions, non-profits, and other public and private groups.

- ***Natural Resources and Recreation***

Regional land trusts and public land groups help maintain our rural character while providing programs and places of recreation.

- ***Transportation***

Maine State Ferry Service serves the island with two boats, Capt Frank E. Thompson (2012) and Capt Charles Philbrook (1993) and 6 trips per day (May – Dec). The MSFS maintains ferry terminals in Rockland and one on VH in Carver's Harbor. The island has a Ferry Tariff Advisory Board as well as a resident serving on the MSFS Ferry Advisory Board.

Penobscot Island Air leases the airstrip on VH from the town and is the only company allowed to utilize the airstrip. PIA is a mail delivery service, but also is a passenger plane that connects with Knox County Airport in Owls Head. PIA also transports medical patients if/when the ferry is not an option. The town was, and still is, hesitant to allow public use of the airstrip and should therefore maintain its relationship with PIA.

- ***Public Facilities and Services***

Fox Island Electric Cooperative serves Vinalhaven and North Haven. The submarine cable was upgraded in 2005

Medical Services are handled primarily by Island Community Medical Services, but also utilize various means of transportation to get patients or emergency victims to the mainland in a timely fashion. Pen Bay Medical Center is located in Rockport, approximately 3 miles from the Maine State Ferry terminal in Rockland. If patients are not taken by ferry, they are either flown by Penobscot Island Air or LifeFlight.

- ***Fiscal Capacity and Capital Investment Plan***

Vinalhaven, much like many towns, seeks to coordinate and reduce costs when possible. This becomes more difficult when on an island, but if possible, coordinating barges or technical services with other neighboring islands will help reduce the financial burden.

- ***Knox County Collaboration***

The County Emergency Management Agency coordinates county emergency response when a disaster or emergency incident extends beyond the normal mutual aid boundaries of the affected community, or several communities.

The county puts out a bid package for all towns in their jurisdiction for salt/sand. In addition, we coordinate with the Town of Union to store the sand until we can pick it up.

VH contracts the services of Knox County Sherriff to employ a resident deputy. It is with the resident deputy that people generally feel more comfortable and attribute follow-through on cases. In addition, a resident deputy will often respond to emergency calls that might not otherwise be able if they were only covering 40 hours. Maintaining that relationship with Knox Co Sherriff is important for the island.

Vinalhaven is not the only island in the Gulf of Maine. To that end, challenges experienced on VH are likely similar on neighboring islands. The Maine Islands Coalition is a group of representatives from unbridged islands with year-round populations. The representatives discuss relevant issues and advocate for the economic, environmental, and social sustainability of year-round communities. Vinalhaven should continue to send a representative to this group.

The Island Institute is a nonprofit organization dedicated to the sustainability of year-round island communities. It hosts conferences, conducts policy research, sponsors scholarships, provides professional support to island leaders, and coordinates the Island Fellows Program, which places recent college graduates in island communities to assist with community identified projects.

Additional regional support is available from the Mid-Coast Regional Planning Commission. The town is currently a member and receives technical assistance and support from the commission. The MCRPC works with communities in Knox and Waldo Counties on various planning needs including comprehensive planning, zoning, transportation studies, and mapping.

Future Land Use Plan

The State definitions of land based upon predominant uses are shown in the next table along with the current corresponding Vinalhaven Zones and Shoreland Zoning Districts.

Area Designations	
State Area Definitions	Vinalhaven Current Zones and Current Shoreland Zoning (SZ) Districts
Growth Area: an area that is designated in a community's comprehensive plan as <u>suitable for orderly residential, commercial, or industrial development</u> , or any combinations of those types of development and related infrastructure, and into which <u>most development projected over 10 years is directed</u> .	<ol style="list-style-type: none"> 1. Village Overlay District 2. Commercial Fisheries/Maritime Activities District 3. Residential Commercial District
Rural area: a geographic area that is identified and designated in a community's comprehensive plan as an area that is <u>deserving of some level of regulatory protection from unrestricted development</u> for purposes that may include, but are not limited to, supporting agriculture, forestry, mining, open space, wildlife habitat, fisheries habitat, and scenic lands, and away from which most development projected over 10 years is diverted.	<ol style="list-style-type: none"> 1. Residential Marine 1 District 2. Airport Overlay District
Critical rural area: means a rural area that is specifically identified and designated by a community's comprehensive plan as <u>deserving maximum protection from development to preserve natural resources and related economic activities</u> that may include, but are not limited to, significant farmland, forest land or mineral resources; high-value wildlife or fisheries habitat; scenic areas; public water supplies; scarce or especially vulnerable natural resources; and open lands functionally necessary to support a vibrant rural economy.	<ol style="list-style-type: none"> 1. Residential Marine 2 District 2. Residential Marine 3 District
Critical Natural Resources: areas where the following natural resources, under federal and/or state law, warrant protection from the negative impacts of development: (1) Resource Protection District areas, (2) Wetlands, (3) Significant wildlife/plant habitat, (4) Threatened, endangered, and special concern animals/plant species habitat, (5) Significant freshwater fisheries spawning habitat, (6) Natural communities that are critically imperiled, (7) Coastal and sand dune systems, (8) Fragile	<ol style="list-style-type: none"> 1. Stream Protection District 2. Water District 3. Resource Protection District 4. Shoreland Zone 5. Wetlands 6. Coastal Wetlands

mountain areas, or (9) National Natural Landmarks.

The Comprehensive Plan and its Future Land Use Plan are not a land use ordinance, but they can serve as a legal foundation of current and future land use ordinances.

Vinalhaven Future Land Use Plan	
Ordinances/Easements	Recommendations
Zoning Ordinance	Maintain, enact or amend local ordinances as appropriate to address or avoid conflicts with: <ul style="list-style-type: none">• Policy objectives of the Sensible Transportation Policy Act (23 M.R.S.A. §73);• State access management regulations pursuant to 23 M.R.S.A. §704; and
Shoreland Zoning Ordinance	Amend, as needed, to meet State requirements. Note: No amendments are needed at present.
Subdivision Regulations	Amend, as needed, to meet current State requirements in Title 30-A M.R.S.A. §4404, Statutory Review Criteria, and to enhance local subdivision ordinance standards to fit best the needs of Vinalhaven. Amend land use ordinances to require commercial or subdivision developments in critical rural areas, if applicable, maintain areas with prime farmland soils as open space to the greatest extent practicable.

The following are also strategies that are recommended that are not reflected in current policies/local ordinances.

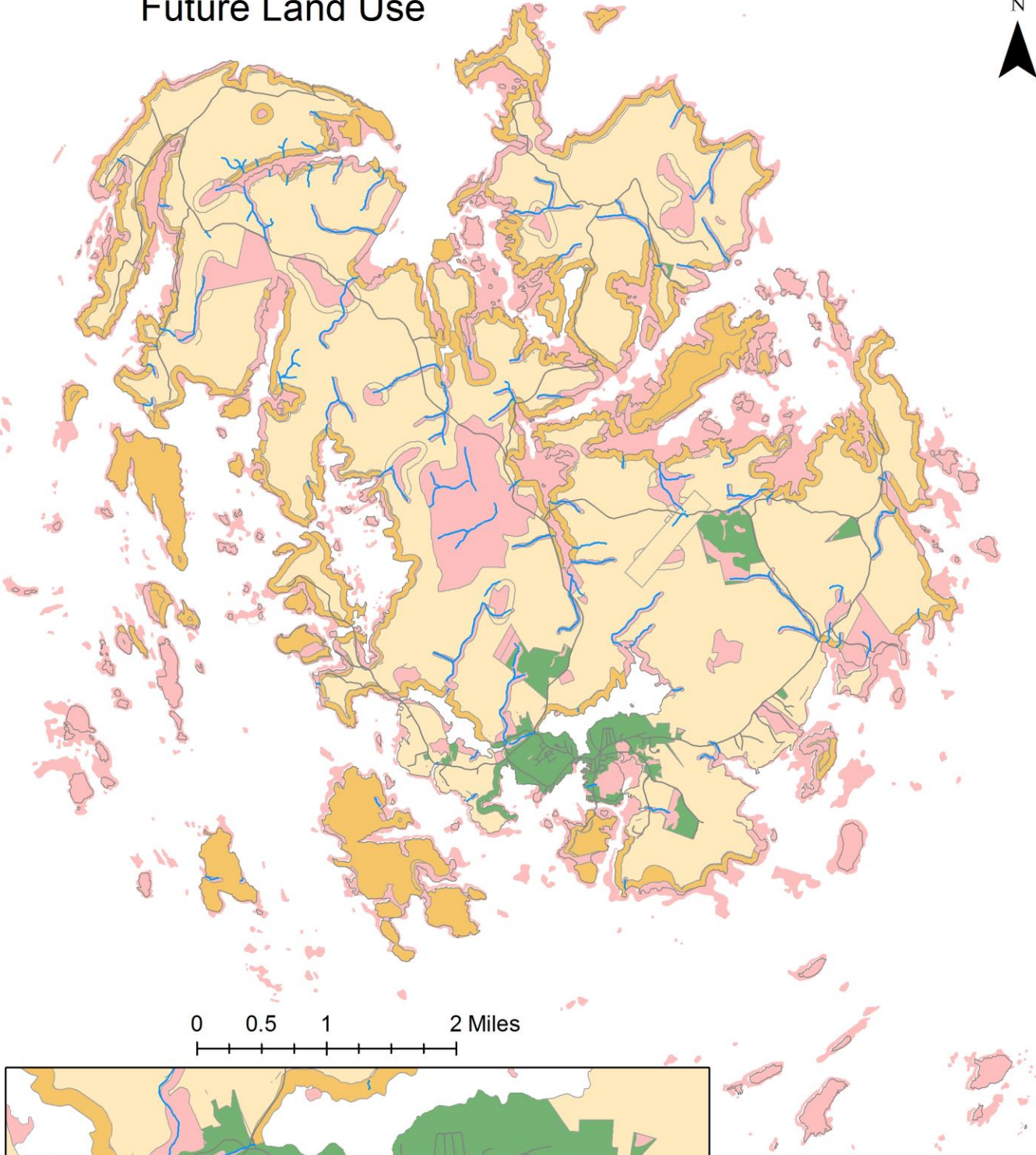
- Work with the local or county historical society and/or the Maine Historic Preservation Commission to assess the need for, and if necessary plan for, a comprehensive community survey of the community's historic and archaeological resources.
- Provide educational materials at appropriate locations regarding aquatic invasive species.
- Designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.
- Through local land use ordinances, require subdivision or non-residential property developers to look for and identify critical natural resources that may be on site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.

- Through local land use ordinances, require the planning board (or other designated review authority) to include as part of the review process, consideration of pertinent Beginning with Habitat maps and information regarding critical natural resources.
- Limit non-residential development in critical rural areas (if the town designates critical rural areas) to natural resource-based businesses and services, nature tourism/outdoor recreation businesses, farmers' markets, and home occupations.
- Include agriculture, commercial forestry operations, and land conservation that supports them in local or regional economic development plans.
- Encourage forest owners to maintain forests in a way that reduces fire hazards.
- Encourage owners of marine businesses and industries to participate in clean marina/boatyard programs.
- Support implement of local and regional harbor and bay management plans.
- Create or continue to support a community affordable/workforce housing committee and/or regional affordable housing coalition.
- Support the efforts of local and regional housing coalitions in addressing affordable and workforce housing needs.
- Create a list of recreation needs or develop a recreation plan to meet current and future needs. Assign a committee or community official to explore ways of addressing the identified needs and/or implementing the policies and strategies outlined in the plan.
- Support pedestrian and bicycle safe options.
- Encourage local sewer and water districts to coordinate planned service extensions with the Future Land Use Plan.

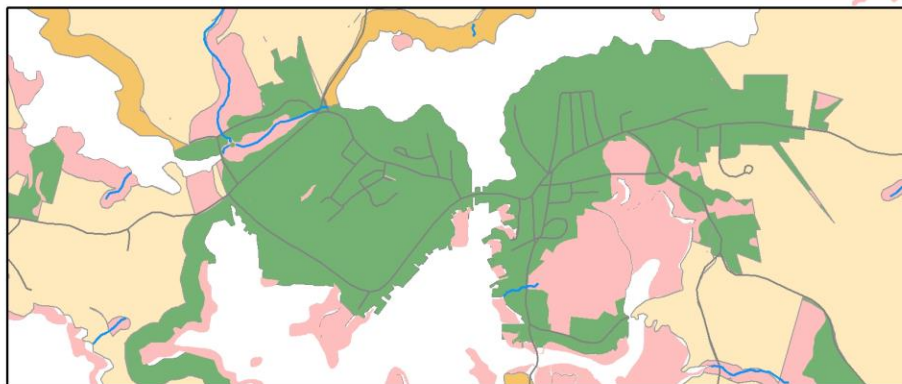
Responsible Parties and Timeframes: The Select Board appoints members to a Planning Commission, who draft ordinances, original or amended, consulting with Town officials, the Planning Board, and the public. The Select Board can revise ordinance amendments and place them on the Town warrant for Town meeting vote by resident voters. The recommendations in this Future Land Use Plan should be drafted and presented to voters within **five years** of the adoption of this plan.

Future Land Use

N



0 0.5 1 2 Miles



- Growth Area
- Rural Area
- Critical Rural Area
- Critical Natural Resources

Policies/Strategies

Historic and Archaeological Resources

Goal: To preserve state and local historic and archaeological resources.

Policies:

1. Protect, to the greatest extent practicable, the significant historic and archaeological resources in the community.

<i>Strategies</i>	<i>Implementation Timeframe</i>	<i>Implementation Strategy</i>
1. For known historic archeological sites and areas sensitive to prehistoric archeology, through local land use ordinances require subdivision or non-residential developers to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.	Current	Land Use Ordinance Section 21: Subdivisions states, "The proposed subdivision will not have an undue adverse effect on the scenic or natural beauty of the area, historic sites, significant wildlife habitat identified by the Dept. of IFW or the municipality or rare and irreplaceable natural areas or any public rights for access to the shoreline."
2. Adopt or amend land use ordinances to require the planning board (or other designated review authority) to incorporate maps and information provided by the Maine Historic Preservation Commission into their review process.	Current	Land Use Ordinance Section 16. D. Archaeological and Historic Sites states, "Any proposed land use activity...listed, or eligible to be listed...shall be submitted to the Maine Historic Preservation Commission for review and comment..."
3. Work with the local or county historical society and/or the Maine Historic Preservation Commission to assess the need for, and if necessary plan for, a comprehensive community survey of the community's historic and archaeological resources.	3 – 6 years	Planning Commission shall encourage and work with the local Historical Society towards completing an inventory.

Water Resources

Goal: To protect the quality and manage the quantity of the State's water resources, including lakes, aquifers, great ponds, estuaries, rivers, and coastal areas.

Policies:

1. To protect current and potential drinking water sources
2. To protect significant surface water resources from pollution and improve water quality where needed.
3. To protect water resources in growth areas while promoting more intensive development in those areas.
4. To minimize pollution discharges through the upgrade of existing public sewer systems and wastewater treatment facilities.
5. To cooperate with neighboring communities and regional/local advocacy groups to protect water resources.

<i>Strategies</i>	<i>Implementation Timeframe</i>	<i>Implementation Strategy</i>
1. Adopt or amend local land use ordinances as applicable to incorporate stormwater runoff performance standards consistent with:		
a. Maine Stormwater Management Law and Maine Stormwater regulations (Title 38 M.R.S.A. §420-D and 06-096 CMR 500 and 502).	Current	Section 16 DD of Local Land Use Ordinances requires minimization of Stormwater runoff pursuant to the aforementioned regulations.
b. Maine Department of Environmental Protection's allocations for allowable levels of phosphorus in lake/pond watersheds.	Current	
c. Maine Pollution Discharge Elimination System Stormwater Program	Current	

2. Consider amending local land use ordinances, as applicable, to incorporate low impact development standards.	Current	Local Land Use Ordinances take into consideration low impact development and will continue to amend the ordinance as deemed necessary by local needs.
3. Where applicable, develop an urban impaired stream watershed management or mitigation plan that will promote continued development or redevelopment without further stream degradation.	N/A	There are no urban impaired streams on Vinalhaven.
4. Maintain, enact, or amend public wellhead and aquifer recharge area protection mechanisms, as necessary.	Current	Section 16 HH of Local Land Use Ordinances prohibits the application of pesticides/herbicides in the Water District Zone and Resource Protection Zone. Other applications/zones also apply. Other protection mechanisms include development restrictions in the shoreland zone, stream protection, and wetland areas.
5. Encourage landowners to protect water quality. Provide local contact information at the municipal office for water quality best management practices from resources such as the Natural Resource Conservation Service, University of Maine Cooperative Extension, Soil and Water Conservation District, Maine Forest Service, and/or Small Woodlot Association of Maine.	Current	Information is available at the Town Office and by request from the Vinalhaven Water District.
6. Adopt water quality protection practices and standards for construction and maintenance of public and private roads and public properties and require their implementation by contractors, owners, and community officials and employees.	Current	Local Land Use Ordinances Section 16.Y. states, "In order to prevent road and driveway surface drainage...roads and driveways shall be designed, constructed, and maintained to empty onto an unscarified buffer strip at least 50 feet.....between the outflow point of the ditch or culvert and the normal high-water line of a body of water...."

		Other provisions under that section include guidelines for ditches and drainage.
7. Participate in local and regional efforts to monitor, protect and, where warranted, improve water quality.	Current	Vinalhaven is an island and does not share water resources, but are willing to participate in regional efforts when applicable.
8. Provide educational materials at appropriate locations regarding aquatic invasive species.	Ongoing	Information may be available at various public locations, including, but not limited to, Town Office, VLT Office, and Library
9. Maintain visibility and number of signs that are posted around the pond along North Haven Road in order to notify the public about protecting the water supply and restricting recreational access.	Current	VWD currently maintains signs, but stresses the importance of maintaining them given the proximity of the road to the drinking supply.
10. Communicate with the local Public Works to establish “best management practices” in the pond watershed along North Haven Road with respect to the management of road drainage and use of commercial products for maintain the road surface and shoulder areas. Develop an emergency response plan to address accidental or illegal spills of chemicals or wastes that may occur as vehicles travel on the road adjacent to the pond.	Current	Vinalhaven Water District has policies in place that help preserve water quality of Round Pond.
11. Encourage well owners to monitor water quality and practice safe drilling methods.	Ongoing	A well monitoring survey/study could be considered island-wide to help identify areas of saltwater intrusion or identify other contaminants that may or may not be present in wells. Provide educational materials at the Town Office or other public buildings about safe distances from septic and shore that may be dependent upon soil types not otherwise determined in the land use ordinance. Advise well owners at the time of drilling about maximum depths advisable to avoid hitting brackish water

		(using the formula cited by Robert Gerber, hydrologist, in 1989: static water level at mean high tide times 40 gives the depth at which brackish water will be found).
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Natural Resources

Goal: To protect the State's other critical natural resources, including without limitation, wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas, and unique natural areas.

Policies:

1. To conserve critical natural resources in the community.
2. To coordinate with neighboring communities and regional and state resource agencies to protect shared critical natural resources.

Strategies	Implementation Timeframe	Implementation Strategy
1. Ensure that land use ordinances are consistent with applicable state law regarding critical natural resources.	Current	Shoreland Zone and Resource Protection are amended as necessary to comply with current state regulations.
2. Designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.	3 – 6 years	Areas designated as Critical Resources Areas would include currently zoned areas such as Stream Protection District, Water District, Resource Protection District, Shoreland Zone, Wetlands, and Coastal Wetlands. These zones already have development restrictions that protect the natural resources.
3. Through local land use ordinances, require subdivision or non-residential property developers to look for and identify critical natural resources that may be on site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.	3 – 6 years	The Planning Commission should seek to amend local ordinances to require subdivision developers to map any critical natural resource (significant wildlife, plant/animal species threatened or endangered, fragile mountain areas, national natural landmarks, freshwater fisheries habitat). Subdivision Ordinance currently states that, “development will not have an adverse effect on scenic, cultural, and natural values, surface water quality, or ground water quality.” There are also provisions to identify on any maps, freshwater wetlands, rivers, streams, or brooks.
4. Through local land use ordinances, require the	3 – 6 years	The Planning Commission should seek to amend the review process to include

planning board (or other designated review authority) to include as part of the review process, consideration of pertinent Beginning with Habitat maps and information regarding critical natural resources.		consideration of Beginning with Habitat maps and other critical natural resources.
5. Initiate and/or participate in interlocal and/or regional planning, management, and/or regulatory efforts around shared critical and important natural resources.	Current	When applicable, the town participates in interlocal and/or regional planning, management and/or regulatory efforts with regards to critical and important natural resources.
6. Pursue public/private partnerships to protect critical and important natural resources such as through purchase of land or easements from willing sellers.	Current	Public Land groups are aware of critical natural resources/areas on the island and work to protect those parcels through easements or land purchase. The town does not actively seek out the purchase or easement of such properties, but promotes the state's Current Use Tax Programs.
7. Distribute or make available information to those living in or near critical or important natural resources about current use tax programs and applicable local, state, or federal regulations.	Current	Information regarding Current Use Tax Programs are available at the Town Office continually.

Agricultural and Forest Resources

Goal: To safeguard the State's agricultural and forest resources from development which threatens those resources.

Policies:

1. To safeguard lands identified as prime farmland or capable of supporting commercial forestry.
2. To support farming and forestry and encourage their economic viability.

Strategies	Implementation Timeframe	Implementation Strategy
1. Consult with the Maine Forest Service district forester when developing any land use regulations pertaining to forest management practices as required by 12 M.R.S.A. §8869.	Current	When applicable, the Planning Commission engages the help of the MFS District Forester.
2. Consult with Soil and Water Conservation District staff when developing any land use regulations pertaining to agricultural management practices.	Current	Shoreland Zone
3. Amend land use ordinances to require commercial or subdivision developments in critical rural areas, if applicable, maintain areas with prime farmland soils as open space to the greatest extent practicable.	3-6 years	The Planning Commission should consider the presence of Prime Farmland Soils, as identified by USGS soil maps, when approving commercial or subdivision development.
4. Limit non-residential development in critical rural areas (if the town designates critical rural areas) to natural resource-based businesses and services, nature tourism/outdoor recreation	3-6 years	The current zoning already places restrictions on development in those zones, but may be amended as needed.

businesses, farmers' markets, and home occupations.		
5. Encourage owners of productive farm and forest land to enroll in the current use taxation programs.	Current	Resources are available at the Town Office, realtor offices, and local land trust.
6. Permit land use activities that support productive agriculture and forestry operations, such as roadside stands, greenhouses, firewood operations, sawmills, log buying yards, and pick-your-own operations.	Current	These operations/activities are supported in RM1, RM2, RM3, and CFMA Districts, so long as they do not employ more than two (2) people.
7. Include agriculture, commercial forestry operations, and land conservation that supports them in local or regional economic development plans.	5-10 years	When applicable, we shall seek to include agriculture, commercial forest, and conservation land in an economic development plan
8. Encourage forest owners to maintain forests in a way that reduces fire hazards.	2 – 10 years	The concern and danger of forest fires is real during certain parts of the year. Encouragement of best practices could include as little as providing information at the Town Office and/or Fire Hall.

Marine Resources

Goal: To protect the State's marine resources industry, ports and harbors from incompatible development and to promote access to the shore for commercial fishermen and the public.

Coastal Policies:

1. To promote the maintenance, development, and revitalization of the State's ports and harbors for fishing, transportation, and recreation;
2. To manage the marine environment and its related resources to preserve and improve the ecological integrity and diversity of marine communities and habitats, to expand our understanding of the productivity of the Gulf of Maine and coastal waters and to enhance the economic value of the State's renewable marine resources;
3. To support shoreline management that gives preference to water-dependent uses over other uses, that promotes public access to the shoreline and that considers the cumulative effects of development on coastal resources;
4. To discourage growth and new development in coastal areas where, because of coastal storms, flooding, landslides or sea-level rise, it is hazardous to human health and safety;
5. To encourage and support cooperative state and municipal management of coastal resources;
6. To protect and manage critical habitat and natural areas of state and national significance and maintain the scenic beauty and character of the coast even in areas where development occurs;
7. To expand the opportunities for outdoor recreation and to encourage appropriate coastal tourist activities and development;
8. To restore and maintain the quality of our fresh, marine and estuarine waters to allow for the broadest possible diversity of public and private uses; and,
9. To restore and maintain coastal air quality to protect the health of citizens and visitors and to protect enjoyment of the natural beauty and maritime characteristics of the Maine coast.

Policies:

1. To protect, maintain, and, where warranted, improve marine habitat and water quality.
2. To foster water-dependent land uses and balance them with other complementary land uses.
3. To maintain and, where warranted, improve harbor management and facilities.
4. To protect, maintain and, where warranted, improve physical and visual public access to the community's marine resources for all appropriate uses including fishing, recreation, and tourism.

Strategies	Implementation Timeframe	Implementation Strategy
1. Identify needs for additional recreational and commercial	Current	Annually review the needs based on the recommendations of the Town Manager and

access (which includes parking, boat launches, docking space, fish piers, and swimming access).		Harbor Master
2. Encourage owners of marine businesses and industries to participate in clean marina/boatyard programs.	On-going	The Harbor Master and Town Office should provide information about clean marina/boatyard programs.
3. Provide information about the Working Waterfront Access Pilot Program and current use taxation program to owners of waterfront land used to provide access to or support the conduct of commercial fishing activities.	Current	Information is continually available at the Town Office.
4. Support implement of local and regional harbor and bay management plans.	5 – 10 years	Vinalhaven follows Shoreland Zoning which seeks to reduce or eliminate coastal pollution. In addition, a Harbor Management Plan regulates activities allowed in Carver's Harbor and Sands Cove. With those, it is believed that it is sufficient to ensure the continued protection of Carver's Harbor. If appropriate, the Board of Selectmen should support the implementation of a harbor/bay management plan.
5. If applicable, provide sufficient funding for and staffing of the harbormaster and/or harbor commission.	Current	Per our Harbor Ordinance, a Harbor Master is employed by the town.
6. Work with local property owners, land trusts, and others to protect major points of physical and visual access to coastal waters, especially along public ways and in public parks.	Current	There are numerous points of visual and physical access that are protected, but should be encouraged to preserve access, particularly to support commercial fishing.

Economy

Goal: Promote an economic climate that increases job opportunities and overall economic well-being.

Policies:

1. To support the type of economic development activity the community desires, reflecting the community's role in the region
2. To make a financial commitment, if necessary, to support desired economic development, including needed public improvements.
3. To coordinate with regional development corporations and surrounding towns as necessary to support desired economic development.

<i>Strategies</i>	<i>Implementation Timeframe</i>	<i>Implementation Strategy</i>
1. If appropriate, assign responsibility and provide financial support for economic development activities to the proper entity (e.g., a local economic development committee, a local representative to a regional economic development organization, the community's economic development director, a regional economic development initiative, or other).	Current	Refer to recommendation of the Budget Committee annually.
2. Enact or amend local ordinances to reflect the desired scale, design, intensity, and location of future economic development.	Current	Beyond the current setbacks and development restrictions, this is currently met per Local Land Use Ordinances; the Planning Board "may require other conditions to fit the facility harmoniously into its neighborhood."
3. If public investments are foreseen to support economic development, identify the mechanisms to be considered to finance	Current	When applicable, mechanisms to fund economic development will be considered by the appropriate personnel.

them (local tax dollars, creating a tax increment financing district, a Community Development Block Grant or other grants, bonding, impact fees, etc.)		
4. Participate in any regional economic development planning efforts.	Current	The Town regularly has a representative on regional boards or supports regional organizations, including Maine State Ferry Board, Island Institute, Mid-Coast Economic Development District, Mid-Coast Regional Planning Commission, but is not limited to supporting those groups.

Housing

Goal: To encourage and promote affordable, decent housing opportunities for all Maine citizens.

Policies:

1. To encourage and promote adequate workforce housing to support the community's and region's economic development.
2. To ensure that land use controls encourage the development of quality affordable housing, including rental housing.
3. To encourage and support the efforts of the regional housing coalitions in addressing affordable and workforce housing needs.

Strategies	Implementation Timeframe	Implementation Strategy
1. Maintain, enact or amend growth area land use regulations to increase density, decrease lot size, setbacks and road widths, or provide incentives such as density bonuses, to encourage the development of affordable/workforce housing.	Current	Village Overlay District – Density Bonus, lot sizes were grandfathered as would have become non-conforming once the ordinances were created.
2. Maintain, enact or amend ordinances to allow the addition of at least one accessory apartment per dwelling unit in growth areas, subject to site suitability.	Current	Accessory structures are allowed given they meet the required setbacks.
3. Create or continue to support a community affordable/workforce housing committee and/or regional affordable housing coalition.	5 – 10 years	As young families and active seniors begin to find housing more of concern, VH should seek to revive a housing committee to ensure VH residents have access to affordable housing.
4. Designate a location(s) in growth areas where mobile home parks are allowed pursuant to 30-A M.R.S.A. §4358(3)(M) and where manufactured housing is	Current	Individual mobile homes are and will continue to be allowed in these districts: RM-1, RM-2, RM-3 and RC. Multi-unit residential structures are allowed in these districts: RM-1, RM-2, and RC. Subsidized housing is allowed town wide. Environmental

allowed pursuant to 30-A M.R.S.A. §4358(2).		constraints and infrastructure limitations of this island community would make the siting of a mobile home park unfeasible."
5. Support the efforts of local and regional housing coalitions in addressing affordable and workforce housing needs.	5-10 years	There are no local housing coalitions at this time as there has been no need, but VH should work with regional groups and/or create a local group if needed.
6. Seek to achieve a level of at least 10% of new residential development built or placed during the next decade be affordable.	Current	Review housing data from MSHA periodically. Continue to support accessory structures and apartment buildings.

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Recreation

Goal: To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters.

Policies:

1. To maintain/upgrade existing recreational facilities as necessary to meet current and future needs.
2. To preserve open space for recreational use as appropriate.
3. To seek to achieve or continue to maintain at least one major point of public access to major water bodies for boating, fishing, and swimming, and work with nearby property owners to address concerns.

<i>Strategies</i>	<i>Implementation Timeframe</i>	<i>Implementation Strategy</i>
1. Create a list of recreation needs or develop a recreation plan to meet current and future needs. Assign a committee or community official to explore ways of addressing the identified needs and/or implementing the policies and strategies outlined in the plan.	3-6 years	Parks Commission shall continue to address recreation needs of town parks.
2. Work with public and private partners to extend and maintain a network of trails for motorized and non-motorized uses. Connect with regional trail systems where possible.	Current	The town maintains trails at various parks around the island and when applicable collaborates with Vinalhaven Land Trust and other public land groups to maintain them. There are no motorized use trails maintained by the town as our current parks do not present viable options.
3. Work with an existing local land trust or other conservation organizations to pursue opportunities to protect important open space or recreational land.	Current	Most of the land that is protected is done through a local land trust, but if/when applicable, the town shall pursue such opportunities to collaborate with the local land trust.
4. Provide educational materials	Current	Materials at the town office and local land

regarding the benefits and protections for landowners allowing public recreational access on their property. At a minimum this will include information on Maine's landowner liability law regarding recreational or harvesting use, Title 14, M.R.S.A. §159-A.		trust provide relevant information.
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Transportation

Goal: To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

Policies:

1. To prioritize community and regional needs associated with safe, efficient, and optimal use of transportation systems.
2. To safely and efficiently preserve or improve the transportation system.
3. To promote public health, protect natural and cultural resources, and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and minimize increases in vehicle miles traveled.
4. To meet the diverse transportation needs of residents (including children, the elderly and disabled) and through travelers by providing a safe, efficient, and adequate transportation network for all types of users (motor vehicles, pedestrians, bicyclists).
5. To promote fiscal prudence by maximizing the efficiency of the state or state-aid highway network.

Strategies	Implementation Timeframe	Implementation Strategy
1. Develop or continue to update a prioritized improvement, maintenance, and repair plan for the community's transportation network.	Current	The Town Manager and Board of Selectmen meet annually to set goals and priorities.
2. Initiate or actively participate in regional and state transportation efforts.	Current	Town representatives serve on regional transportation boards.
3. Maintain, enact or amend local ordinances as appropriate to address or avoid conflicts with:		
a. Policy objectives of the Sensible Transportation Policy Act (23 M.R.S.A. §73);	3 – 6 years; on-going thereafter	Planning Commission should look to make necessary amendments to the local ordinances that reflect these policies and regulations as they look to protect people and the environment from adverse impacts of development.
b. State access management regulations pursuant to 23 M.R.S.A.	3 – 6 years; on-going thereafter	

§704; and		
c. State traffic permitting regulations for large developments pursuant to 23 M.R.S.A. §704-A.	Current	Section 16.D. Subdivision Ordinances
4. Maintain, enact or amend ordinance standards for subdivisions and for public and private roads as appropriate to foster transportation-efficient growth patterns and provide for future street and transit connections.	Current	Section 16.D. Subdivision Ordinances has provisions and guidelines for designing and building public and private roads that foster efficient growth and, where possible, future connections.
5. Provide a safe year-round airstrip.	Current	Continue to use this area as a limited town airport providing essential medical flights and a single-contract private carrier. Continue to prohibit private plane or helicopter use.
6. Support policies as developed by Ferry Tariff Committee.	Current	Advocate for proportional representation on the State Ferry Advisory Committee. Afford residents of Vinalhaven the opportunity for input/approval of any new ferryboat design.
7. Promote pedestrian and bicycle safe options.	On-going	Bike and pedestrian travel is limited primarily to the Downstreet area/Village Overlay District. Where applicable, we shall seek local approval and grant funding for creating multi-use, walking, and bicycling paths in important, high frequency areas of the island.
8. Preserve historic quality on the island.	Current	Transportation projects and improvements in historically sensitive areas, like the village, should be designed in a context sensitive manner preserving the historic qualities of the area.

Public Facilities and Services

Goal: To plan for, finance, and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

Policies:

1. To efficiently meet identified public facility and service needs.
2. To provide public facilities and services in a manner that promotes and supports growth and development in identified growth areas.

<i>Strategies</i>	<i>Implementation Timeframe</i>	<i>Implementation Strategy</i>
1. Identify any capital improvements needed to maintain or upgrade public services to accommodate the community's anticipated growth and changing demographics.	Current	The Town Manager and Board of Selectmen meet annually to set goals and priorities.
2. Locate new public facilities comprising at least 75% of new municipal growth-related capital investments in designated growth areas.	Current	The majority of the town's facilities are located within the Village Overlay District.
3. Encourage local sewer and water districts to coordinate planned service extensions with the Future Land Use Plan.	On-going	Whenever possible, the town shall attempt to coordinate capital projects with sewer and water. Otherwise, the Village Overlay District currently outlines the boundaries of the two service districts.
4. If public water supply expansion is anticipated, identify and protect suitable sources?	N/A	Expansion of the public water supply is not anticipated as the current supply is operating under the maximum allowed capacity and the land around the current supply mostly protected from development.
5. Explore options for regional delivery of local services.	Current	To the extent that this applies, the town attempts to coordinate delivery of local services.

Fiscal Capacity

Goal: To plan for, finance, and develop an efficient system for public facilities and services to accommodate anticipated growth and economic development

Policies:

1. To finance existing and future facilities and services in a cost effective manner.
2. To explore grants available to assist in the funding of capital investments within the community.
3. To reduce Maine's tax burden by staying within LD 1 spending limitations.

<i>Strategies</i>	<i>Implementation Timeframe</i>	<i>Implementation Strategy</i>
1. Explore opportunities to work with neighboring communities to plan for and finance shared or adjacent capital investments to increase cost savings and efficiencies.	Current	While Vinalhaven is an island community, the ability to share capital investment costs are always sought and welcome.

Capital Investment Plan

Vinalhaven Capital Investment Plan Summary 2013-2025					
Comprehensive Plan Chapter/Town Dept.	Anticipated Item and (Need)	Estimated Cost*	Priority	Responsible Party (ies)	Possible Funding Sources
Public Facilities & Services	Public Works Garage	\$75,000-300,000	A	The Board of Selectmen approve the spending for all Capital Projects prior to town votes, therefore, we expect the Selectmen to be responsible for these projects and funds.	A combination of any or all of the following: Local Funding or Private, State, and/or Federal Grants
	Transfer Station/Dump	\$10,000-50,000	C		
	Historical Society	\$30,000-75,000	C		
	Brown's Head Lighthouse	\$50,000-75,000	C		
Transportation	Carrying Place Bridge		A		
	Lane's Island Bridge		B		
	Road Paving	\$500,000-2,000,000	B		
	Sidewalks	\$100,000-400,000	C		
Marine Resources	Public Boat Launches and Floats	\$5,000-20,000	B		
Vehicles	Fire Truck(s)	\$200,000-450,000	A		
	Utility Jeep	\$18,000-35,000	A		
	Police Cruiser	\$18,000-35,000	A		

Source: Town

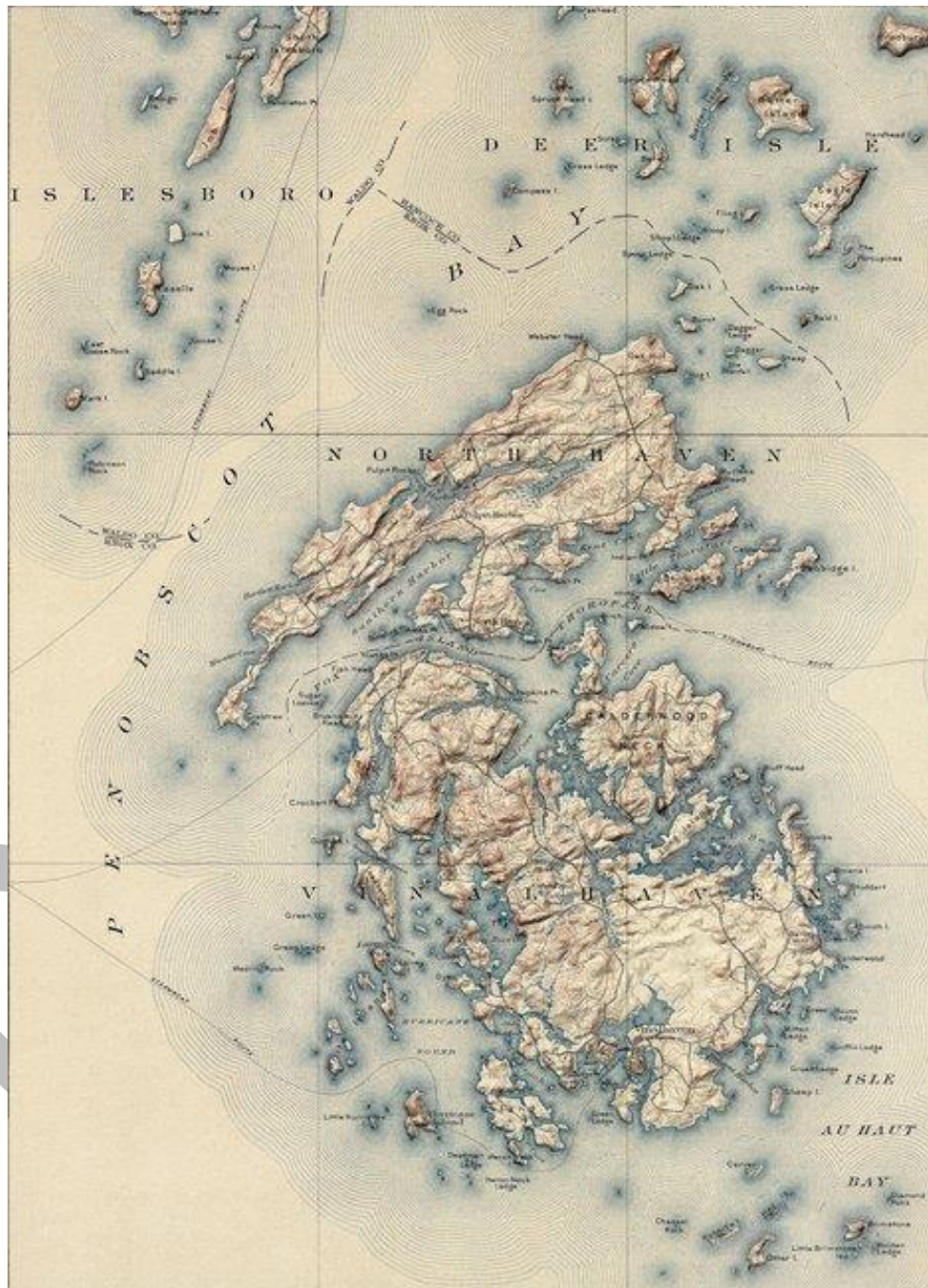
**These estimates are not exact or from construction companies and not approved to be spent. These projects are all based on an evaluation of the current state of said facilities. Funding is not determined and projects may be completed during the life of the plan*

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Vinalhaven's Comprehensive Plan

Resource Analysis, Conditions, and Trends



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Historic and Archaeological Resources

Introduction

Vinalhaven is an island rich in natural and cultural history. The island was incorporated in 1789 and is still home to heirs of the families living here at that time. There are 10 Buildings/Places on the National Historic Register and over 80 historic and pre-historic sites on the island. At its peak, Vinalhaven was home to over 3,000 people, many of whom worked in the granite quarrying industry. Vinalhaven granite can be found in buildings, monuments, and roads all over the world. Today, the Vinalhaven Historical Society actively seeks to preserve the islands history for all to remember.

State and Local Goal(s)

To preserve state and local historic and archaeological resources.

Analyses

1) Are historic patterns of settlement still evident in the community?

Yes. As you might expect, many towns were developed and built around major transportation routes and/or centers (water features, roads, trains, etc...). In many cases, historic development patterns shed light on when a town formed. For example, land-locked communities along major rivers may have settled in a central location along the river as that was the main import/export method, whereas Rocky Mountain and Mid-West Plains communities are likely to be found near, past or present, roads/railroads/rivers.

For Vinalhaven, Maine, the community saw early, and extensive, development along the southern coves and harbors. Today, Carver's Harbor is without a doubt the most developed stretch of the island followed closely by Old Harbor and the Thoroughfare. These harbors served as the main points of import/export and today, Carver's Harbor is the location of the majority of the island's marine resource activity and the island's State Ferry terminal.

As the community grew, it spread further north, toward the Fox Islands Thoroughfare and Calderwoods Neck. Today's most densely developed areas still remain along Carver's Harbor with less dense

“neighborhoods” as you get further away from “Downstreet”.

- 2) What protective measures currently exist for historic and archaeological resources and are they effective?

Local ordinances do have protective measures for historic and archaeological resources. Section 16 D of the Land Use Ordinance states, “Any proposed land use activity involving structural development or soil disturbance on or adjacent to sites listed on, or eligible to be listed on the National Register of Historic Places, or having historical importance as determined by the Planning Board, shall be submitted by the applicant to the Maine Historic Preservation Commission for review and comment, at least twenty (20) days prior to action being taken by the Planning Board. The Planning Board shall consider comments received from the Commission prior to rendering a decision on the application.”

In addition, protection is given to historic resources that are listed under state and national regulations as they apply to the respective registries. Refer to the table on the following pages of this chapter for a detailed list of historic and archaeological resources.

- 3) Do local site plan and/or subdivision regulations require applicants proposing development in areas that may contain historic or archaeological resources to conduct a survey for such resources?

While the local zoning ordinance is sensitive to the cultural and natural resources, it does not require an historic or archaeological survey to be conducted for the proposed development of subdivisions. As stated in the ordinance, “The proposed subdivision will not have an undue adverse effect on the scenic or natural beauty of the area, historic sites, significant wildlife habitat identified by the Department of Inland fisheries and Wildlife or the municipality or rare and irreplaceable natural areas or any public rights for access to the shoreline” (Section 21: II: H. Scenic, Cultural and Natural Values). To a further extent, “The Planning Board may require that the proposed subdivision include a landscape plan that will show how scenic, historic or environmentally sensitive areas will be preserved” (Section 21:V:B.1.).

- 4) Have significant historic resources fallen into disrepair, and are there ways the community can provide incentives to preserve their value as an historical resource?

Vinalhaven has seen many changes over the last 100 years, most notably changes in quarrying and maritime activity. Carver's Harbor transformed as white fish declined and rarely are granite blocks seen moving around town. Most recently, the Downstreet Market and the Fire Hall that houses 'Old Rueben' were a focus of Main Street revitalization efforts. In February of 2012, the Board of Selectmen, upon request, founded the Main Street Historic Committee. This community group brings together numerous resources and a drive to conserve the Main Street character that many people wish to see. The group will serve as a guide to the town, present restoration recommendations, and assist in the restoration process.

Condition and Trends

- 1) An outline of the community's history, including a brief description of historic settlement patterns and events contributing to the development and character of the community and its surroundings.

The historic built environment on Vinalhaven includes nearly 100 sites that reflect Vinalhaven's maritime, farming, granite quarrying, social/fraternal, educational, and religious heritage, the historic role of tourism, and other 'Downstreet' commercial enterprise. In its separate parts and as a whole, like faces and voices of family and friends, the manmade environment forms one's sense of self and place.

The Red Paint people came to Vinalhaven 3,800-5,000 years ago to harvest the area's abundant shell and fin fish. Shell middens, stone tools, and skeletal animal remains indicate their presence and that of the Abenaki and other Indians who visited the island in the 17th century. Archaeological investigation of Vinalhaven and many of the outlying islands has been ongoing by the Maine Historic Preservation Commission and the Maine State Museum since the 1970's. Sites on Crockett Cove, at Perry Creek (site of an Indian quarry), Long Cove, Leadbetter Narrows, Calderwood Point, Coombs' Neck, and Seal Bay have been extensively examined. Because these sites are along the shoreline, they are subject to erosion but are otherwise protected to a degree as a result of being within the Shoreland Zone where little development is allowed. Still, we are in danger of losing these rich and diverse archaeological resources as our shoreline recedes and the sea slowly rises.

European explorers are known to have visited these waters in the 1500's, and in 1603 the English Captain Martin Pring is said to have sighted and named Vinalhaven and North Haven 'The Fox Islands.' Permanent settlement did not take place, however, until after the cessation of the French and Indian Wars in 1763. Thaddeus Carver arrived from Marshfield, Massachusetts in 1766 and ten years later purchased 700 acres from Francis Cogswell who operated a sawmill on the southern shore of the South Island (Vinalhaven) in the area later known as Carver's Harbor. Cogswell came from Ipswich, Massachusetts, possibly as early as 1760 and was a temporary resident utilizing his sawmill (Mill Race) in the spring and summer. Little physical documentation exists of the early Euro-American settlement period (1750-1800) other than what is reflected in cemeteries.

After the Revolutionary War, the population grew and in 1785 there were at least 75 settlers on Vinalhaven and North Haven and surrounding islands. Represented by a Bostonian, John Vinal, Esq., the residents (Arey, Carver, Calderwood, Coombs, Dyer, Ginn, Green, Hopkins, Lane, Leadbetter, Norton, Philbrook, Pierce, Roberts, Smith, and Vinal) that year petitioned the General Court of Massachusetts 'to relinquish any claims that this Commonwealth may have to said islands, to all inhabitants and their Heirs and Assigns forever...' The following year, following a survey by Rufus Putnam, the General Court resolved to grant the settlers title to the land. On June 25, 1789, Vinalhaven became an incorporated town. By 1800, 860 people were living in the area and after the war of 1812 the region finally experienced a long respite from concerns of war.

The earliest economies on Vinalhaven were fishing and farming. Fishermen harvested close to home supported by boat builders and suppliers. In the 1800's and into the mid 1900's Vinalhaven's large fleet of fishing vessels sometimes returned with catches of 10,000 pounds or more. The island supplied seafood markets in Portland, Boston, and New York with salted and dried fish and later exported herring and lobster, canned fish, cut and packed fresh fin fish, and fish glue. More recently fresh Vinalhaven lobster has been an economic mainstay supplemented by scallops, crab, sea urchins, and to a lesser degree as the season is curtailed, shrimp and halibut. In 1903 the Island boasted the largest fish curing plant (Lane-Libby) in Maine and later, the first cold storage plant in the States. Now, as the 21st century unfolds, with the fin fish supply severely depleted, Vinalhaven is home port to one of the most profitable, if not the largest lobster fishing fleet in the world, supporting a healthy fishing economy in which half of our year-round residents still have livelihoods connected to the sea. Many fishermen still

work out of old fish houses and from old wharves; others have built new structures and there is much adaptive use.

Throughout the 19th century, farming, which provided grains, feed, and fresh produce, was very important for Vinalhaven islanders. Farming sometimes supplemented fishing income, and vice versa; for others it was the sole family support. These were 'farms' ranging in size from 30-300 acres, usually with working oxen, milk cows, sheep (as many as 80), poultry (as many as 50), and sometimes a pig. Early crops included barley, corn, Irish potatoes, and hay, and the farms produced eggs as well as butter and cheese. Most acreage was dedicated to harvested crops and meadow, an orchard and vegetable gardens, and the balance in woodland (for cordwood). The Island farms remaining in the 20th century concentrated on dairy production, but with the advent of stricter pasteurization requirements in the 1950's, farming here went fallow, as evidenced now by orchard remains, shoreline capes, and some remaining barns. Of over 80 Island farms, nearly half of the houses still stand, most being low and high posted clapboarded timber-framed capes, often with two or three intact fireplaces; some including the large hearth and bake oven. Few of their outbuildings are standing.

Not far beneath our fragile and thin soils was quarryable-grade granite and its extraction from Vinalhaven and Hurricane islands overshadowed all other Island economies in the last third of the 19th century. The granite industry's wealth provided the basis for a diverse and strong commercial district well into the 20th century. When coupled with active fishing and farming, the granite industry provided a setting in which social and educational institutions grew, reflecting the needs and interests of a large year-round population of 2,855 residents in 1880. Excepting a very early Indian quarrying project, serious granite extraction began in 1826, with smaller scale operations being overtaken by larger ones, Bodwell Granite being the largest. For over 100 years Vinalhaven granite made the Island one of Maine's largest quarrying centers. Men arrived to work from other states, from the British Isles, from Italy (as carvers), and later, from Scandinavia, to quarry, cut, polish and shape the stone. Granite left Vinalhaven on sloops, schooners, and barges for ports as far away as New Orleans. The first large federal contracts began prior to the Civil War and continued into the early 20th century. Among the many projects built with area granite were the base of the Brooklyn Bridge; the New York Custom House (now the Museum of the American Indian); post offices in Brooklyn, Washington, Buffalo, Cincinnati, St. Louis, and Kansas City; the Washington Monument and federal office buildings in the Capital; the Pennsylvania Railroad Station (in Philadelphia); the columns for the nave of the Cathedral of St. John the

Divine in New York City; as well as private mansions, monuments, bridges, dams and thousands of tons of paving blocks for the streets of Portland, Boston, New York, Newark, and Philadelphia. With the advent of structural steel, concrete, and asphalt as the building materials of choice, the Bodwell closed in 1919 and the paving block businesses in the 1930's.

- 2) An inventory of the location, condition, and use of any historical or archaeological resource that is of local importance.

Location/Building	Condition	Current Use (2012)
Vinalhaven Galamander, Bandstand Park	Galamander roof replaced 2012	Town park, small concerts, historic display
Star of Hope Lodge, Main Street	Fair condition, exterior repairs needed	Residency
Browns Head Light Station	Repairs made to lighthouse in 2012	Residency
Union Church of Vinalhaven, East Main Street	Good, regularly maintained	Community space and church
Heron Neck Light Station	Excellent	Lighthouse
Saddleback Ledge Light Station	Good, regularly maintained USCG	Lighthouse
Vinalhaven Public Library, Carver Street	Great condition	Library and community space
Murch Family House, Calderwood Neck	Good, regularly maintained	Seasonal residence
Moses Webster House, Atlantic Avenue	Good condition	Bed and Breakfast/Inn
Pleasant River Grange No. 492, Round Island Road	Fair condition	Limited community use

In addition to these locations/buildings, the island also has many historic/archaeological resources relating to maritime, quarrying, and other various traditions.

- Maritime - Many of the working marine buildings from the past, even from the first third of the 20th century, are no longer standing, but there is evidence of this constant and evolving industry on Vinalhaven. Most of the older extant maritime buildings have undergone changes of

ownership and sometimes of use. One of the main wharves is now a series of shops and the sail loft is an artist's studio. An exception, with its exterior well-maintained and original use intact, is the Hopkins Boatyard. Ever changing, maritime buildings are continually being built, but now they reflect not boat building or fin fishing but rather the lobstering industry. A significant percentage of the built environment on Vinalhaven is maritime buildings, both old and new. There is no protection for any of these buildings other than the simple truth that while they have use and the industry is an economically viable one, they will likely be maintained. Were that not the case they, like the barns of our farming era, would become a thing of the past.

- Farming - The nearly 40 extant farmsteads from 1800-1860 are primarily out of town and are concentrated on the easterly side of Crockett's Cove, by Mill River, on Calderwood's Neck, around Seal Bay, and on Coombs' and Arey's Necks. Most have kept the integrity of their exteriors and some have not been severely altered inside but only a handful share the landscape with their original barns and outbuildings. Except for the Pleasant River Grange, which is on the National Register of Historic Places, none of these sites is afforded any protection.
- Granite Quarrying - During the time that granite quarrying was the dominant industry, the quarry whistles dictated Vinalhaven's rhythm of life six days a week. The ethnicity of island inhabitants was diverse with Finns, Swedes, Norwegians, and Scots, many staying on past the demise of the industry in the 20th century. Boarding houses were built to accommodate the resultant population boom of the late 19th century, and the second floors of many private residences were converted to take in boarders. Now only a few telltale exterior stairways and a small, privately owned quarry/cutting operation are still in evidence.

Vinalhaven's only railroads existed during this period. One connected the East Boston Quarry to the main harbor, its locomotive still intact as late as 1948; the other provided transportation between Booth Quarry and Roberts Harbor. While much quarry machinery and wire rope has since been removed, the past quarry operations are evident everywhere on Vinalhaven. Often filled with spring water, a few, Lawson's and Booth's for example, are now favorite swimming spots. Grout piles and discarded projects abound and there remain a significant number of extant paymaster's offices, rows of company houses as well as many of the commercial buildings and social halls that grew and thrived when the granite industry was at its height from the 1880's to the early 1900's. Gone, though, are the carving sheds, the

blacksmiths' shops, the machinery, and the pervasive noise and dust. Quarry sites are protected by their immutable nature, and the Galamander by its National Register designation, but the company houses have no protection and most are unaware of their significance.

- Social/Fraternal - Several large buildings, which existed when Vinalhaven's population peaked around 1880, such as the Knights of Pythias Hall, the Independent Order of Odd Fellows' Lodge, and the Moose Hall, are either restored or are being restored, but only the Odd Fellows Lodge (Star of Hope) is protected by its National Register designation. Another building, the 1888 Engine House and Fire Hall, is maintained by the town. Two of the largest three-story buildings with social affiliation, the GAR Memorial Hall (1895) and the former Masonic Hall/Bodwell Granite Company Building (1879) are no longer standing due to fire in one instance and a demolition in the other.
- Educational - None of the one-room schools are in operation although two have been adapted as private residences. The 'White' and 'Washington' schools are standing, the former in private hands and the latter owned by the town and now serve as the municipal offices. Since there are so few of the original schools left, the two remaining become even more significant. The Carnegie Library is one of the few buildings on the Island to be built with Bodwell Company's local (the gray) and Jonesboro (the pink) granite and is on the National Register. In 2007, the library celebrated its centennial by building addition to meet the needs of the community.
- Religious - Three places of worship are currently in use. Most notably, the Union Church, designed by nationally-known architect John Calvin Stevens (dedicated in 1899) is the second building on the site; the first (built in 1860) burned in 1899. The Pleasant River Chapel, designed by architect Holmes Stockly, was built in 1991. Its congregation, the Community of Christ, had earlier worshipped as the Reorganized Church of Latter Day Saints in the former Atlantic Avenue home of Edward Walker, an official of the Bodwell granite Company. The Second Advents' Chapel, built in 1887, was actively used as a place of worship and then, like many Vinalhaven buildings, became something else to meet new needs, in this case, the Boy Scout Hall. Now restored, it is the archives center for the Vinalhaven Historical Society. A room in the present Masonic Hall was provided for and furnished as a Christian Scientist Meeting Hall in the early

twentieth century. Additionally, an area known as Zion, by Fox Rocks, was the site of a religious fervor in 1838 when Mormon Missionaries convinced five local families to go west

- Tourism - Old grand hotels and large boarding houses like The Central Hotel, Harbor House, The Granite Hotel, and The Islander are gone although Bridgeside Inn, The Rockaway, and the Down Easter (formerly Ocean View) exist as private homes. More recently, a few private homes have been converted to bed and breakfast inns. Summer homes built near the Thoroughfare by the Rusticators are important testimony to an architectural style and time (1886-1929) and have been researched as a group by Roger G. Reed in *Summering on the Thoroughfare/The Architecture of North Haven, 1885-1945*. Some of these large 'cottages,' like the Hopkins-Daland Cottage, incorporated early farmhouses or saw them razed to make way for these grander structures. None of the buildings that thrived on tourism or seasonal residents is protected (except the Payne Homestead, which is on the National Historic Register) and, like the schools and neighborhood 'convenience' stores such as Oakes', Allen's, Brown's, and Shields', a great many have been lost over time.
- Commercial - The 'Downstreet' commercial district, as well as some outlying former small stores, present a streetscape that many take for granted because much of it has 'always been there.' But, looking in Vinalhaven Island at old photographs from 1900-1930, it quickly becomes apparent how much is not there as well. Of the buildings presently 'Downstreet,' a significant number are older buildings and most are maintained. Many of them have undergone a series of adaptive uses such as the present 'Mill Race' which had been an old bowling alley before becoming a series of restaurants, or the blacksmith shop that became a movie theatre and is now a motel. None of these buildings have any protection, yet most would benefit from the tax incentives offered by being in a National Historic Register district. A few buildings from the 1970's are distinctively different and little has been done to impress upon us all the degree to which proportion and scale, proximity to the street, and materials can make new structures compatible with old.

MAINE HISTORIC PRESERVATION COMMISSION

Inventory Data for Municipal Growth Management Plans

Resource: ☒ Prehistoric Archaeological Sites: Arthur Spiess
 ☐ Historic Archaeological Sites: Leith Smith
 ☐ Historic Buildings/Structures/Objects: Kirk Mohny

Municipality: **VINALHAVEN.**

Inventory data as of **April 4, 2012** :

There are 82 prehistoric archaeological sites known in the township of Vinalhaven.

Various professional archaeological surveys have been completed (shown in yellow on the accompanying map)

Needs for further survey, inventory, and analysis:

**Known Archaeological Sites and
Areas Sensitive for
Prehistoric Archaeology* in
Vinalhaven**
information provided by
Maine Historic Preservation Commission
March 2012

*dated material subject to future revision
map 1/1



Areas sensitive for
prehistoric archaeology



1/2 k square intersecting a known
prehistoric archaeological site.



1/2 k square intersecting a known
historic archaeological site with
a good estimated location.

0 0.5 1 2 3 4 5
Kilometers



MAINE HISTORIC PRESERVATION COMMISSION

Inventory Data for Municipal Growth Management Plans

Resource: __ Prehistoric Archaeological Sites: Arthur Spiess
 X Historic Archaeological Sites: Leith Smith
 ___ Historic Buildings/Structures/Objects: Kirk Mohney

Municipality: Vinalhaven

Inventory data as of March, 2012

To date, 33 historic archaeological sites are documented for the town:

Site Name	Site #	Site Type	Periods of Significance
Tillison Granite Works	ME 449-001	quarry, granite	1870 - c.1920
Royal Tar	ME 449-002	wreck, steamer	Sunk October 1836
Ella Rose	ME 449-003	wreck, schooner	1857 to 1907
Cumberland	ME 449-004	wreck, screw	17-Mar-17
Castine	ME 449-005	wreck, screw	8-Jun-35
Joe	ME 449-006	wreck, schooner	12-Aug-05
Helen B. Crosby	ME 449-007	wreck, schooner	11-Oct-06
Emma	ME 449-008	wreck, schooner	24-Jan-40
Barge 767	ME 449-009	wreck, barge	1918
Bertha E. Glover	ME 449-010	wreck, vessel	1898
Flora Condon	ME 449-011	wreck, vessel	1907
Rebecca Douglass	ME 449-012	wreck, vessel	1907
Ella Eudora	ME 449-013	wreck, schooner	Apr-40
Louisa Nason	ME 449-014	wreck, schooner	November 1860
Clara M. Gross	ME 449-015	wreck, sloop	1890-1914
Betty B.	ME 449-016	wreck, oil screw	1942-1971
Maid of All Work	ME 449-017	wreck, gas screw	1936-1946
Joyce Rebecca	ME 449-018	wreck, gas screw	1837 to 1936

Henrietta	ME 449-019	wreck, schooner	1869
Good Intent	ME 449-020	wreck, schooner	1813 to 1909
Greyhound	ME 449-021	wreck, schooner	1869
Mary A. Downs	ME 449-022	wreck, gas screw	1868 to 1911
Rising Billow	ME 449-023	wreck, gas screw	1867 to 1913
Presto	ME 449-024	wreck, schooner	1857
Conquest	ME 449-025	wreck, schooner	1856
Georgia	ME 449-026	wreck, schooner	Lost on Triangle Ledge, 1/14, 1875.
Abbie A. Morton	ME 449-027	wreck, sloop	1899 to July 31, 1911
Bluebird	ME 449-028	wreck, schooner	1869
Leora M. Thurlow	ME 449-029	wreck, schooner	1898
James A. Brown	ME 449-030	wreck, schooner	1898
Anne McVicar	ME 449-031	wreck, schooner	Wrecked Brown's Island, 5/14, 1882.
Thomas H. Lawrence	ME 449-032	wreck, vessel	1939
Post Boy	ME 449-033	wreck, unidentified	Unknown

Needs for further survey, inventory, and analysis:

No professional surveys for historic archaeological sites have been conducted to date in Vinalhaven.

Future archaeological survey should focus on the identification of potentially significant resources associated with the town's maritime, agricultural, residential, and industrial heritage, particularly those associated with the earliest Euro-American settlement of the town in the 18th and 19th centuries.

MAINE HISTORIC PRESERVATION COMMISSION

Inventory Data for Municipal Growth Management Plans

Resource: ___ Prehistoric Archaeological Sites: Arthur Spiess
 ___ Historic Archaeological Sites: Leith Smith
 X Historic Buildings/Structures/Objects: Kirk Mohnney

Municipality: Vinalhaven

Inventory data as of March, 2012 :

Vinalhaven Galamander, Bandstand Park
Star of Hope Lodge, Main Street
Browns Head Light Station
Union Church of Vinalhaven, East Main Street
Heron Neck Light Station
Saddleback Ledge Light Station
Vinalhaven Public Library, Carver Street
Murch Family House, Calderwood Neck
Moses Webster House, Atlantic Avenue
Pleasant River Grange No. 492, Round Island Road

The above-named properties are currently listed in the National Register of Historic Places.

Needs for further survey, inventory, and analysis:

A comprehensive survey of Vinalhaven's historic above-ground resources needs to be conducted in order to identify other properties that may be eligible for nomination to the National Register of Historic Places.

- 3) A brief description of threats to local historic resource and to those of state and national significance as identified by the Maine Historic Preservation Commission.

Ownership and development are general threats for any resource. Often the waterfront properties of significant cultural value are too costly for non-profit groups or municipalities to secure financially. The threats to Vinalhaven's historic and cultural resources are no different. There are ten historic buildings from 1835-1900 on the National Register of Historic Places, but most are not protected in any way.

Other buildings may qualify for the National Register, but there is no concerted effort to help people understand the importance of these buildings and the need to maintain architectural inheritance and integrity. Some commercial buildings of great historic significance have been demolished; the Memorial Hall, brought down in the early 1970's, and others have been lost to fire.

In addition to the buildings listed on the National Historic Register, there are many local buildings that are of important architectural record that remain in existence with exteriors fairly well intact. The future of this large architectural record has always been at risk from fire and benign neglect, but now, severe development pressure threatens, particularly out of town, where farmsteads near the shore can be razed to build something grander.

Timeline

3000 BC	1500s	1600s	1603	1750s	1789	1807
Red Paint People	European explorers in area	Abenaki Indians use maritime resources	Martin Pring names the Fox Islands	early settlement sawmills/homes	Town of Vinalhaven incorporated	84 - 0 vote against SEP from MA
1816	1832	1846	1847	1849	1851	1867-1892
<i>Royal Tar</i> burns off Coombs Neck	Brown's Head lighthouse built	North Island becomes North Haven	net factory built	bridge over Carver's millstream	Moses Webster starts granite operation	<i>The Pioneer</i> , first steamboat to serve Island
1871-1910	1880	1884-1885	1888	1900	1903	1906
Bodwell Granite, largest employer	Census, population peaks at 2,855	<i>The Wind</i> ; Star of Hope Lodge,	volunteer fire company organizes	(new) Union Church	Lane-Libby Fish Plant, largest in ME	Carnegie Library opens
1908	1910	1914	1937	1943-1959	1945	1960
Pleasant River Grange established	VH Water Company constructs public water system	first town electricity power plant built	East Boston quarry closed, last major granite operation	<i>Vinalhaven II</i> , town commissioned ferry	ICMC established, Dr. Ralph Earle	<i>Everitt Libby</i> , first boat under Maine State Ferry System
1967-1968	1971	1974	1977	1982	1988	1989
Historical Society's museum in old town hall; Lane's Isl	State of Maine Shoreland Zoning mandated	Local Land Use Ordinance passed	Submarine power cable laid across Penobscot Bay	first town manager, Robert Littlefield	First Comprehensive Plan adopted	Vinalhaven Bicentennial
1992	1996	2003	2004	2005	2009	2012
Air strip becomes municipally owned	Transfer station opens in same location as old town dump	First Salaried Fire Chief	Wastewater Treatment Facility/Public Sewer (in VOD)	911 Services started; FIEC installs new submarine cable	Fox Island Wind Project completed (3) 1.5 MW turbines	Capt. Frank E. Thompson commissioned by MSFS

Survey Results

Historic and Archaeological Resources	Yes	No	Unsure
Do you favor preserving historic sites and town landmarks?	97%	1%	3%
Do you favor protecting archeological resources by limiting development?	69%	10%	21%
Would you like to continue maintaining (clean up, fix, preserve) cemeteries?	93%	1%	6%
Do you favor maintaining town parks and quarries?	99%	1%	0%
Should we adopt a Historic Building Code/Ordinance?	72%	14%	15%

Issues of Public Concern

Residents have expressed concern for the loss of some buildings that contributed to their historic Downstreet character. Over the past 20 years, the Downstreet area has seen numerous building transformations; some were remodels, others were restorations, and a couple were seen as a loss of an important piece of history. Other concerns are for the recognition and preservation of historic and archeological sites around the island, of local or national significance.

Water Resources

Introduction

Vinalhaven's public water supply is provided by the Vinalhaven Water District, a quasi-municipal corporation formed by legislative charter in 1978, and serves approximately 350 customers. The water supply is sourced from Round Pond (14 acres) while Folly Pond serves as a reserve should the levels in Round Pond become too low. There are 86 ponds and quarries on the island with an average size of 0.6 acres and there are over 4,000 acres of wetlands (coastal and freshwater).

State and Local Goal(s)

To protect the quality and manage the quantity of the State's water resources, including lakes, aquifers, great ponds, estuaries, rivers, and coastal areas.

Analyses

1. Are there point sources (direct discharges) of pollution in the community? If so, is the community taking steps to eliminate them?

Over the last ten years, the town has worked to eliminate overboard discharges. As of December 2011, there is a Licensed Wastewater Outfall for the town's Wastewater Treatment Facility and 12 licensed overboard discharges. License renewals are permitted at the state level and the town encourages their elimination. The Town's LPI works with landowners to eliminate known straight-pipes and reduce shoreline pollution.

2. Are there non-point sources of pollution? If so, is the community taking steps to eliminate them?

Like most towns, there are non-point source pollutants. Sources such as run-off and snowmelt collect pollutants and sediment from roadways, parking lots and yards. Historically, farming on the island has also been a source of non-point source pollution. Run-off carrying fertilizers and animal waste affect water quality greatly and has been reduced in the past few years. Maine Department of Marine Resources monitors shoreline quality for shellfish harvest and has had to close many of the coves and mudflats due to pollution (See Habitat and Marine Resources Map in Appendix). Over those last few

years, DMR has re-opened or re-designated closed mudflats to Restricted, which allows for commercial shellfish harvest following a cleansing process, either “relayed or depurated”.

While farming is not as productive as it was in the mid-20th century, precautions must always be taken along streams, ponds, wetlands, and other bodies of water. Maintaining a strong vegetative buffer is one of the best defenses to water quality as it allows the pollutants to filter through the soils. The town enforces the shoreline zone requirements to limit the potential impacts humans may have along the coastal shorelines. The Water District and Vinalhaven Land Trust utilize their Board, staff, and volunteers to periodically assess activity within the Round Pond and Folly Pond watershed.

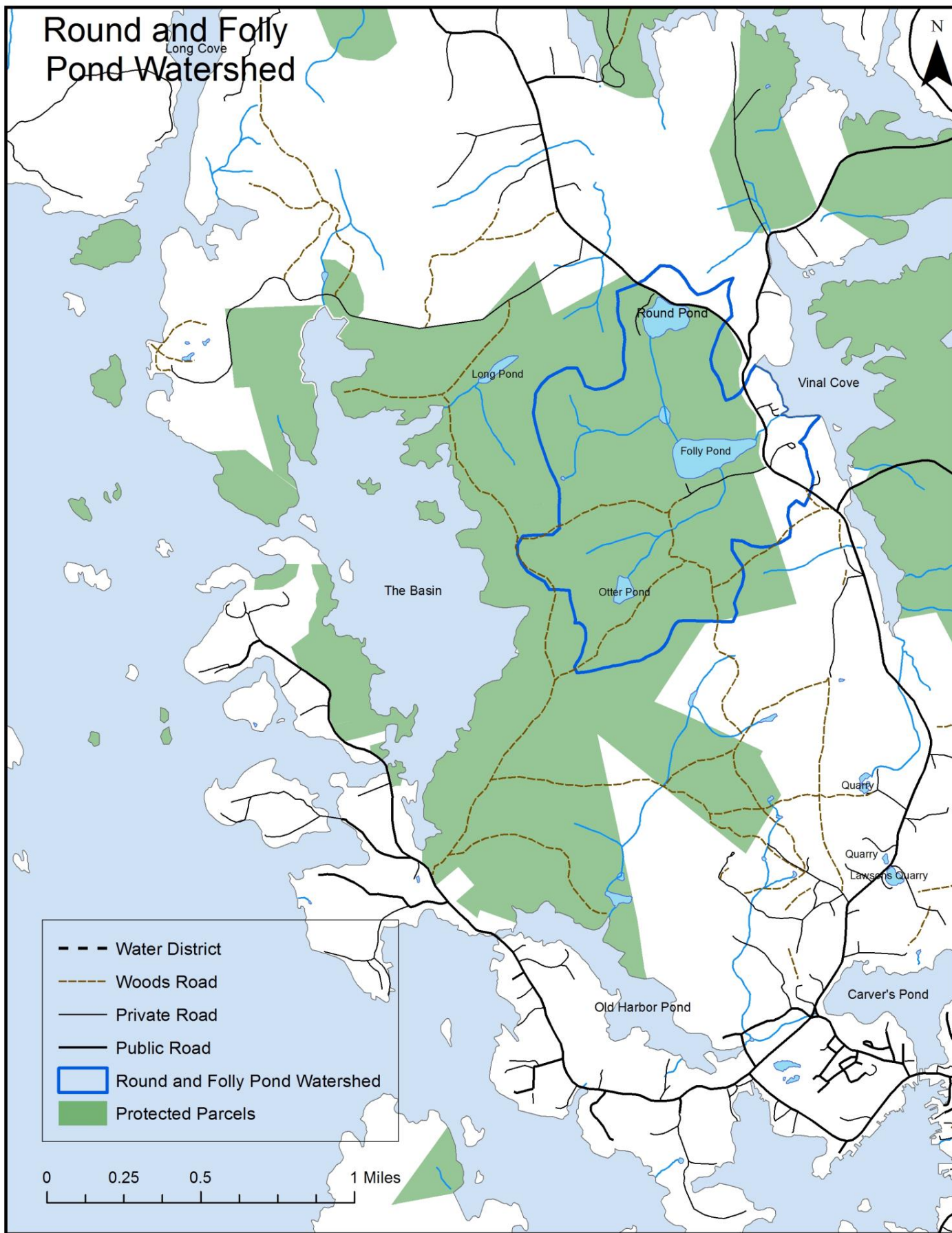
3. How are groundwater and surface water supplies and their recharge areas protected?

In 1978, Vinalhaven designated the Water District. The purpose of this district is to safeguard the quality and quantity of fresh water in the municipal water supply reservoirs (Round Pond and Folly Pond) and their watersheds. The Water District includes the Water District reservoirs and their watersheds including all land and water sheds around Round and Folly Ponds as designated on the Official Zoning Map. In addition to the Water District, local ordinances also regulate development along other bodies of water.

As seen in the following map, the lands within the watershed district are protected by various agencies (MCHT, VLT, and VH Water District). Together, their ownership preserves the water quality within the watershed by restricting development. There are approximately 35 acres not protected within the watershed, identified by Gerber in the 1988 Ground Water Resource Study, which are east of the North Haven Road.

Zone/District	Purpose/Definition	Minimum Development Distance
Stream Protection District	...to protect from pollution and degradation fresh water brooks and streams, the areas through which they run, and into which they empty	<ul style="list-style-type: none"> • 75 feet horizontal of normal high-water line of stream • 250 feet horizontal of normal high water line of saltwater body • 250 feet horizontal of the upland edge of a freshwater or coastal wetland.
Resource Protection District	...to protect fragile shorelines and other lands of unique geological and natural features...wetlands, and flood plains, on which development would degrade water quality...	<ul style="list-style-type: none"> • 250 feet horizontal of the upland edge of freshwater wetlands, salt marshes and salt meadows, and wetlands associated with great ponds and rivers
Shoreland Zone	...to control activities near bodies of water.	<ul style="list-style-type: none"> • 250 feet horizontal of the normal high-water line of any saltwater body, pond, or quarry • 250 feet horizontal of the upland edge of a non-forested coastal or freshwater wetland • 75 feet horizontal of the normal high water line of a stream

Round and Folly Pond Watershed



Stream Protection and Shoreline

The purpose of this district is to protect from pollution and degradation fresh water brooks and streams, the areas through which they run, and into which they empty.

The Stream Protection District includes all land areas within seventy-five (75) feet, horizontal distance, of the normal high-water line of a stream, exclusive of those areas within two-hundred and fifty (250) feet, horizontal distance, of the normal high water line of a saltwater body, or within two hundred and fifty (250) feet, horizontal distance, of the upland edge of a freshwater or coastal wetland. Where a stream and its associated Shoreland Zone are located within two hundred and fifty (250) feet, horizontal distance, of the above water bodies or wetlands, that land area shall be regulated under the terms of the Shoreland Zone associated with that water body or wetland.

4. Do public works crews and contractors use best management practices to protect water resources in their daily operations (e.g. salt/sand pile maintenance, culvert replacement, street sweeping, and public works garage operations)?

There are no written guidelines or procedures for the public works crew. The crew tries to limit their environmental impact during projects and follow any state or federal regulations when they apply.

5. Are there opportunities to partner with local or regional advocacy groups that promote water resource protection?

While the village watershed is well protected from development, there are numerous groups based on the island that can, and have, lead water resource education. The Vinalhaven Water District (VWD) sent flyers to the rate payers within the Village Overlay District informing them of ways to conserve water. This is particularly important in the summer months as demand is high and, historically, the season is less likely to get precipitation. Other island-based groups include the Vinalhaven Land Trust (VLT) whom own property within the Round and Folly Pond watersheds.

Regional water resource groups that can partner with VWD and VLT to promote conservation and water quality include the Knox-Lincoln County Soil and Water Conservation District (KLCSWCD), Maine Coast Heritage Trust (MCHT), and the Maine Natural Resources Conservation Service. Together these groups

offer some sort of education program for K-12 and/or Adults, own property within or adjacent to the watershed, or continued maintenance/oversight of the watershed.

Conditions and Trends

1. A description of each great pond, river, surface drinking water supply, and other water bodies of local interest including:

Great Pond

As defined in Title 38 §480 of the Maine Statute, "Great ponds" means any inland bodies of water which in a natural state have a surface area in excess of 10 acres and any inland bodies of water artificially formed or increased which have a surface area in excess of 30 acres." Folly Pond is the only pond on the island greater than 10 acres (14.5 acres).

- ecological value - Folly Pond serves as a back-up water supply to Round Pond. The value to the island community was noticed in 2002 when Round Pond saw signs of drought and water from Folly Pond was utilized. Ecologically, the pond provides habitat for birds, mammals, reptiles, and amphibians. There are fish in the pond as island residents may be seen fishing throughout the year.
- threats to water quality or quantity – known threats to Folly Pond include abutting properties and potential runoff. There is one property to the east of Folly Pond that has animals and it could be a potential source of runoff. In addition, the other major concern is the public access road along the east of the pond.
- documented water quality and/or invasive species problem – there are no known problems with invasive species in the pond. As for water quality, filtration is utilized to make the water drinkable under EPA standards.

Rivers, as they are mapped in the U.S. Geological Survey 7.5-minute (or 15 minute in the absence of the aforementioned) series topographic map

- ecological value – all rivers provide habitat to plant and animal species. They also help to maintain water supplies to wetlands, ponds, and salt marshes.

- threats to water quality or quantity – Threats to the rivers are minor. The town has a Stream Protection Zone in the Local Land Use Ordinances that limits development within 75 feet. See Existing Land Use for more information regarding the regulations of this zone.
- documented water quality and/or invasive species problems – There are no documented invasive species problems, however, water quality for some of the rivers has been of concern as runoff from roadways and farms threaten water quality.

Surface Drinking Water Supply:

- The ecological value is similar to Folly Pond, mentioned under Great Ponds, this water supply provides habitat for animals, but also serves as an important undeveloped parcel. Due to its importance of providing drinking water, much of the land surrounding the pond is protected and undeveloped.
- The largest threat to Round Pond's water quality includes the road located along the southern border of the pond which lies approximately 5-10 feet from the shoreline.

Round Pond Surface Water Assessment			
Zone	Measure	Findings	Risk Level
Watershed	Ambient Water Quality	Class GPA, in full compliance.	Low
	Existing Conditions	Forested and undeveloped; strong local awareness for protecting the resource.	Low
	Future Development	Future development is controlled by District ownership, zoning ordinances and alliance with private landowners.	Low
	Overall		Low
Shoreland	Pond Classification	Eutrophic, though no problems noted.	Low
	Soils	No concern for erodible soils along shoreline; road embankment present.	Low

	Activities Posing a Threat	Public access open but restricted for recreational uses; roadway drainage and vehicular traffic may expose pond quality.	Low-Moderate
	Potential for Future Threats	Same as above. Ownership, zoning and public awareness help mitigate threat.	Low-Moderate
	Overall		Low
Intake	Raw Water Quality	TE2 & TE3 testing shows good quality; low turbidity.	Low
	Ownership/Control	Water District owns intake area.	Low
	Activities Posing a Threat	Public access limited by signs and locked gate.	Low
	Potential for Future Threats	None identified.	Low
	Overall		Low

Source: Drumlin Environmental, LLC, Maine Public Drinking Water Source Water Assessment Program
Vinalhaven Water District Round Pond Watershed, March 2003

- Documented water quality and/or invasive species problems – in the late 1990's, Round Pond experienced a period of high use and drought-like conditions resulting in a drawdown of water. Water from Folly Pond was required to meet the demand for a short period of time.

Water Bodies of Local Interest:

Round Pond, Folly Pond, Long Pond, Otter Pond, Cedar Pond, Dyer Pond, Vinal Cove, and Perry's Creek all provide something to island residents. Some find the serenity and natural beauty of high importance while others see the recreational value as many of them have trails along them.

- The ecological value of these water bodies include aesthetic, species habitat (mammals, amphibians, birds, etc...), or natural buffers.

- Threats to water quality or quantity are low as many of these water bodies are within parks or preserves. There are however, septic systems that are located near or along the shores of some of the aforementioned water bodies.
- There are no known or documented water quality and/or invasive species problems beyond what was previously mentioned for Round or Folly Pond in this chapter.

2. A summary of past and present activities to monitor, assess, and/or improve water quality, mitigate sources of pollution, and control or prevent the spread of invasive species (IS).

	Past	Present
Monitor, Assess, and/or Improve water quality	Daily monitoring	UV and Filtration now help ensure water quality.
Mitigate pollution sources	Filtration and disinfectant	
Control or prevent spread of IS	No known IS reported	N/A

3. A description of the location and nature of significant threats to aquifer drinking water supplies.

The 1989 Ground Water Resource Study and Municipal Water Supply Evaluation present a complete analysis of Vinalhaven's water resources. In that report, concerns and recommendations were made regarding the town's water supply, Round and Folly Ponds (Gerber, 1989). The primary concern was the proximity of North Haven Road to Round Pond. Given the curves in the road and potential for slick wintery conditions, it is suggested that a Spill Prevention, Countermeasures, and Control Plan be developed.

Second, Gerber believed that it was important that there be some control of access to and around the ponds. Land and parcels located within the aquifer are owned by the Water District, VLT, and MCHT. This current ownership will ensure the least amount of development thus preserving the water quality within the aquifer. There were some issues regarding access to roads adjacent the ponds and it was suggested that those roads be gated.

4. A summary of existing lake, pond, river, stream, and drinking water protection and preservation measures, including local ordinances. If we were to apply the law of supply and demand to our natural resources, water – fresh water (“sweet water” the Italians call it) – would be very expensive indeed. The supply is limited; the demand is great.

Stream Protection District

The purpose of this district is to protect from pollution and degradation fresh water brooks and streams, the areas through which they run, and into which they empty. The Stream Protection District includes all land areas within seventy-five (75) feet, horizontal distance, of the normal high-water line of a stream, exclusive of those areas within two-hundred and fifty (250) feet, horizontal distance, of the normal high water line of a saltwater body, or within two hundred and fifty (250) feet, horizontal distance, of the upland edge of a freshwater or coastal wetland. Where a stream and its associated Shoreland Zone are located within two hundred and fifty (250) feet, horizontal distance, of the above water bodies or wetlands, that land area shall be regulated under the terms of the Shoreland Zone associated with that water body or wetland.

Water District

The purpose of this district is to safeguard the quality and quantity of fresh water in the municipal water supply reservoirs (Round Pond and Folly Pond) and their watersheds. Formed in 1978, the Water District includes the Water District reservoirs and their watersheds including all land and water sheds around Round and Folly Ponds as designated on the Official Zoning Map.

C. Resource Protection District

The purpose of this district is to protect fragile shorelines and other lands of unique geologic and natural features, especially those that include steep slopes, unstable soils, wetlands, and flood plains, on which development would degrade water quality, disrupt productive habitats and biological ecosystems or destroy natural and scenic value.

Survey Results

		Well	Town Supply	Other
Q 112	Water source is...	95	89	3
		Yes	No	
Q 113	Are you satisfied with the quality of your water?	79%	21%	
Q 114	If you have a well, do you experience salt water intrusion?	5%	94%	
Q 115	I would you support a well monitoring study/program?	73%	27%	
Q 116	Is water quality of concern to you?	83%	17%	
Q 117	Is water quantity of concern to you?	72%	27%	

Issues of Public Concern

The Water District serves approximately 350 homes leaving 900 or more homes to rely on personal wells. Most people are generally satisfied with the quality of their water, but also are concerned about the quality and quantity. The wells across the island vary and, most recently, well owners have been concerned with arsenic in the wells. In the past, there has been high concern over salt water intrusion as concentrated development can stress the freshwater lens.

There is also concern for the protection of the public drinking supply as the road is located within 15-20 feet. Numerous studies and reports have identified this as a threat to the pond and consideration for relocating the road should be considered.

Natural Resources

Introduction

Natural and scenic resources are plentiful in Maine and perhaps ten-fold on the Maine islands. Vinalhaven is no exception; there are a plethora of wetlands, shorelands, scenic vistas, and wildlife habitat. Some or all of these are a source of pride and reasoning for calling Vinalhaven home, whether part or year-round resident, many find comfort in the island's natural resources. Threats to these resources generally include human development. Development on the island, however, has not posed a significant threat as local ordinances have sought to protect these resources. This chapter provides an overview and analysis of the island's natural resources.

State and Local Goal(s)

To protect the State's other critical natural resources, including without limitation, wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas, and unique natural areas.

Analyses

1. Are any of the community's critical natural resources threatened by development, overuse, or other activities?

Vinalhaven is largely undeveloped and has approximately 4,200 acres in public parks/preserves, conservation easement, Tree Growth, Open Space, or otherwise unprotected, but undeveloped. In addition, 30% of the island lots are undeveloped (or without an assessed building value according to local records) which represents 48% of the island in acres. Some or all of the aforementioned 4,200 acres are included in that 48%. Refer to the Recent Development Map in the Appendix to see which parcels have been issued building permits.

High value habitat is a portrayal of the "highest value habitat from the Gulf of Maine Watershed Habitat Analysis, a habitat suitability model developed by the (USFWS) Gulf of Maine Coastal Program (Beginning with Habitat, Primary Map 2)." 91 species of fish, wildlife, and plants were evaluated for this program and the habitat presented as high value represents the top 25% for all species combined, excluding areas less than 5 acres.

2. Are local shoreland zone standards consistent with state guidelines and with the standards placed on adjacent shorelands in neighboring communities?

The town follows the state's Shoreland Zone guidelines. See the Existing Land Use chapter for more details regarding zoning.

3. What regulatory and non-regulatory measures has the community taken or can the community take to protect critical natural resources and important natural resources?

The town's Land Use Ordinance recommends minimum lot sizes that take into account the protection of natural resources.

Resource Protection

The purpose of this district is ***to protect fragile shorelines and other lands of unique geologic and natural features***, especially those that include steep slopes, unstable soils, wetlands, and flood plains, on which development would degrade water quality, disrupt productive habitats and biological ecosystems or destroy natural and scenic value. The Resource Protection District includes areas in which development would adversely affect water quality, productive habitat, biological ecosystems, or scenic and natural values.

RM2

The purpose of this district is to provide for residential use, structures accessory to allowed uses, small non-residential facilities for educational, scientific or nature interpretation purposes, private and public recreation areas with limited structural development, boat houses and marine storage. The two acre minimum lot size is to protect tidal areas from pollution, soil erosion and sedimentation, and to decrease the density of development on the shore.

RM3

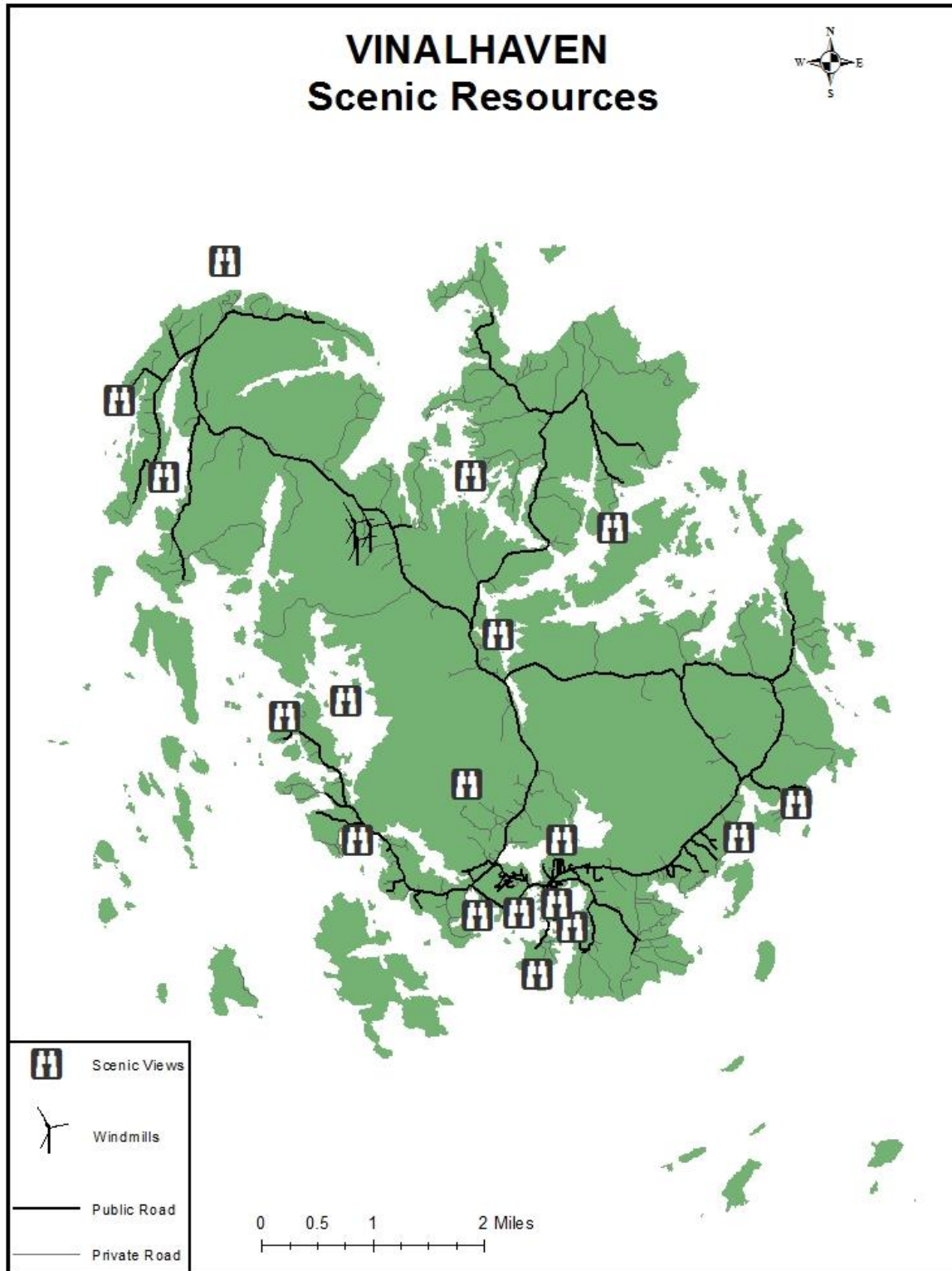
The purpose of this district is as stated in E. above: ***the three acre minimum lot size is required to protect areas of regional wildlife significance*** as designated by the State of Maine's Inland Fisheries and Wildlife Department in its Penobscot Bay Conservation Plan of March 1987, and areas of scenic and recreational value as indicated in Vinalhaven's Public Access and Scenic Inventory of 1990.

4. Is there current regional cooperation or planning underway to protect shared critical natural resources? Are there opportunities to partner with local or regional groups?

While there is no formal cooperation between the town and public land groups, there are numerous groups present on the island that help to preserve the island's natural resources. Vinalhaven Land Trust (459 acres), Maine Coast Heritage Trust (959 acres), US National Park Service (414.3 acres), and The Nature Conservancy (86.6 acres) already own and/or have easements on VH. In total, these groups have easements preserving a total of 1,918 acres, due to the sensitivity of identifying and printing a map, only the total numbers will be published. Contact the various agencies for more specific information.

Conditions and Trends

1. The community's Comprehensive Planning Natural Resources Data Set prepared and provided to the community by the Department of Inland Fisheries and Wildlife, Department of Environmental Protection and the Office, or their designees.
2. A map or description of scenic areas and scenic views of local importance, and regional or statewide importance, if available.



Map of 1992 Results by DeWan Assoc

Also, include new points for local importance that may not have been included, most likely because land was not public.

View	Score (100 = the highest)	Management Recommendations	2012 Current Status (changes since DeWan's report)
1. Carver's Harbor – A distinctive Maine fishing village	79	<ul style="list-style-type: none"> • Maintain the scale of the town through careful review of site plan applications • General maintenance of the ferry terminal 	
2. Carver's Pond – A large but relatively secluded, inland water body covering almost 150 acres on the north side of the village – Clearly visible from the road	61	<ul style="list-style-type: none"> • Acquisitions of conservation easements within the viewshed of the pond. 	
3. Sand Cove – A highly configured water body just west of the village – Clearly visible from the road	73	<ul style="list-style-type: none"> • Conservation easements to protect Norton Point 	<ul style="list-style-type: none"> • Norton Point has been developed
4. Indian Creek – Contains many of the elements associated with the Maine fishing village	70	<ul style="list-style-type: none"> • Conservation easements to protect the viewshed of Indian Creek, Lane's Island, and Armbrust Hill 	<ul style="list-style-type: none"> • A conservation easement along the eastern shore of Indian Creek protects the viewshed • The Town owns Boy Scout Point on the southwestern shore and Hen Island in the Creek
5. Lane's Island – A preserve at the mouth of Carver's Harbor occupies a good part of the Island – Preserve owned by the Nature Conservancy and open to the public	86	<ul style="list-style-type: none"> • Continued protection of views through conservation easements • Vegetation management to maintain open character of the moors 	<ul style="list-style-type: none"> • Many of the views from Lane's Island are preserved by the conservation easement and by the State, Federal, and conservation organization ownership of the offshore nesting islands (Roberts, Little Roberts, Carvers, Hay, Otter, Brimstone, and Little Brimstone)

6. Armbrust Hill Wildlife Reservation – On the east side of Carver’s Harbor – Owned by the Town – Open to the public	73	<ul style="list-style-type: none"> Aggressive vegetation management to preserve the land views and open up new vistas to other parts of the island and Penobscot Bay 	<ul style="list-style-type: none"> Trail upkeep and some pruning to keep moors open is done by volunteers Work on DeWan’s recommendations continues
7. Old Harbor – A cove with its adjacent Old Harbor Pond lies on the south of Vinalhaven	68	<ul style="list-style-type: none"> Vegetation management to preserve the views into the pond and harbor Conservation easement to protect viewshed of Old Harbor 	<ul style="list-style-type: none"> A portion of the northeast shore of Old Harbor Pond is under a conservation easement, which prohibits building within 350’ of the shore
8. Barton Island – Further north along the coast – Offers a wonderful westerly view out to Penobscot Bay	63	<ul style="list-style-type: none"> Vegetation management to maintain views of Penobscot Bay and the nearby islands 	
View	Score (100 = the highest)	Management Recommendations	2012 Current Status (changes since DeWan’s report)
9. The Basin – Tidal lake at the northern end of the Barton Island Road – Visible from the road crossing	72	<ul style="list-style-type: none"> Continue acquisition of conservation easements Vegetation management to preserve intermittent views of the Basin Improve small parking area 	<ul style="list-style-type: none"> Conservation easements and conservation ownership protect the large marsh and some shoreline visible from the road on Barton Island Bridge
10. Isle au Haut Mountain – Along with Tip Toe Mountain has provisions for public access	49	<ul style="list-style-type: none"> Improve trail markings Clean up dump sites Vegetation management to reopen views of Hurricane Mountain 	<ul style="list-style-type: none"> Dump sites cleaned up in June 03 at time of VLT acquisition of a parcel adjacent to the Town Park.
11. Vinal Cove – Small extension of Winter Harbor on the north shore of the island – A short segment of the Round-the-	62	<ul style="list-style-type: none"> Conservation easements to preserve the viewshed within Winter Harbor and Vinal Cove Vegetation management 	<ul style="list-style-type: none"> A conservation easement insures that this view will be maintained

Island Road allows for public visual access			
<p>12. Winter Harbor</p> <ul style="list-style-type: none"> – The view to the southeast – Little development is visible along the configured shoreline – The view extends across the harbor to undeveloped Penobscot Island in Seal Bay 	45	<ul style="list-style-type: none"> • Conservation easements to protect the viewshed of Winter Harbor 	<ul style="list-style-type: none"> • Conservation ownership and easements protect the views from Carrying Place Bridge looking out to Winter Harbor
<p>13. Crockett Cove</p> <ul style="list-style-type: none"> – A deep indentation on the northwestern part of the island – Tip Toe Mountain, one of the few overlooks on Vinalhaven rises from its western shoreline – Small town park here with parking spaces, picnic tables, and several trails 	80	<ul style="list-style-type: none"> • Interpretive signs • Vegetation management to maintain open summit 	<ul style="list-style-type: none"> • The field that slopes to the cove, just before reaching Tip Toe Mountain Park, offers a view of Crockett Cove and is protected by conservation easement
<p>14. Brown's Head</p> <ul style="list-style-type: none"> – Known for its lighthouse which marks the entrance to the Fox Island Thorofare, the very scenic passage between Vinalhaven and North Haven Islands – Public access is limited to a parking lot above the lighthouse 	61	<ul style="list-style-type: none"> • Screening of maintenance buildings • Better definition of the parking lot/turnaround at the end of the road 	<ul style="list-style-type: none"> • The lighthouse and 6.75 acres around it is now owned by the Town
<p>15. Fox Islands Thorofare</p> <ul style="list-style-type: none"> – Extends for 7 or 8 miles between Vinalhaven and North Haven 	70	<ul style="list-style-type: none"> • Vegetation management to preserve the open character around the Town Landing • Conservation easements to limit 	

<ul style="list-style-type: none"> – Has great significance for the sailors of Maine – The only point of public access is from the Town Landing 		development that could be above the horizon on both sides of the Thorofare	
View	Score (100 = the highest)	Management Recommendations	2012 Current Status (changes since DeWan's report)
16. Mill River <ul style="list-style-type: none"> – One of many coves on VH w/long fingers of water extended inland – Limited public visibility with Carrying Place Bridge the only point where the cove is visible from a road 	50	<ul style="list-style-type: none"> • Conservation easements to protect the viewshed of Mill River, especially the ridge line 	<ul style="list-style-type: none"> • Conservation easements cover part of the west side of Mill River
17. Geary's Beach <ul style="list-style-type: none"> – And adjoining Arey Neck Woods are town recreation areas on the eastern shore – Facilities include paths, picnic tables, and two beach areas – Panoramic views overlooking East Penobscot Bay 	72	<ul style="list-style-type: none"> • Continued good maintenance • Conservation easements to protect recreation area's view-shed • Interpretive signs to increase educational and recreational value of the property 	<ul style="list-style-type: none"> • This area is an outstanding site for bird sightings and nesting • Maintenance by Parks Commission continues
18. Arey Cove <ul style="list-style-type: none"> – A sparsely settled cove extending from Arey Neck to Narrows Island – The main public view is from Narrows Park at the end of the Booth Quarry Rd. – Offers views over East Penobscot Bay from its dramatic shoreline 	56	<ul style="list-style-type: none"> • Continued development of Narrows Park • Reestablishment of vegetation on the slopes facing Arey Cove 	<ul style="list-style-type: none"> • Some forestry work has been done

3. What are the important plant, wildlife, and fish habitat known in Vinalhaven? (Include rare species, Significant Wildlife Habitats, wetland resources, large blocks of undeveloped habitat, inland fishery resources, and Focus areas of Statewide Ecological Significance.)

Documented rare wildlife species in Vinalhaven include Harlequin Ducks, Bald Eagles, Great Cormorant, and Purple Sandpiper. Rare plants include American Sea-blite. Rare/exemplary natural communities include Maritime Spruce-Fir Forest, Pitch Pine Woodland, and Spruce Fir Wet Flat. Significant Wildlife Habitats include Inland Wading Bird and Waterfowl Habitat, Tidal Wading Bird and Waterfowl Habitat, Seabird Nesting Islands, and Significant Vernal Pools. MDIFW does not have any data with regards to fish assemblages in streams, rivers, and pools in Vinalhaven. This is not to say that fish-bearing waters are absent, however, as there are undoubtedly some small streams and ponds that host warmwater and/or coldwater fishes. See Appendix F for maps and supporting information regarding these species.

Survey Results

Should we do more, less, or the same to preserve...?	More	Less	Same	Unsure
Rural Character	52%	3%	43%	3%
Scenic Resources	55%	3%	41%	2%
Wetlands	46%	5%	46%	3%
Forests	44%	5%	49%	3%
Hillsides/Ridgelines	37%	6%	47%	10%
Public access to the shore	48%	3%	46%	3%

Issues of Public Concern

Most notably, there has been some concern about the amount of land placed under conservation easements or bought by public land groups. Primary issues include the amount of revenue lost from property tax. Since the island has such high valuations, the reduction in taxes to enroll in the easements, or state current use tax programs for that matter, receive a significant reduction in taxes. Looking forward, another concern regarding the preservation of land is the concern for future building lots. Land that was previously held and passed down is no longer affordable and placing the restrictions on them do not allow for new families to build. It is important that land under consideration for purchase or easement be measured by some rubric to determine its overall value to the community.

Another noteworthy concern is the use of ATVs on conservation lands and public/private wetlands.

While this mode of recreation appeals to individuals, it is important to recognize where you should and should not ride. In the past, the school has held assemblies to educate the students on the potential impacts ATVs have on the environment. Looking forward, ATV riders should work with land groups and private citizens to establish a network of trails that are best suited for the activity.

DRAFT

Agricultural and Forest Resources

Introduction

The forests that define the interior landscape of Vinalhaven originated following the decline of the quarrying industry after the turn of the century. In the early 1900's, when quarrying was in its heyday, land was cleared around the quarries, and farms were enlarged to produce food for the workers. Sheep kept the fields open and dairy farms proliferated from Calderwood Neck to Coombs Neck. Wood was cut to clear fields and burn for fuel. The island would have been largely unrecognizable to us today as much of the forest of today regenerated during that period. White spruce, which predominates, starts to decline at 80 years of age and is affected by several stress factors on the island. Thin soil and strong winds contribute to difficult growing conditions and early mortality.

State and Local Goal(s)

To safeguard Vinalhaven's agricultural and forest resources from development which threatens those resources.

Analyses

1. How important is agriculture and/or forestry and are these activities growing, stable, or declining?

Agricultural activities have increased in Vinalhaven over the past 10 years. As more people pay attention to their health and the "local food movement", there has been a growing demand for island-grown produce. In the past 10 years, there have been a total of 12 farms.

Forestry operations have remained the same over the past 10 years. There has been a decrease of 938.5 acres of forest enrolled in the State's Tree Growth program in that time period. While private wood mills still operate, there are few commercial forestry operations on the island.

2. Is the community currently taking regulatory and/or non-regulatory steps to protect productive farming and forestry lands? Are there local or regional land trusts actively working to protect farms or forest lands in the community?

While farming used to be a big part of the island economy over 60 years ago, it is now a small representation of the island's food supply. Recent trends include an increase in farm productivity, but many of the viable farm lands have been purchased with no intent to farm or are leased to those that wish to farm. At the start of the 2012 farm season, there were approximately 15 acres actively being farmed. This represents 1% of the potential viable farmland on the island as depicted in the Agriculture and Forestry Map. The Vinalhaven Arts and Recreation Center works with some of these local farmers to sell the produce and promote the local food economy. On a more regional level, there is the Maine Farmland Trust (MFT) whom seeks to preserve farmlands as the value they have in potential housing development continues to rise. Currently, there is little involvement between MFT and the VH community.

Forest lands on Vinalhaven are generally used for recreational purposes. As mentioned above, there are few commercial forestry operations. There are multiple groups present on the island that protect forested lands in the community; the Vinalhaven Land Trust (VLT) and the Maine Coast Heritage Trust (MCHT), The Nature Conservancy (TNC), and the US National Park Service (NPS). Together, these groups own or have easement rights of over 1,900 acres. VLT and MCHT are the most active in Vinalhaven, offering programs and services to maintain, educate, and promote the use of these public lands. See the Recreation Chapter for a complete list of organizations owning public lands.

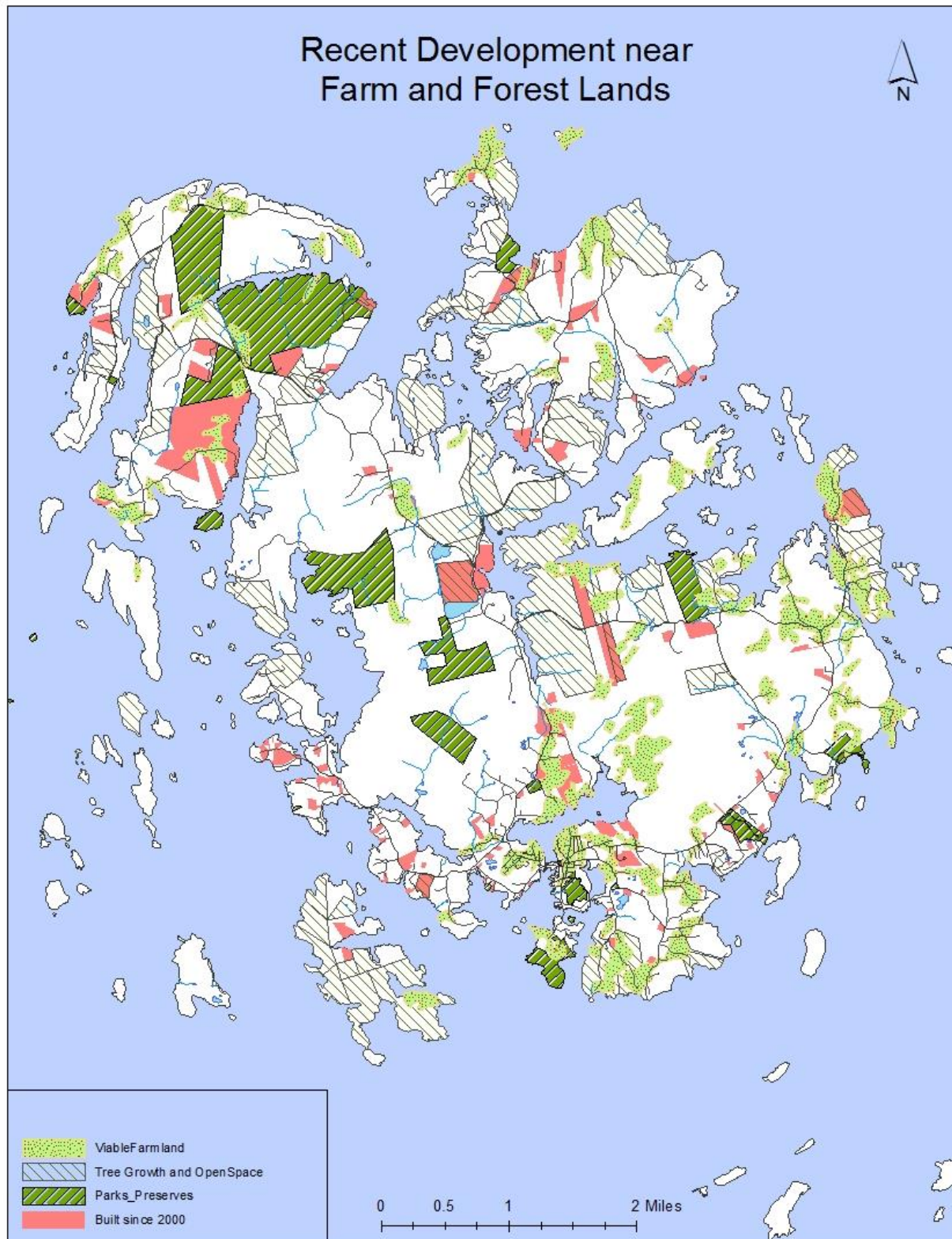
3. Are farm and forest land owners taking advantage of the state's current use tax laws?

Yes. As published in the Town's 2010 Annual Report, Vinalhaven has 1,310.5 acres enrolled in Tree Growth. In addition, there are also 56.5 acres enrolled in the Farmland Tax Program. A complete list of properties enrolled in the programs can be seen in the 2010 Town of Vinalhaven Annual Report.

4. Has proximity of new homes or other incompatible uses affected the normal farming and logging operations?

Due to the lack of farm/forest operations on the island, new homes do not impact commercial operations. The map on the following page shows the parcels in which building permits for residential units were issued. Due to zoning, building lots cannot be fully developed so the areas in red do not necessarily represent the size or scale of development. A few of the properties have viable farmland as

determined by the USGS Soil Map, but do not necessarily represent current farming operations. For the purposes of this comp plan, we included open space with tree growth as they both represent forest/undeveloped lands.



5. Are there large tracts of agricultural or industrial forest land that have been or may be sold for development in the foreseeable future? If so, what impact would this have on the community?

There are no industrial forest lands on the island and large tracts of agricultural land are not expected to be sold for development within the foreseeable future. As population growth has been at a relative plateau and is projected to remain at or near the same level, it is expected that the current buildable lots are sufficient to meet the needs of any growth.

6. Does the community support community forestry or agriculture (i.e. small woodlots, community forests, tree farms, community gardens, farmers' markets, or community-supported agriculture)? If so, how?

There has been a recent increase in the local food market with the sale of island produce at Vinalhaven's Arts and Recreation Center (a non-profit committed to supporting local agriculture and providing community educational opportunities). There are also a few island farmers that sell their produce in town at the weekly Flea Market and/or through a Community Shared Agriculture (CSA).

Small woodlots can be seen throughout the island and are often selectively harvested on a seasonal basis to provide those owners with the energy needed during the heating season. Given the amount of undeveloped wooded lands, it is reasonable to believe other community members share the burden for harvesting the wood for their own use as well.

7. Does the community have town or public woodlands under management, or that would benefit from forest management?

The town owns over 140 acres of public parks (which may include open spaces or woodlands), but does not manage the woodlands, nor is there a foreseeable benefit to managing the current town-owned properties.

Conditions and Trends

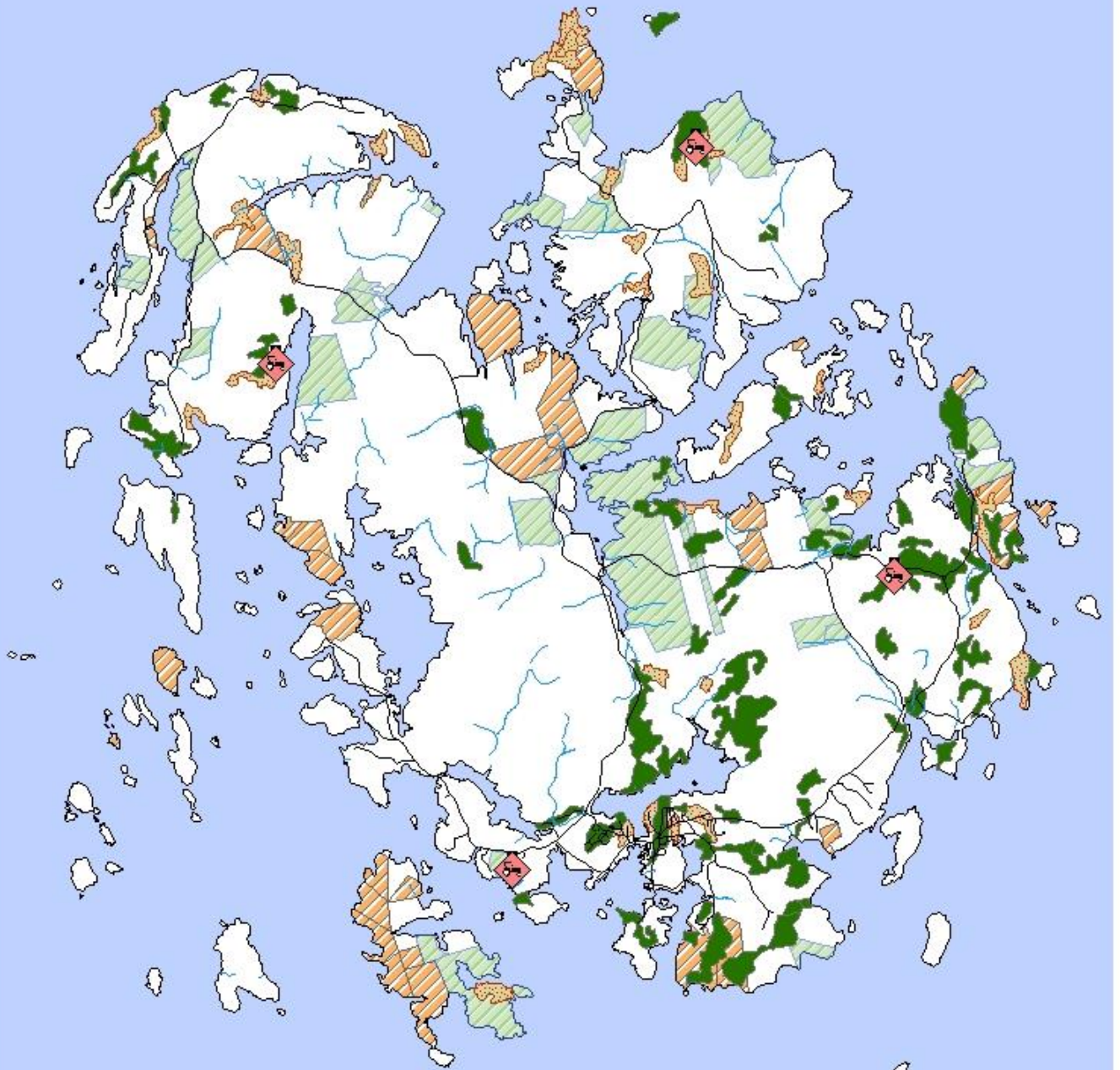
1. The community's Comprehensive Planning Agriculture and Forestry Data Set prepared and provided to the community by the Department of Agriculture, the Maine Forest Service, and the Office, or their designees.
2. A map and/or description of the community's farms, farmland, and managed forest lands and a brief description of any that are under threat.

Farm lands and forests are connected by common resources such as soil, water, and animals/insects just to name a few. Continually, there are pressures impacting and affecting resources which may be development, weather, or invasive species. In recent years, it has been brought to light the impacts invasive species could have on some of our resources, most noticeably, the Winter Moth.

Efforts are undertaken to curtail invasive species and other threats to these important farm and forest resources as they arise. Support from various established groups such as the Vinalhaven Land Trust, Maine Coast Heritage Trust, the school, and the town, often help alleviate the issues. Volunteer groups often tend to form around issues that are seen to have significant impacts to particular aspects of the island.

Overall, the farm and forest resources are worn and remain largely productive with current management. Refer to the following map for a detailed image of viable farmland (not necessarily active farms), farms, and forest lands as they are protected under the Tree Growth and Opens Space tax programs.

Vinalhaven's Farm and Managed Forest Lands



0 0.5 1 2 Miles

3. Information on the number of parcels and acres of farmland, tree growth, and open space enrolled in the state's farm, tree growth, and open space law taxation programs, including changes in enrollment over the past 10 years.

Some of the major challenges we experience include shallow soils, increased cost to import/export, and high property valuations. Many of the properties enrolled in these programs are waterfront properties. When these properties get the tax reduction it increases the local cost share for everyone. This would not be as large of an issue but for the fact that many of the properties enrolled in Tree Growth are suspected of not following a management plan meant for commercial forestry operations. Given the shallow soil types, cost of transportation on/off the island, and primarily the presence of spruce forests, or the lack of large tracts of hardwoods, these properties are not likely to produce a product that would benefit the landowner or town financially. See below for an account of the total acres enrolled in the state's three programs (excludes Working Waterfront).

	Farmland		Tree Growth		Open Space	
	Parcels	Acres	Parcels	Acres	Parcels	Acres
2010	2	56.5	36	1,310.5	32	403.8
2005			45	1,974.8	24	530
2001			48	2,249	25	710.8

4. A description of any community farming and forestry activities (e.g. community garden, farmer's market, or community forest).

Community farming on Vinalhaven has become more evident over the last 5 years. There has been the addition of a CSA (Community Shared Agriculture) and the continuation of the summer weekly Flea (Farmer's) Market. Both of these activities serve over 100 people providing fresh food and social capital. Currently, there are no community forestry activities on the island. There is a privately owned saw mill on the island and there are one or two entities that are harvesting personal wood lots.

Survey Results

Would you like to see Community Gardens expand?

Count of Residency	Q83				
Residency	Favor	Oppose	Undecided	(blank)	Grand Total
Year-Round	46%	7%	9%	3%	65%
Seasonal	24%	1%	3%	1%	28%
Non-Resident Taxpayer	5%	1%	1%	1%	7%
(blank)	0%	0%	0%	0%	0%
Grand Total	75%	8%	13%	4%	100%

Would you like to see CSA's expand?

Count of Residency	Q84				
Residency	Favor	Oppose	Undecided	(blank)	Grand Total
Year-Round	43%	8%	9%	5%	65%
Seasonal	24%	1%	3%	1%	28%
Non-Resident Taxpayer	5%	1%	1%	1%	7%
(blank)	0%	0%	0%	0%	0%
Grand Total	72%	9%	13%	6%	100%

Would you like to see Farming expand?

Count of Residency	Q88				
Residency	Favor	Oppose	Undecided	(blank)	Grand Total
Year-Round	49%	3%	7%	7%	65%
Seasonal	25%	0%	2%	2%	28%
Non-Resident Taxpayer	6%	0%	1%	1%	7%
(blank)	0%	0%	0%	0%	0%
Grand Total	79%	3%	9%	9%	100%

Would you like to see Processing Farm Products on the island?

Count of Residency	Q102				
Residency	Favor	Oppose	Undecided	(blank)	Grand Total
Year-Round	35%	9%	17%	4%	65%
Seasonal	13%	5%	10%	1%	28%
Non-Resident Taxpayer	3%	1%	2%	1%	7%
(blank)	0%	0%	0%	0%	0%
Grand Total	50%	15%	29%	5%	100%

Issues of Public Concern

Over the last year, the Winter Moth have brought concern to the long-term health of the island's deciduous trees. This invasive species flies in the late fall and lays eggs in the crevices of tree bark. Over the course of the winter months, the green-inchworm like caterpillars form and slowly eat the leaves. It is believed that trees infested with the moths die within a few years as a result of the defoliation and weakening.

Poorly managed forests are another concern island residents have with regards to forest health. It is not uncommon for the island to experience dry conditions in the summer months. The last major fire the island experienced was in the 1930's on Calderwood's Neck. Examples of poorly managed forests are ones with little to no regard to fallen trees or limbs. This ground cover provides fuel for fires causing them to accelerate.

There is concern over the deer population on the island. With no natural predators and limits on hunting, many believe that they are beginning to become more of a nuisance. In addition to the threat to agriculture, the community is concerned with the amount of ticks on the island. Some wonder if we can consider a deer management plan to help reduce the amount of hosts.

Marine Resources

Introduction

The marine resources of Vinalhaven contribute a great deal to the town's local economy as many working residents are employed in marine based businesses. Over the past five years, total pounds of lobsters landed have increased on an average of 14%. Vinalhaven accounts for approximately 10% of the state's total catch. Other fisheries for VH fishermen include clams, crabs, and various fish species. Marine resources are also valued for habitat preservation and recreational opportunities. The purposes of this chapter are to help the Town identify and manage its marine resources sustainably, protect the health of residents, and safeguard the local economy dependent upon these resources.

State Goal and State Coastal Policies

1. To protect the State's marine resources industry, ports and harbors from incompatible development and to promote access to the shore for commercial fishermen and the public.
2. For coastal communities, the Growth Management Act requires that a local comprehensive plan address the state coastal management policies (38 MRSA §1801). These are:
 - a. To promote the maintenance, development, and revitalization of the State's ports and harbors for fishing, transportation and recreation;
 - b. To manage the marine environment and its related resources to preserve and improve the ecological integrity and diversity of marine communities and habitats, to expand our understanding of the productivity of the Gulf of Maine and coastal waters and to enhance the economic value of the State's renewable marine resources;
 - c. To support shoreline management that gives preference to water-dependent uses over other uses, that promotes public access to the shoreline and that considers the cumulative effects of development on coastal resources;
 - d. To discourage growth and new development in coastal areas where, because of coastal storms, flooding, landslides or sea-level rise, it is hazardous to human health and safety;
 - e. To encourage and support cooperative state and municipal management of coastal resources;

- f. To protect and manage critical habitat and natural areas of state and national significance and maintain the scenic beauty and character of the coast even in areas where development occurs;
- g. To expand the opportunities for outdoor recreation and to encourage appropriate coastal tourist activities and development;
- h. To restore and maintain the quality of our fresh, marine and estuarine waters to allow for the broadest possible diversity of public and private uses; and,
- i. To restore and maintain coastal air quality to protect the health of citizens and visitors and to protect enjoyment of the natural beauty and maritime characteristics of the Maine coast.

Analyses

1. Is coastal water quality being monitored on a regular basis?

The Maine Department of Marine Resources (DMR) monitors water quality regionally. The Town monitors water quality from the Wastewater Treatment Facility, which discharges into Carver's Harbor on a regular basis. As of February 2012, water quality is recorded as being within healthful limits.

2. Is there a local or regional plan in place to identify and eliminate pollution sources?

Municipal plans to eliminate pollution include identifying leaking septic systems and point-source pollution. These areas are identified based on the DMR Marine Resource maps identifying clam flat closures around the island. Other sources of pollution include runoff from heavy rains which cause untreated or insufficiently treated wastewater to enter coastal waters.

3. Has closing of clam or worm flats threatened the shellfishing industry, and are sources of contamination known? Are sources point (direct discharge) or nonpoint sources?

Water quality can be degraded by many factors, resulting from natural occurrences and from human activity. Pollution can be classified by its origin. Point source pollution originates from a single point, such as an outflow pipe, an overboard discharge including untreated wastes from a residence, business,

or industry. Non-point source pollution, for example from stormwater runoff of fertilizer, phosphorous, motor oil and other chemicals, is also of concern. The Maine Department of Environmental Protection (DEP), Bureau of Land and Water Quality lists 12 licensed, active overboard discharges and one wastewater outfall facility approved within Vinalhaven. See the map titled Licensed Outfalls and Discharges for the location of these point sources of pollution within Vinalhaven. The amount of point source pollution has decreased with fewer licensed discharges. Vegetative buffers, as required in shoreland zoning and the proper use of fertilizers and appropriate disposal of chemicals, can reduce pollution runoff. According to the DMR landings data, it is believed that the shellfish industry has increased over the past ten years in Vinalhaven. Pollution reduction measures already enacted and further such measures would be beneficial to shellfishing.

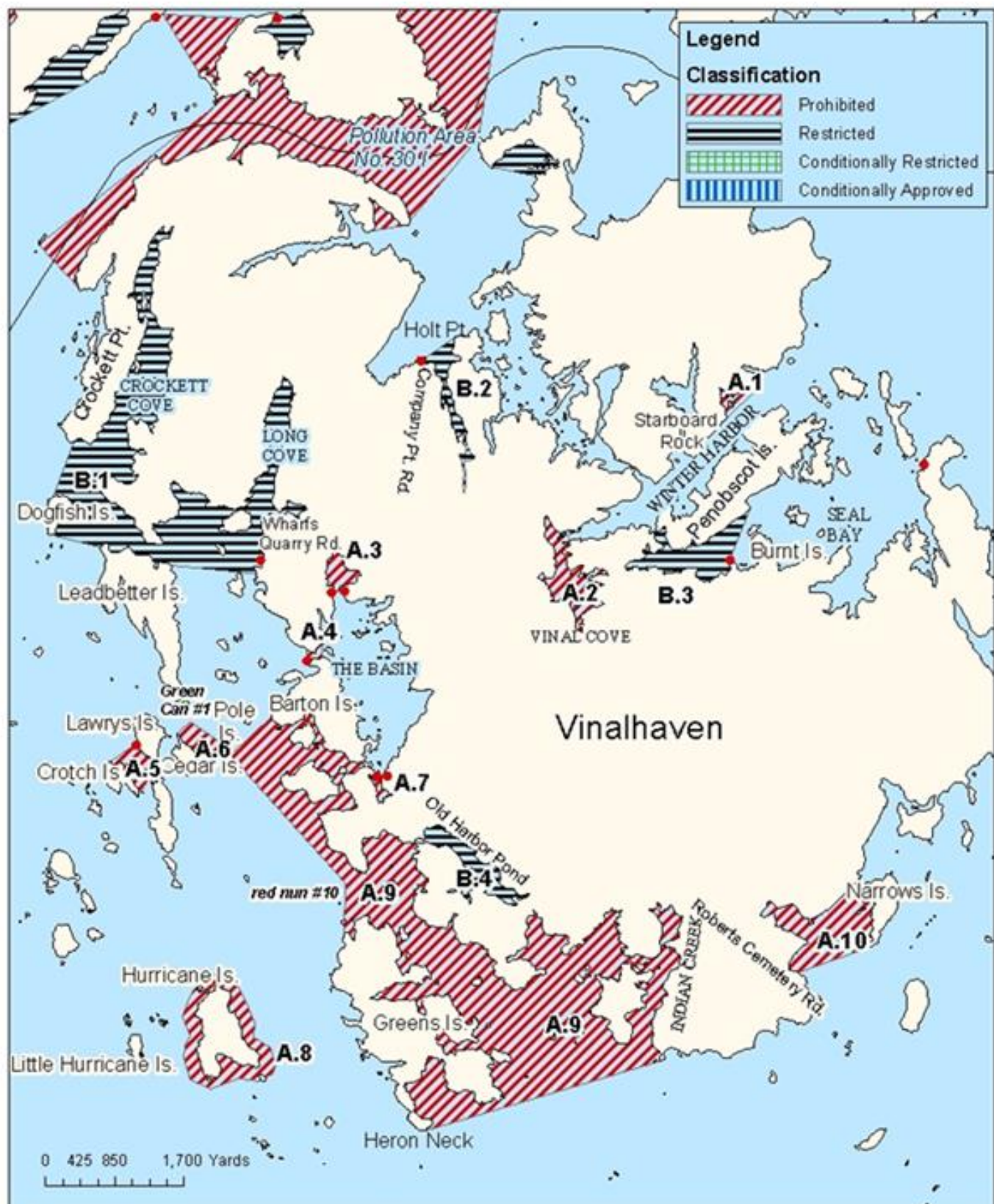
The map below is an example of what is sent out annually to the town to inform harvesters of the closures around the island with regards to shellfish. Maps and notices are posted by Maine Department of Marine Resources.



Maine Department of Marine Resources

Pollution Closed Area No. 34-C

Vinalhaven



4. Are traditional water-dependent uses thriving or in decline? What are the factors affecting these uses? If current trends continue, what will the waterfront look like in 10 years?

Over the past decade, marine activities within Vinalhaven have generally increased. From 2000 to 2010, landings of lobster have increased 69.5 percent in weight and 64.3 percent in value. During this same period, however, landings in crab and other species have declined. See *Conditions and Trends* below for more figures. See the Habitat and Marine Resources map for aquaculture lease locations.

According to local records, in 2011 approximately 300 people were employed in marine related businesses in Town. State and federal regulations have often curtailed these activities. The high value of waterfront property has resulted from increased demand for residential development in shoreland areas. With the recent downturn in the housing market, many properties along Vinalhaven's coast remain for sale. As of February 2012, there were approximately 25 shoreline properties for sale (listed by island realtors), of which 5 are undeveloped. Waterfront property along Carver's Harbor has been protected through Vinalhaven's Land Use Ordinance and Zoning districts. Commercial access to the shore has been maintained and recent marine activities have increased, including a new (re-built) lobster processing plant, purchased by Linda Bean's Perfect Maine Lobster Co in 2003.

The Town cannot control the national market for marine products, State and Federal regulations, or the real estate market. Statewide, the Maine Department of Labor forecasts that the fishing industry employment, including finfish, shellfish and other marine products, will increase by 4.4 percent between 2008 and 2018. Current marine related uses are protected in shoreland zoning ordinance provisions (described below) and it is therefore anticipated that within the next ten years the waterfront will look primarily the same.

5. Is there reasonable balance between water-dependent and other uses, and between commercial and recreational uses? If there have been recent conversions of uses, have they improved or worsened the balance?

To balance water-dependent with non-water-dependent uses, residential use has been prohibited along

the shore of Carver's Harbor since 1988. Both the Economic and Marine Resources sections of this Plan forcefully stress the need to continue the preservation of our commercial harbor environment for those engaged in lobstering, to maintain and increase their access to the water and to sustain the strict prohibitions on incompatible development within this important area.

According to the Code Enforcement Officer and Planning Board, within the past ten years there have been 26 change of use permits. There were few (less than 5) conversions of water-dependent use (and structures) to non-water-dependent and residential (seasonal and year round) uses. These conversions have been distributed throughout the island and judged to have little to no effect on marine based activities within the Town.

To balance the needs of commercial fishermen, residents and recreational users, the Harbor Ordinance, adopted in 2008, states, "Assignments for the privilege of maintaining a mooring in Vinalhaven Harbor shall be made in the order received according to the following ordered priorities:

1. Fulltime commercial fishing vessel
2. Part-time commercial fishing vessel
3. Commercial Vessel
4. Pleasure Vessel
5. Guest Mooring/Rental Mooring.

Furthermore, the Harbor Ordinance states, "The Town of Vinalhaven considers that the placement of houseboats and floating businesses in tidal waters as a low priority use of any coastal water body. Houseboats and floating businesses shall be assigned moorings in limited numbers and in specific areas designated by the Harbor Master."

6. How does local zoning treat land around working harbors?

The shoreland zoning provisions include a Commercial Fisheries/Maritime Activities District to protect current working waterfront activities in the harbor area. It is generally believed that this district and its permitted uses, prohibited uses, and dimensional requirements have served Vinalhaven well and have helped to maintain the traditional working harbor. Expansion of the Commercial Fisheries/Maritime

Activities District might be merited in the area of Old Harbor, which face pressure from residential or commercial non-water-dependent development.

The Village Overlay District has the purpose, “to promote consistency in the parameters of development in the area surrounding Carver’s Harbor.” The lots along Carver’s Harbor, particularly Main St, pre-date the consideration for zoning and are in many cases undersized. This district has been effective as it allows for smaller lot sizes and shorter setbacks from adjoining lots.

7. Is there a local or regional harbor or bay management plan? If not, is one needed?

In 2008, the Town adopted a Harbor Ordinance that regulates activities occurring on the shores of Vinalhaven. From the ordinance, a Harbor Committee was formed with the purpose of planning the development of and establishing policies for the Vinalhaven harbor area, recommend rules and regulations for use of the harbor, and review the activities of the Harbor Master.

8. Are there local dredging needs? If so, how will they be addressed?

The U.S. Army Corps of Engineers has identified Carver’s Harbor of Vinalhaven a priority for dredging. The last dredging in Carver’s harbor occurred in 1963. Concern for the State Ferry boats makes this project important as it is the primary means of transportation to and from the mainland.

9. Is there adequate access, including parking, for commercial fishermen and members of the public?
Are there opportunities for improved access?

Over the next ten-year planning period, it is believed that the current capacity of Town owned facilities will be adequate to meet anticipated demand of commercial fishermen and for recreational users. Proposed improvements to these facilities include resurfacing, striping, and other regular maintenance. See the Capital Investment Plan in the Fiscal Capacity chapter of this plan for more information.

10. Are important points of visual access identified and protected?

See the Natural Resources chapter of this comprehensive plan for a description of scenic resources, most of which are found within or are close to shoreland areas. The only inventory of scenic views, completed by DeWan Associates in 1992, catalogued 18 outstanding views, with values of from 45 to 86 (out of a possible 100).

The Land Use Ordinance Resource Protection District purpose, “is to protect fragile shorelines and other lands of unique geologic and natural features, especially those that include steep slopes, unstable soils, wetlands, and flood plains, on which development would degrade water quality, disrupt productive habitats and biological ecosystems or destroy natural and scenic value.” This district also includes Town and State Park areas.

In the Residential Marine 3 District, the Land Use Ordinance references Vinalhaven's Public Access and Scenic Inventory of 1992 in order to protect those identified areas from inappropriate development that would degrade scenic resources. Those areas include Crocket's Cove, Mill River, Winter Harbor, Carver's Pond, Vinal Cove, and the Basin.

Subdivision regulations in the Land Use Ordinance state, “The proposed subdivision will not have an undue adverse effect on the scenic or natural beauty of the area, historic sites, significant wildlife habitat identified by the Department of Inland fisheries and Wildlife or the municipality or rare and irreplaceable natural areas or any public rights for access to the shoreline.”

Wireless Telecommunications Facilities provisions in the Land Use Ordinance require a scenic assessment to protect the scenic and visual character of the community. The provisions state, “The proposed wireless telecommunications facility shall have no unreasonable adverse impact upon designated scenic resources within the Town, as identified in the municipally adopted comprehensive plan; a Town, State or Federal park; property containing a conservation easement because of its visual beauty, land under conservation, or by a State or federal agency.”

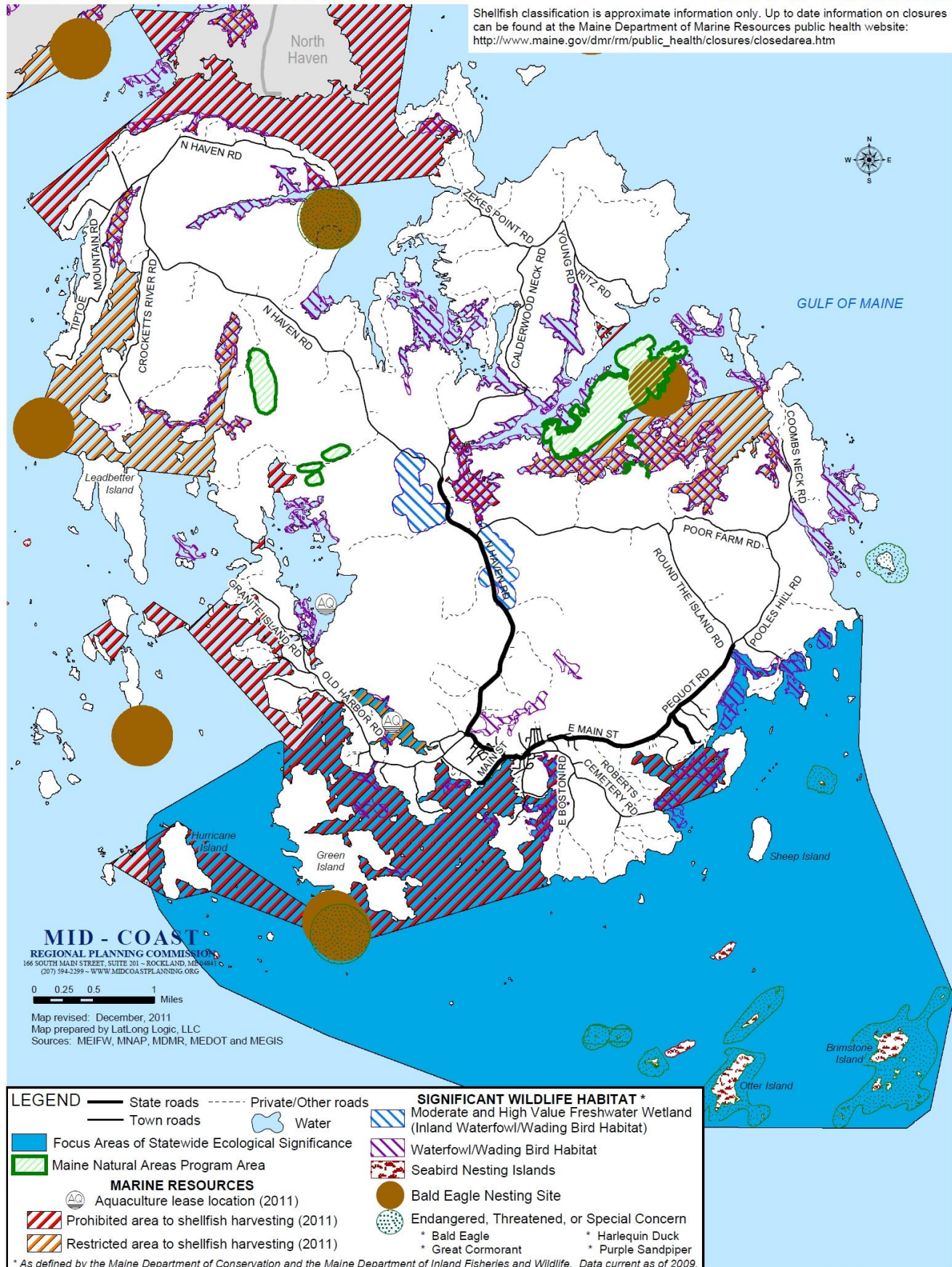
Conditions and Trends

The community's Comprehensive Marine Resources Data Set prepared and provided to the community by the Department of Conservation, and the Office, or their designees.

HABITAT AND MARINE RESOURCES

TOWN OF VINALHAVEN

Shellfish classification is approximate information only. Up to date information on closures can be found at the Maine Department of Marine Resources public health website: http://www.maine.gov/dmr/rm/public_health/closures/closedarea.htm



The number of residents holding marine resource licenses (dealers and harvesters) has decreased by 54 in the past six years to total 292 but the number of commercial lobster tags registered to Vinalhaven residents has increased by 1,340 to total 9,480.

Marine Resource Licenses held by Vinalhaven residents

Type/Year	2005	2006	2007	2008	2009	2010
Dealers	10	9	8	8	9	9
Harvesters	336	327	314	294	281	283

Source: Maine DMR

Total Lobster Trap Tags fished by Vinalhaven residents

	2005	2006	2007	2008	2009	2010
Total Tags	8,140	9,495	10,280	8,650	7,919	9,480

Source: Maine DMR

Maine DMR categorizes marine licenses as shown in the next table for Vinalhaven.

Vinalhaven Marine Licenses

Licenses	2005	2006	2007	2008	2009	2010
Comm. Fishing - Crew	20	21	20	20	24	19
Comm. Fishing - Non-resident	1	1	1	0	0	0
Comm. Fishing - Single	2	3	2	1	1	3
Comm. Shrimp - Crew	9	10	9	6	8	5
Comm. Shrimp - Single	0	0	0	1	1	1
Comm. Shellfish	2	2	1	4	5	6
Demo - Lobster	1	1	0	0	0	0
Lobster/Crab Apprentice Under 18	3	2	1	0	1	2
Lobster/Crab Non-Comm.	9	9	5	8	9	8
Lobster/Crab Class II +70	0	0	0	6	6	8
Lobster/Crab Class III +70	0	0	0	1	1	0
Lobster Meat Permit	1	1	1	0	1	1

Licenses	2005	2006	2007	2008	2009	2010
Lobster/Crab Apprentice	20	12	14	9	10	10
Lobster/Crab Class I	66	71	66	60	57	54
Lobster/Crab Class II	99	95	98	96	100	95
Lobster/Crab Class III	62	65	62	61	51	55
Lobster/Crab Over Age 70	6	6	8	6	6	5
Lobster/Crab Student	67	57	52	42	34	43
Lobster/Crab Under Age 18	8	8	5	3	3	2
Marine Worm Digging	0	0	0	0	0	2
Mussel - Hand	0	1	0	0	0	0
Quahog (Mahogany)	1	0	0	0	0	0
Retail Seafood	6	7	6	6	8	8
Scallop - Diver	1	1	1	2	1	0
Scallop - Dragger	13	12	11	10	11	8
Scallop with Tender	0	0	0	0	0	1
Scallop –Non-Comm.	2	7	5	4	0	1
Sea Urchin/ Scallop Tend	2	1	1	0	1	0
Sea Urchin - Diver	1	1	1	1	1	0
Sea Urchin - Dragger	2	1	1	1	0	0
Sea Urchin with Tender	0	0	0	0	0	1
Wholesale with Lobsters	6	4	4	4	2	2
Wholesale with Lobsters, Supp	3	2	2	2	1	1

Source: Maine DMR

Maine DEP notes that the following fish and decapods are present in Penobscot Bay.

Fish and decapods in Penobscot Bay

Genus and species	Common Name
<i>Crangon septemspinosa</i>	sand shrimp
<i>Carcinus maenas</i>	green crab
<i>Gasterosteus aculeatus</i>	Threespine stickleback

Genus and species	Common Name
<i>Apeltes quadracus</i>	Fourspine stickleback
<i>Pungitius pungitius</i>	Ninespine stickleback
<i>Tautoglabrus adspersus</i>	Cunner
<i>Homarus americanus</i>	American Lobster
<i>Cyclopterus lumpus</i>	Lumpfish
<i>Myoxocephalus aeneus</i>	Grubby
<i>Pholis gunnellus</i>	Rock gunnel
<i>Syngnathus fuscus</i>	Northern pipefish
<i>Microgadus tomcod</i>	Atlantic tomcod
<i>Urophycis tenuis</i>	White hake
<i>Psuedopleuronectes americanus</i>	Winter flounder

Source: Maine DMR

Landings in lobster have increased in the past decade while landings for crab and other species have decreased.

Vinalhaven Landings in 2000 and 2010

Year	Species	Live Pounds	Value
2000	crab	545,254	\$215,232
2000	lobster	3,446,703	\$11,556,498
2000	other species	4,398,347	\$608,110
2010	clam soft	83,195	\$131,802
2010	crab	262,754	\$84,615
2010	lobster	5,842,761	\$18,982,906
2010	other species	2,778,728	\$554,819

Source: Maine DMR, updated 12/7/11

Note: Some species were combined due to confidentiality provisions

The number of boats registered to Vinalhaven residents is shown in the next table.

Boat Anchorage in Vinalhaven

Boat Length (ft)	2011
10-19	121
20-29	77
30-39	116
40-48	26
78	1
Total	341

Source: Maine DMR

See the map titled Licensed Outfalls and Discharges for the location of point sources of pollution within Vinalhaven, as listed in the next tables.

Owners of Licensed Active Overboard Discharges (OBD) Type 413	DEP_ID	Water Body	Licensed Flow (GPD)
Elizabeth Swain & Christopher Ayres	001035	Atlantic Ocean at Old Harbor	300
Andrew S. Updegrove	001905	Carvers Harbor	300
Flora Noonan	002081	Carvers Pond	300
Katharine Cole & Dennis Hannan	002103	Fox Island Thorofare	300
Dept of Transportation	002285	Carver's Harbor	650
Carl W. Engelhart	002447	Atlantic Ocean at Old Harbor	450
Arthur Terry, III	002489	Fox Islands Thorofare	450
Beth Gilford	002535	Atlantic Ocean at Indian Creek	300
Jean Scudder	003229	Atlantic Ocean at Old Harbor	810
W. Stevens Sheppard	003277	Fox Island Thoroughfare	500
Lorraine Walker & Victor Ames	006877	Old Harbor	300
J. Philip Saul and Amy Davis	007036	The Reach	300

Source: Maine DEP

Note: GPD (gallons per day) of effluent

Wastewater Facilities in Vinalhaven	NPDES License	Maine License	Category
Town of Vinalhaven	ME0102491	8146	Minor

Source: Maine DEP

A map and / or description of water-dependent uses.

See the Current Land Use Map for the existing zoning along and near the coast including shoreland zones. Most development along the coast outside of harbor areas is residential, not water dependent. Commercial uses are primarily located adjacent to the village area. Water dependent uses are found at and near landings, piers and wharfs, which are mostly within the village area.

A brief summary of current regulations influencing land use patterns on or near the shoreline.

Floodplain Management: Vinalhaven participates in the National Flood Insurance Program, and the Town has adopted Floodplain Management Ordinance provisions. Special flood hazard areas are inundated by 100-year floods, i.e., less than a one percent chance of being equaled or exceeded in a given year. Ordinance provisions limit development in flood prone areas and require that new development in these areas is suitably designed to withstand flooding.

Shoreland Zoning: Vinalhaven has adopted shoreland zoning provisions that are intended to provide protection to shorefront areas. Districts include Stream Protection, Water District, Resource Protection, Residential Marine 1, Residential Marine 2, Residential Marine 3, Residential Commercial, and Commercial Fisheries/Maritime Activities. See the Land Use Ordinance for more information on these standards and permitted uses.

A description of any local or regional harbor or bay management plans or planning efforts.

As noted, Vinalhaven has adopted a Harbor Ordinance. The Harbor Master oversees the Town's moorings, floats, docks, ramps, wharves, channels, and adjacent municipal property. Reference to the Penobscot Bay Conservation Plan (Maine Inland Fisheries and Wildlife, 1987 and Revisions) has been incorporated in the Land Use Ordinance to protect habitat for seasonal wildlife, seabird nesting islands and designated Class A habitat areas of state or national significance.

Significant Marine Wildlife Habitats - Vinalhaven	
Area Number	Area Name
P066	Mill River
P067	Carver Cove
P068	Seal Bay
P069	Stoddard-Smith Islands
P070	Narrows-Sheep-Green Islands*
P071	Saddleback Ledge-Brimstone I.*
P072	Roberts-Hay-Otter Islands*
P073	Greens Island
P074	Vinalhaven Town
P075	Hurricane Island
P076	The Basin
P077	Lairey's-Crane-Crotch Islands*
P078	White Island
P079	Medric Rock-Green Ledge
P080	Green-Dogfish Islands
P081	Crockett Point

Source: Penobscot Bay Conservation Plan, 1987

Note: * Also, a Class A Wildlife Habitat designated area.

Marine Wildlife - Vinalhaven	Season of Occurrence
Black Ducks	F*
Black-Backed Gulls	W,P*,F

Marine Wildlife - Vinalhaven	Season of Occurrence
Cormorants	N,P,F
Canada Geese	F*
Eiders	W,S,N,F
Goldeneye/Bufflehead	W,S*,F
Herring Gulls	W*,S,N*,P,F*
Loons	W*,S,F
Mergansers	S
Osprey Nests	N
Old Squaws	W,S,F
Shorebirds	P
Small Gulls	P
Unid. Waterfowl	W,F*

Source: Penobscot Bay Conservation Plan, 1987

Note: W=winter, S=spring migration, N=nesting, P=post nesting, F=fall migration,

* Indicates the presence of greater than 1% of the species' population in Penobscot Bay for the season identified.

The location of facilities (wharves, boat ramps, pump-out stations, etc.), with a brief description of any regional or local plans to improve facilities.

See the map titled Public Facilities and Services for the location of harbor facilities. The primary harbor facilities include the two town parking lots that allow fishermen to load/offload traps and access to public floats. In addition, there is a public float near the Maine State Ferry terminal. Boat launches are also available to the public, two in town at the parking lots and a third at the Thoroughfare, which also includes a dock.

Over the next ten-year planning period, it is believed that the current capacity of Town-owned harbor and landing facilities will be adequate to meet anticipated demand. Proposed improvements to these facilities include replacing the pilings under the town parking lot and continuing to maintain the public floats/launches. See the Capital Investment Plan in the Fiscal Capacity chapter of this plan for more information.

A description or map showing public access points to the shore. Include a brief description of their use, capacity, physical condition, and plans to improve, expand, or acquire facilities such as parking or toilets.

See the map titled Public Facilities and Services for the locations of boat launches and parks with water access.

Over the next ten-year planning period, it is believed that current capacity will be adequate to meet anticipated demand. The public launch at the Carver's Harbor parking lot needs repair, but the launch at the old fish plant parking lot is sound. The third boat launch, at the Thoroughfare, is also adequate, but should be monitored and maintained as needed. Refer to the Public Facilities and Services chapter for more info about public buildings.

A list of scenic resources along the shoreline, including current ownership (public or private) and any protections.

Most of the scenic resources on Vinalhaven are found within or are close to shoreland areas. The sites listed in DeWan's report refer to publicly accessible viewsapes, therefore, the 'Current Protection

Status/Ownership' will refer to the names of any public group that owns that land. See the Natural Resources chapter of this comprehensive plan for a more descriptive analysis and map of these resources

Site Name and Location	Prioritized Rating/ Ranking	Current Protection Status/ Ownership (Easements)
Lane's Island	86	Nature Conservancy
Crockett Cove	80	Town Park (Little Tip Toe Mt)
Carver's Harbor	79	Main St & Town Park (Armbrust Hill)
Sand Cove	73	Town Park
The Basin	72	VLT/MCHT
Geary's Beach	72	
Indian Creek	70	Town Park
Fox Islands Thorofare	70	Town Landing
Old Harbor	68	(View from road)
Barton Island	63	
Vinal Cove	62	(View from road)
Carver's Pond	61	Town Hall/roadside view
Brown's Head	61	Town Owned
Arey Cove	56	Town Park (Booth's Quarry)
Mill River	50	Road Views & VLT
Winter Harbor	45	VLT

Source: Scenic Inventory Report, DeWan Associates, 1992

Survey Results

Should we do more, less, or the same to preserve...?	More	Less	Same	Unsure
Public access to the shore	48%	3%	46%	3%
Marine based businesses	58%	2%	35%	6%
Moorings related to the marine economy	51%	2%	38%	8%
Moorings for visitor use	30%	18%	45%	7%

Issues of Public Concern

Following results from the community survey and conversations during the preparation of this plan, the following issues arose. First, and perhaps most important to sustaining the island economy is access to shore or change of use in shoreland zone. Historically, commercial fishermen have had access to the shore and often owned the houses and wharfs on shoreland property. As the demand for and value of those properties rise, it has become harder and harder for fishermen to maintain ownership, or more importantly, pass it on to their children or grandchildren.

Second, given the increasing concern for climate change/global warming, some people are raising questions about rising sea level. What are the potential threats to the island? Where should energy be focused? Will Main St be underwater someday? All of these questions, and more, will be answered over time. While it is not expected to be within the scope of this plan, it is recommended to begin assessing potential issues/concerns and ideas to help address those.

Population and Demographics

Introduction

With a year-round population of over 1,300 people, according to local records and upwards of 5,000 in the summer, Vinalhaven is the largest un-bridged year-round island community. The community supports a Pre-K – 12 school with an average class size of 10 students. Aging-in-place and sustaining/attracting young adults are expected to be some of the most important aspects of our island's population over the next 10 years.

Analyses

1. Is the rate of population change expected to continue as in the past, or to slow down or speed up? What are the implications of this change?

Historic Population:

Over the last 40 years, Vinalhaven's population has fluctuated +/- 200 people, according to the U.S. Census Bureau. While island estimates indicate populations may be higher, it appears that the population seems to be stable nonetheless.

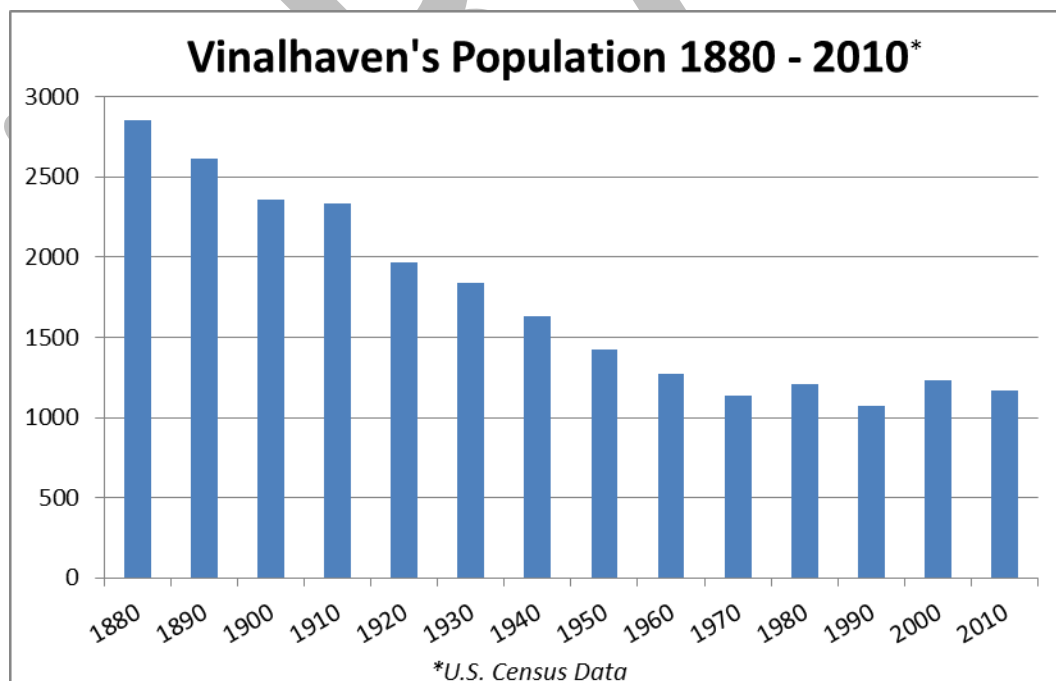
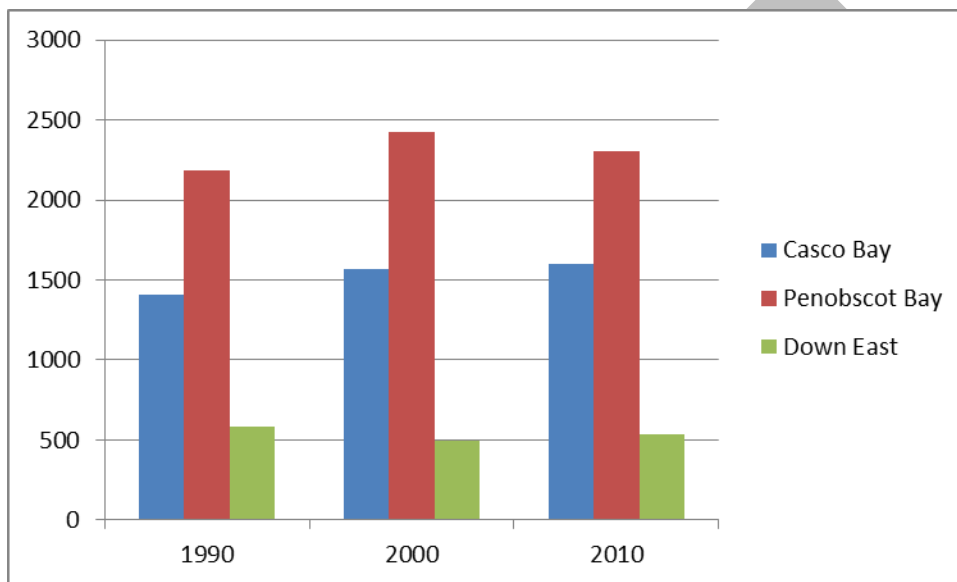


Figure 6.1: Vinalhaven Population from 1880 - 2010

Compared to other island communities in the Penobscot Bay region, Vinalhaven remains the largest populated island. Islesboro is next largest, but has half as many residents, 566 in 2010. Rockland, Vinalhaven's nearest mainland neighbor, has a population of 7,297 (in 2010), and like most of the island communities saw a slight decrease in population from 2000.



Sources: Census and Maine State Planning Office

Using linear regression analysis of the years 1970-2010, the Vinalhaven population in 2025 could reach 1,193 persons. Based upon non-compounded growth per year over the same period in which there was an increase of 30 people, an additional 12 people could be expected by 2025, to total 1,177 persons. Given the relatively small change overall and fluctuations seen by decade during the past forty years, it is just as likely that the Town's population could remain stable, increase slightly, or decrease slightly. Assuming the 2010 Census figure is believed to be accurate, for planning purposes, it is recommend using a forecast of 1,190 year-round residents (estimated from regression analysis), with a likely range of 1,100 to 1,250.

Table 6.1: Year-Round Population Comparisons with Other Island Communities 1880-2000

Community	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
VINALHAVEN	2,855	2,617	2,358	2,334	1,965	1,843	1,629	1,427	1,273	1,135	1,211	1,072	1,235	1,165
Cranberry Isles	343	330	374	399	410	349	334	228	181	186	198	189	128	141
Frenchboro	150	132	174	197	164	117	119	97	57	56	43	44	38	61
Isle au Haut	274	206	182	160	102	89	97	82	68	45	57	46	79	73
Islesboro	1,208	1,006	923	877	637	697	718	529	444	421	521	579	603	566
Matinicus	243	196	184	179	141	156	112	188	100	90	66	67	51	74
Monhegan	90	90	94	120	133	109	115	75	65	44	109	88	75	69
North Haven	775	552	551	535	510	476	460	410	384	399	373	332	381	355
Swans Island	765	632	758	749	566	576	452	468	402	323	337	348	327	332
Rockland												7,972	7,609	7,297
Rockport												2,854	3,209	3,330
Camden												4,022	5,254	4,851

Migration Analysis:

The island's net population change over the last 10 years is (-) 70 people. In that same time period, the net change due to natural causes (114 births and 167 deaths) was (-) 17, leaving the remaining change, a loss of 53, to migration.

Population Forecasts:

Vinalhaven's forecasted population for 2025 is 1,193. Many of the recommendations made in the chapters of this plan, take into consideration this projected number, but are not based solely on population. Changes in land use, including new year-round residential development will determine the actual population growth of Vinalhaven. The chapters of this plan provide a more in-depth analysis of needs and potential impacts on the island's resources.

Seasonal Population:

Vinalhaven is heavily influenced by seasonal populations. The year-round population is approximately 1,165 and there are an equal number of homes associated with seasonal residents as there are year-round. Given that, it is believed that the island's population in the months of July-August reaches nearly 4,000 people. This puts a significant strain on island resources and is discussed in relevant chapters.

Age Distribution:

The State forecasts a total population decline for Knox County based upon 1990-2008 data, with increases in older age groups not offsetting the loss in younger age groups. Given the results of the 2010 Census and the observed growth trends (since 1970 and since 2000) in most communities, however, I anticipate modest growth countywide, with most of that growth occurring in the adult age groups.

As per the 2010 U.S. Census, the median age of Vinalhaven is 45.1. In 2000, the most frequent age group was 45-49, the same cohort in 2010. As seen in Table 6.2, there is a significant decrease (35%) in the 19 and under population since 2000. The largest increase in age groups is between 55-64 years old, which saw a 79% increase. There are concerns from many of the town committees and groups that their volunteer base is “growing old” and there are fewer people to do the work that has been required as fiscal budgets continue to tighten.

	Vinalhaven					Knox County				
	2000		2010		% Change	2000		2010		% Change
	Number	%	Number	%		Number	%	Number	%	
Under 5	84	6.8	44	3.8	-47.6	2,082	5.3	1,921	4.8	-7.7
5 to 9	83	6.7	63	5.4	-24.1	2,383	6.0	2,097	5.3	-12.0
10 to 14	83	6.7	74	6.4	-10.8	2,762	7.0	2,297	5.8	-16.8
15 to 19	65	5.3	62	5.3	-4.6	2,437	6.2	2,135	5.4	-12.4
20 to 24	57	4.6	65	5.6	14.0	1,691	4.3	1,763	4.4	4.3
25 to 29	65	5.3	52	4.5	-20.0	2,180	5.5	1,958	4.9	-10.2
30 to 34	84	6.8	66	5.7	-21.4	2,475	6.2	2,067	5.2	-16.5
35 to 39	93	7.5	68	5.8	-26.9	2,894	7.3	2,375	6	-17.9
40 to 44	101	8.2	86	7.4	-14.9	3,316	8.4	2,574	6.5	-22.4
45 to 49	104	8.4	91	7.8	-12.5	3,348	8.5	3,033	7.6	-9.4
50 to 54	76	6.2	101	8.7	32.9	3,056	7.7	3,388	8.5	10.9
55 to 59	62	5.0	115	9.9	85.5	2,232	5.6	3,409	8.6	52.7
60 to 64	49	4.0	84	7.2	71.4	1,930	4.9	3,125	7.9	61.9
65 to 69	53	4.3	55	4.7	3.8	1,683	4.2	2,293	5.8	36.2
70 to 74	69	5.6	42	3.6	-39.1	1,694	4.3	1,690	4.3	-0.2
75 to 79	42	3.4	32	2.7	-23.8	1,508	3.8	1,296	3.3	-14.1
80 to 84	36	2.9	39	3.3	8.3	989	2.5	1,169	2.9	18.2
85 and over	29	2.3	26	2.2	-10.3	958	2.4	1,146	2.9	19.6
Total	1,235		1,165			39,618		39,736		

Gender:

The 2010 U.S. Census indicated that there were 598 males on Vinalhaven (51.2% of the total population) with a median age of 45.3. The remaining 48.8% (569) represents the females on the island with a median age of 44.5.

Households:

The 2010 Census records 685 seasonal housing units in Vinalhaven. Using the national average household size of 2.59 in 2010, the seasonal population could total 1,775 plus the estimated number of people that can be accommodated in rooms available at B&B's, inns, etc. If the growth in seasonal housing unit construction is greater than the growth in new housing units occupied year-round, and the number of conversions from year-round to seasonal is larger than the conversions from seasonal to year-round, the seasonal population may increase faster than the forecasted total year-round population.

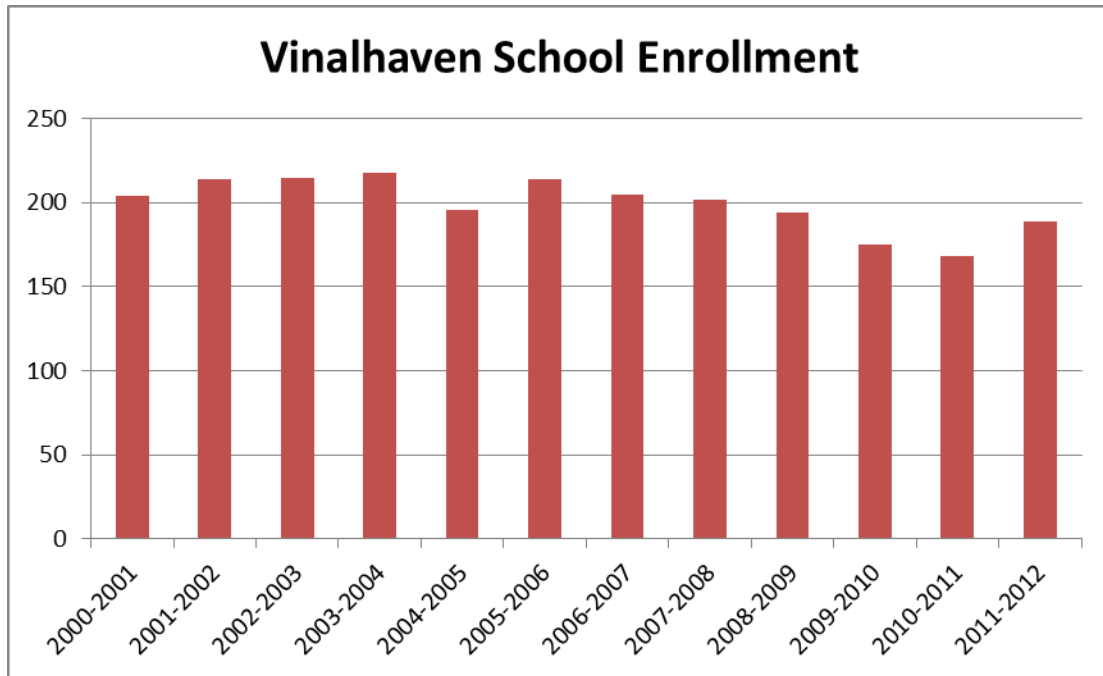
2. What will be the likely demand for housing and municipal and school services to accommodate the change in population and demographics, both as a result of overall change and as a result of change among different age groups?

There may be concern for affordable housing if those families continue to live on Vinalhaven. High property values and low-middle income jobs make it difficult to find affordable housing; see the Housing Chapter for more information.

Town services are expected to stay the same, but there is likely to be an increase in the cost per capita as populations decline.

School Enrollments:

The construction of the new K-12 school was completed in 2003. Projections at that time indicated there would be over 220 students by 2010, currently there are 189. The current trend in population indicates the enrollment will decrease slightly. Just like projecting enrollment at the time of the school's construction, future projections are just that; they are not exact nor are they meant to be.



3. Does your community have a significant seasonal population, is the nature of that population changing? What is the community's dependence on seasonal visitors?

Being an island community attracts a significant amount of seasonal visitors and residents. It is difficult to say how many people are on Vinalhaven at any given time, but based on the average national household size, it is estimated that the island population multiples by 4-5x between the months of June and August. These numbers do not account for seasonal rents occupied by day trippers, overnights or the weekly visitors.

Vinalhaven residents recognize fishing, largely lobstering, is the primary economic provider and at the same time understand the economic need of seasonal populations. There are care takers, seasonal shops and restaurants, landscapers, contractors, day care providers, and many other seasonal based jobs that depend on seasonal visitors.

4. If your community is a service center or has a major employer, are additional efforts required to serve a daytime population that is larger than its resident population?

Vinalhaven is not, nor does it have a service center. Due to the geographic location of the island, there are very few people that commute regularly to Vinalhaven. Vinalhaven's major employers, second to the fishing industry, would include Carver's Market, Islands Community Medical Center, and the Vinalhaven School. Therefore, there is little to no concern with additional needs for daytime traffic, services, or other needs that a town with a typical service center or major employer may expect.

DRAFT

Conditions and Trends

1. The community's Comprehensive Planning Population and Demographic Data Set (including relevant local, regional, and statewide data) prepared and provided to the community by the Office or its designee.

The Comprehensive Planning Population and Demographic data set has been incorporated in the responses to the Analyses section above. Additional information follows.

Total Households

Year	Knox County	Vinalhaven
1970	9,682	431
1980	12,165	479
1990	14,344	470
2000	16,608	550
2010	17,258	545

Source: US Census Bureau

Average Household Size

Year	Knox County	Vinalhaven
1970	2.91	2.63
1980	2.61	2.52
1990	2.45	2.28
2000	2.31	2.25
2010	2.22	2.14

Source: US Census Bureau

Median Age

Year	Knox County	Vinalhaven
1970	34.2	39.4
1980	33.5	35.6
1990	36.9	39.0
2000	41.4	40.2
2010	46.2	45.1

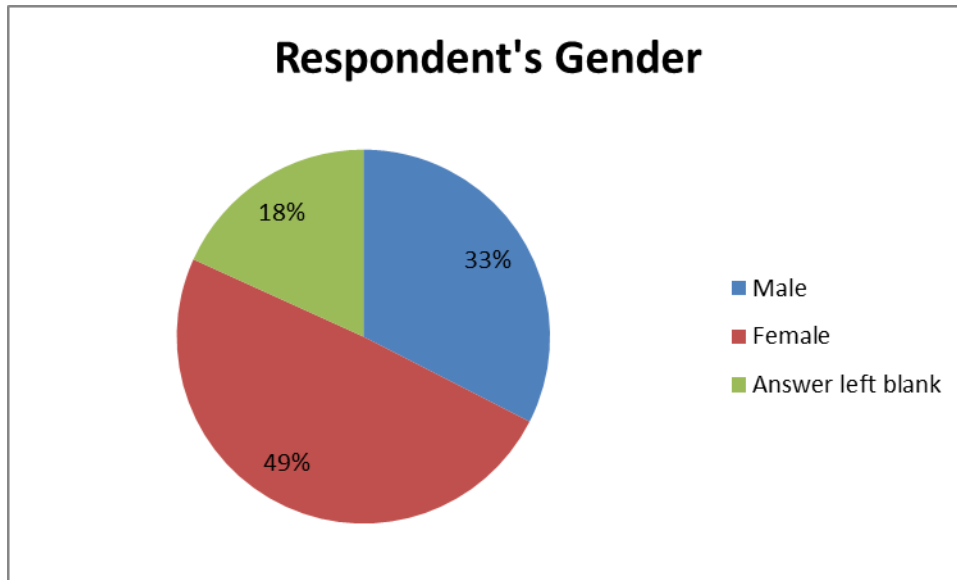
Source: US Census Bureau

Knox County Population Forecast

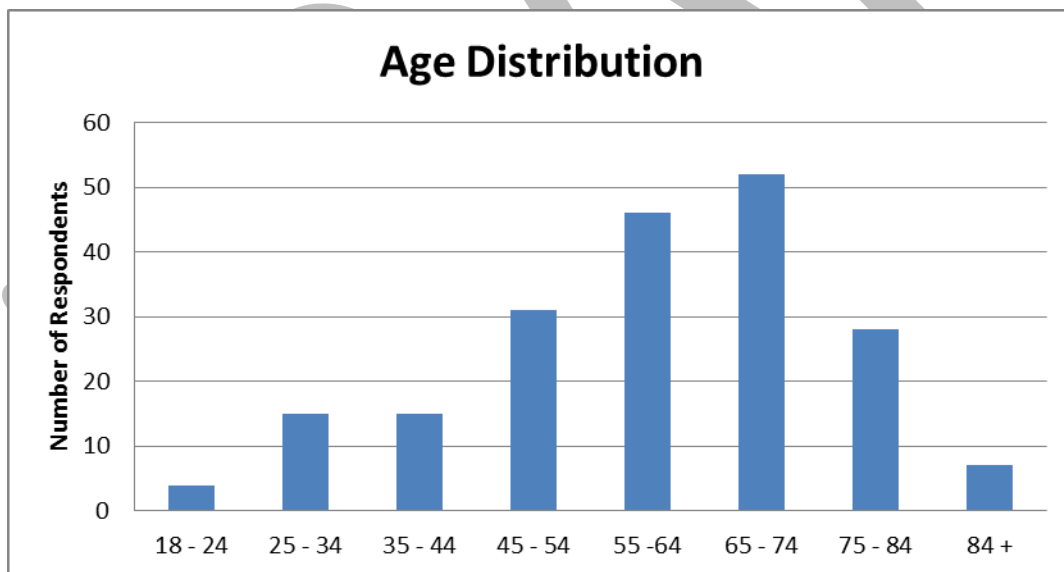
Age Groups/ Year	2013	2018	2023	2028
0-4	2,004	1,892	1,774	1,676
5-9	2,103	2,043	1,930	1,809
10-14	2,124	2,116	2,056	1,943
15-19	1,942	1,866	1,870	1,807
20-24	1,776	1,522	1,500	1,514
25-29	2,415	2,163	1,867	1,798
30-34	2,451	2,554	2,310	2,002
35-39	2,389	2,517	2,623	2,383
40-44	2,686	2,423	2,544	2,651
45-49	2,788	2,655	2,395	2,515
50-54	3,168	2,782	2,645	2,388
55-59	3,393	3,075	2,698	2,565
60-64	3,128	3,349	3,046	2,674
65-69	2,566	2,968	3,182	2,900
70-74	1,850	2,381	2,760	2,967
75-79	1,437	1,568	2,020	2,339
80-84	950	1,104	1,203	1,548
85+	1,371	1,329	1,397	1,494
Total	40,541	40,307	39,820	38,973

Source: Maine State Planning Office

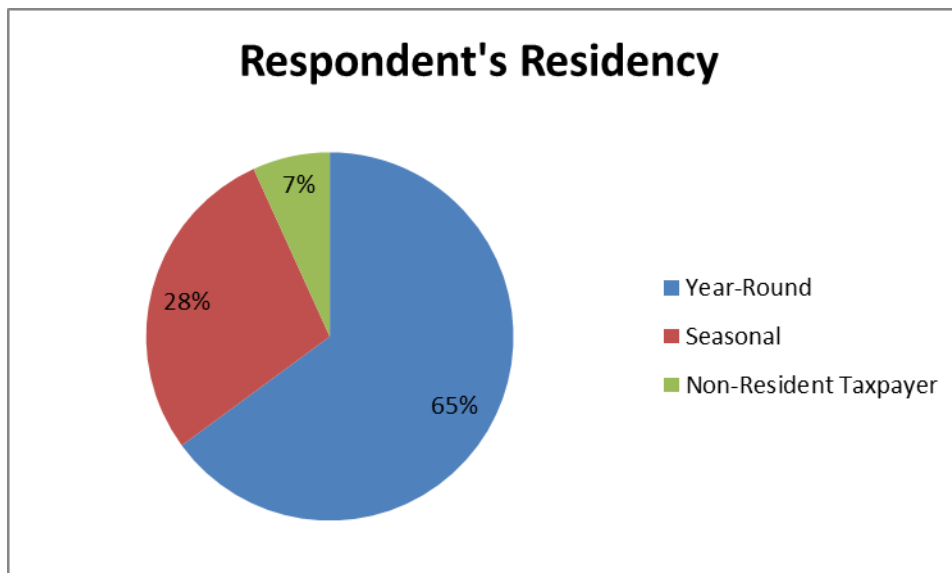
Survey Results



Nearly 25% of the surveys distributed to island residents or homeowners were returned. Of the 203 surveys, 49% were female and 33% were male.



The age distribution of the respondents is reflective of the islands overall age demographics, that is, 49% of the respondents were between the ages of 55-74.



It is also important to note that the majority of the respondents were year-round residents. It is this population that votes on local issues and policies. Their thoughts are well reflected in the survey results. Seasonal residents seemed to echo what year-round respondents desired and any proposed changes were similar or deferred to the year-round population.

Issues of Public Concern

Maintaining the enrollment at the school at current levels or above is important for the island. While the 170+ students is the most of any year-round island community in Maine, it is still important that the enrollment remain at it's current level given the amount of teachers and staff employed and the scale of the school.

Other issues regarding population include aging in place and younger leaders. Many of the community's volunteers and leaders are between the ages of 50 and 70. While this is not a problem, it is important that younger adults begin to get involved to ensure smooth transitions in committees and town matters over the next few years.

Economy

Introduction

The Vinalhaven economy is supported largely by the lobster industry. In 2010, the recorded value of lobsters caught by VH fishermen was over \$18 million. Supplemented by seasonal residents and tourism, the island is able to maintain over 50 businesses on Main St and neighboring areas. It should be noted that Vinalhaven's Residential Marine zones allow fishermen to maintain shops and marine-related businesses.

State and Local Goal(s)

Promote an economic climate that increases job opportunities and overall economic well-being.

Analyses

1. Is the economy experiencing significant change, and how does this, or might this, affect the local population, employment, and municipal tax base?

Vinalhaven is unique in that it is the largest year-round inhabited Maine Island in both population and size. The island is also home to one of the world's largest lobster fleets, accounting for approximately 10% of the state's annual lobster catch. Historically, changes in the economy are seasonal. There are large increases in the summer months that can be attributed to the "tourist season" and lobster harvests. Winter months are spent care-taking homes, mending fishing gear, and ultimately preparing for the seasonal increase brought on by late spring.

Vinalhaven is much like other towns as far as regional and national changes in goods/services, however, the added transportation costs to get those goods/services to and from the island result in inflated prices. This makes any downturn in the local economy seem exponentially larger. Given that, if the marine-related economy dissipates or the "tourist season" shrinks, the island would likely see hardships resembling the collapse of the granite industry. Approximately half of island-residents rely on the lobstering industry. Without lobster it is likely we would lose the stern, captains, and their boats which would then lead into a downward spiral affecting the entire island.

A shift to a tourism-related economy frightens many people due to the potential increased property values, loss of the island's social character, and the threat to natural resources. Property and home values seem to be of significant concern with a community dependent upon a seasonal economy as the current average assessed value of a property is over \$300K (includes public spaces owned by conservation groups, the Town, etc...). Many fear that their heirs will not be able to afford to live on the island they have called home for generations.

2. Does the community have defined priorities for economic development? Are these priorities reflected in regional economic development plans?

There is no local economic development plan, however, the Vinalhaven Chamber of Commerce seeks to help create and sustain the island economy.

The US EDA funds the drafting of CEDS nationwide. Typically, CEDS include economic data and a list of projects based upon community and business input. Most recently, Vinalhaven was included in the EMDC CEDS regional development plan (2010). Some of these projects may be eligible for federal funding. Last year, Knox County communities were moved from the EMDC Economic Development District to the Midcoast EDD (MCEDD), which is currently working on a CEDS for the region.

3. If there is a traditional downtown or village center(s) in the community? If so, are they deteriorating or thriving?

The town center on Vinalhaven is often referred to as "Downstreet". This consists of the properties along Main Street from the Fire Hall to the Union Church (approximately ½ mile long), but could be considered to extend to the Ferry Terminal. Downstreet is home to the majority of Vinalhaven's retail economy and a true working waterfront. Main St is located along Carver's Harbor on the southern side of the island and it is here that you will see evidence of a marine-based economy. Many of the structures seen along the Harbor are protected by zoning to preserve the working feel, but more importantly provide a financially accessible location for our fishermen to live and work.

Financially, Downstreet is more or less sustained, but many physical improvements to buildings and sidewalks could be completed. In the recent years, Vinalhaven has invested millions of dollars in public infrastructure, some of which is evident in the Downstreet area. Most of the improvements have been made underground and has thus caused a need for an investment into transportation infrastructure. Roads and sidewalks of Downstreet need attention, particularly for safe travel from the immediate neighborhoods. Other physical improvements to Downstreet could include building repairs as many of the buildings here pre-date the 1920's. See Historic and Archaeological Resource Chapter for list of historic buildings and recent improvements.

4. Is tourism an important part of the local economy? If so, what steps has the community taken to support this industry?

The impact of tourism is significant, second only to lobstering. The degree to which our economic health thrives depends enormously on the profitability of tourist related businesses. Nine lodging facilities, 6 retail shops, 1 gallery, and 7 restaurants, employ around 60 people and would not remain viable were it not for seasonal business. Several other downtown businesses such as the grocery store might remain open without income from this source, but certainly not on the same scale, and likely employing far fewer people. Many of us are tradespeople, caretakers, and cleaners or work at any of the several dozen other occupations that are dependent either entirely or primarily on summer folks. The employment of about 250 people, nearly the same number as those directly involved in lobstering, would be directly or, to a large degree, indirectly and adversely affected without the profits from the seasonal economy.

On the other hand, it is clear and has been clear for some time that the will of the community is to keep tourism at or about its present level and to keep expansion of this significant slice of the economic pie from overwhelming us. Whether that commitment can remain steadfast in the event of diminished lobster landings is an interesting question and a concern to us all.

The Town of Vinalhaven does not have a visitor management plan as you may find in some of Maine's coastal communities. Transportation to and from the island is limited by the State Ferry service, private water taxi, and Penobscott Island Air (a private mail delivery service which can also provide public connections to regional airports). Given the limited means of transportation to access the island, there

is a sort of natural balance ensuring the island's seasonal fluctuation does not exceed its carrying capacity.

There are numerous committees that seek to better community needs and may indirectly improve services for the tourism industry. For instance, the Sidewalk Committee assesses the Town's sidewalks and presents work proposals to the Board of Selectmen. Sidewalks improve the community's health, socially and physically, but also benefit the tourist by providing safe means of transportation once they are here. Other steps taken by the Town that may benefit the tourist industry may include the management of Town Parks. There are approximately 5 Town Parks on the island that are maintained by the community which serves a direct benefit to our residents, but also provide a source of recreation for tourists.

5. Do/should home occupations play a role in the community?

The Town adopted its zoning ordinance in 1974. In the ordinance, there was the creation of a residential/marine zone, which allows for people to live and work on their residential lots, so long as it is a marine-related business.

The Home Occupation use (within the Town's Land Use Ordinance) allows for enterprises that "involve wholesale production for delivery or sale through retail outlets and may include retailing of items produced or services provided on the premises by the residents..."

6. Are there appropriate areas within the community for industrial or commercial development? If so, are performance standards necessary to assure that industrial and commercial development is compatible with the surrounding land uses and landscape?

Yes, the town adopted island-wide zoning as part of their Land Use Ordinance in 1976. As part of such, the town created two districts to accommodate industrial or commercial development, Residential-Commercial (RC) and Commercial Fisheries & Maritime Activities (CFMA). The purpose of the RC district is to provide for areas of non-polluting, light industrial commercial and residential uses. The purpose of the CFMA district is to provide marine related facilities and services in support of commercial fishing and other maritime activities.

7. Are public facilities, including sewer, water, broadband access or three-phase power, needed to support the projected location, type, and amount of economic activity, and what are the issues involved in providing them?

Sewer and Water services are extended to residential and commercial buildings located within the Village Overlay District. For more information regarding these services refer to the Public Facilities and Services Chapter.

Internet-based businesses are increasing as is the expectations for businesses to be found online. Broadband services on the island are limited to the Downstreet area and houses along high development roadways. The Town received a grant through the Connect Maine Authority to extend services to “last-mile” homes. In doing so, many people will have access to high-speed internet, thus, allowing them to work from home. This could be a great benefit for attracting more people to the island or to keep seasonal residents on the island for longer periods of time.

In 2008, the town’s underwater power cable was replaced and improvements included Three-Phase Power and fiber optics. In addition, the cable was scaled larger than the previous one, which allows for the sale of the excess energy generated by the Fox Island Wind Project.

8. If there are local or regional economic development incentives such as TIF districting, do they encourage development in growth areas?

Economic development incentives can provide a great benefit to businesses and Towns. Currently, there are no local economic development incentives and until 2010, there were no Tax Increment Finance (TIF) Districts on the island. TIF districting is available to businesses to alleviate and minimize hindrances to development. The Fox Island Wind LLC applied for a TIF in the development of the wind-turbine site and was approved.

There are, however, many regional incentives, financial and technical, available to business owners from the Town. The Island Institute has a Coastal Innovation Fund, a \$2 million economic-development tool to help island and coastal entrepreneurs’ access working capital to start or expand their businesses, and

to keep fishing permits in the hands of Maine ground fishermen. Also, financial assistance is available from the Finance Authority of Maine (FAME) and Maine Department of Economic and Community Development (MDECD). Technical assistance is available from FAME, MDECD, GrowSmart Maine, and Maine Development Foundation.

9. How can/does the community use its unique assets such as recreational opportunities, historic architecture, civic events, etc. for economic growth?

All of these assets are used to attract people to the island, whether it is for the day, night, week, or a degree of residency. Visitors will positively impact the local economy during their stay, regardless of the duration. The VHCC works with member businesses and organizations to promote the various assets Vinalhaven has. Groups, official and unofficial, work to develop new opportunities for economic growth. Other opportunities exist in the marine trades, whether it is marketing VH caught lobster or making boats, the marine/working waterfront industry has a lot to offer to the community.

Conditions and Trends

1. The community's Comprehensive Planning Economic Data Set prepared and provided to the community by the Office or its designee.
2. A brief historical perspective on how and why the current economy of the community and region developed.

The earliest economies on Vinalhaven were fishing and farming. Fishermen harvested close to home supported by boat builders and suppliers. In the 1800's and into the mid 1900's Vinalhaven's large fleet of fishing vessels sometimes returned with catches of 10,000 pounds or more. The Island supplied seafood markets in Portland, Boston, and New York with salted and dried fish and later exported herring and lobster, canned fish, cut and packed fresh fin fish, and fish glue. More recently, fresh Vinalhaven lobster has been an economic mainstay supplemented by scallops, crab, sea urchins, and to a lesser degree as the season is curtailed, shrimp and halibut. In 1903, the Island boasted the largest fish curing plant (Lane-Libby) in Maine and later, the first cold storage plant in the States.

Throughout the 19th century, farming, which provided grains, feed, and fresh produce, was very important for Vinalhaven islanders. Farming sometimes supplemented fishing income, and vice versa; for others it was the sole family support. These were 'farms' ranging in size from 30-300 acres, usually with working oxen, milk cows, sheep (as many as 80), poultry (as many as 50), and sometimes a pig. Early crops included barley, corn, Irish potatoes, and hay, and the farms produced eggs as well as butter and cheese. Most acreage was dedicated to harvested crops and meadow, an orchard and vegetable gardens, and the balance in woodland (for cordwood). The Island farms remaining in the 20th century concentrated on dairy production, but with the advent of stricter pasteurization requirements in the 1950's, farming here became history, as evidenced now by orchard remains, shoreline capes, and some remaining barns. Of over 80 Island farms, nearly half of the houses still stand, most being low and high posted clapboarded timber-framed capes, often with two or three intact fireplaces; some including the large hearth and bake oven. Few of their outbuildings are standing.

Not far beneath our fragile and thin soils was quarryable-grade granite and its extraction from Vinalhaven and Hurricane islands overshadowed all other Island economies in the last third of the 19th century. The granite industry's wealth provided the basis for a diverse and strong commercial district well into the 20th century. When coupled with active fishing and farming, the granite industry provided a setting in which social and educational institutions grew, reflecting the needs and interests of a large year-round population of 2,855 residents in 1880. Excepting a very early Indian quarrying project, serious granite extraction began in 1826, with smaller scale operations being overtaken by larger ones, Bodwell Granite being the largest. For over 100 years Vinalhaven granite made the Island one of Maine's largest quarrying centers. Men arrived to work from other states, from the British Isles, from Italy (as carvers), and later, from Scandinavia, to quarry, cut, polish and shape the stone. Granite left Vinalhaven on sloops, schooners, and barges for ports as far away as New Orleans. The first large federal contracts began prior to the Civil War and continued into the early 20th century. Among the many projects built with area granite were the base of the Brooklyn Bridge; the New York Custom House (now the Museum of the American Indian); post offices in Brooklyn, Washington, Buffalo, Cincinnati, St. Louis, and Kansas City; the Washington Monument and federal office buildings in the Capital; the Pennsylvania Railroad Station (in Philadelphia); the columns for the nave of the Cathedral of St. John the Divine in New York City; as well as private mansions, monuments, bridges, dams and thousands of tons of paving blocks for the streets of Portland, Boston, New York, Newark, and Philadelphia. With the

advent of structural steel, concrete, and asphalt as the building materials of choice, the Bodwell closed in 1919 and the paving block businesses in the 1930's.

Now, as the 21st century unfolds, with the fin fish supply severely depleted, Vinalhaven is home port to one of the most profitable and arguably, the largest lobster fishing fleet in the world, supporting a healthy fishing economy in which half of our year-round residents still have livelihoods connected to the sea. Many fishermen still work out of old fish houses and from old wharves; others have built new structures and there is much adaptive use.

3. A list of local and regional economic development plans developed over the past five years, which include the community.

The Eastern Maine Development Corporation prepares annual Comprehensive Economic Development Strategy (CEDS) reports. Through 2011, their reports included Knox County communities along with the five other counties of Eastern Maine. The CEDS reports outline economic trends and inventory planning and projects underway that seek to improve the economy by creating or retaining employment and services, and proposals for which there is community interest and for which funding from the U.S. Economic Development Agency is possible. Vinalhaven projects and proposals were not included in the 2009, 2010, and 2011 CEDS. The Midcoast Economic Development District, which was recently expanded to include Knox County, will solicit and consider projects and proposals from Vinalhaven along with other communities in the District in their future CEDS reports.

4. Where does the community's population work and where do employees in your community reside?
A description of the major employers in the community and labor market area and their outlook for the future.

Approximately 98% of Vinalhaven residents work and reside in Vinalhaven. The island's geographical location deters people from commuting to/from another town as there is a three hour round-trip commute. The Town's major employers are SAD 8 (38); Carver's Harbor Market (15-30); Linda Bean (10-35); Town of Vinalhaven (11); and I.C.M.C. (15); both the Market and Linda Bean range in employees due to seasonal demands. An inventory of island jobs done in 2003, see Table 7.1, reveals that over 250

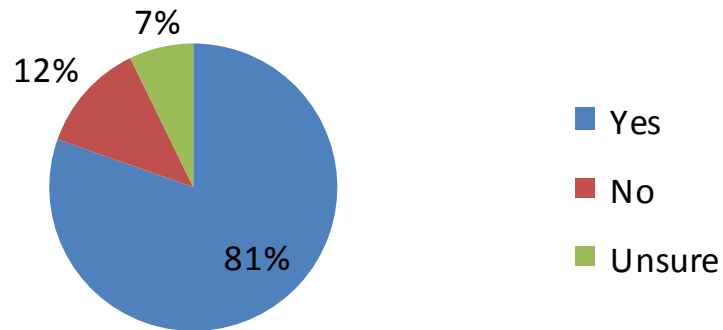
people are employed directly by the lobstering industry, which should be considered the island's largest employer.

5. A description of any economic development incentive districts, such as tax increment financing districts, in the community.

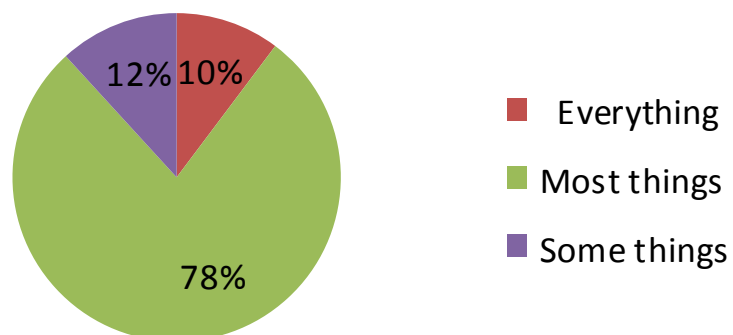
On November 5, 2009, the Town of Vinalhaven, qualified by law to vote, approved the Municipal Development and Tax Increment Financing (TIF) District (Fox Island Wind Project) and adopted the Development Program for such District presented at a Special Town Meeting. Fox Island Wind, LLC (FIW) proposed to construct three 1.5 megawatt wind turbines in the District at a cost of \$14.5 million. The District's means and objectives are to capture and retain all (100%) of this increased assessed value from both real and personal property improvements in the District. The Town will allocate a portion of the tax increment revenue attributable to the FIW Project to FIW to help finance costs of the Project. The Town will retain 10% of the balance of the Tax increment revenue attributable to the Project to help finance public improvements. Allocation to FIW of 90% is pursuant to a Credit Enhancement Agreement between the Town and FIW dated July 1, 2010. The term of 30 years runs from July 1, 2010 to June 30, 2040.

Survey Results

Are you concerned about the stability of VH's year-round economy?



How much do you buy locally (Vinalhaven stores/services)



Would you like to see any of the following businesses or industries expand?	Favor	Oppose	Undecided
Auto & Small Engine Repair Services	72%	7%	21%
Banking	36%	35%	29%
Bed & Breakfast	62%	14%	24%
Boat Building	80%	2%	18%
Community Gardens	77%	9%	13%
Community Supported Agriculture	76%	10%	14%
Construction	42%	21%	36%
Craft Industries	83%	3%	15%
Elder/Home Care Services	86%	2%	13%
Farming	88%	3%	10%
Fast Food/Deli	28%	52%	20%
Forestry Operations	46%	20%	35%
Hotels/Inns/Motels	33%	40%	27%
Medical Services	81%	5%	14%
Restaurants	73%	9%	18%
Retail Stores	63%	12%	26%

Would you like to see any of the following businesses or industries move onto the island?	Favor	Oppose	Undecided
Aquaculture	40%	36%	25%
Auto Taxi Service	56%	18%	26%
Camping/Campgrounds	18%	66%	16%
Chain Stores (retail, fast food, etc...)	10%	83%	7%
Computer Services	66%	15%	19%
Light Industry (processing, manufacturing, etc...)	53%	22%	24%
Marina	44%	33%	23%
Processing Farm Products	54%	17%	30%
Recreation	53%	17%	30%
Tourism	36%	38%	26%
Trade Services	42%	14%	43%
Water Taxi Services	54%	22%	24%

Issues of Public Concern

The low price of lobster, a trend that the industry has seen for the past few years, and the glut of lobster in 2012 made a larger group of people more alert of the industry's challenges. The question of, "What happens if the lobsters are gone or if the fishermen continue to get lower prices?" rang louder than in recent years. While the town does not have the ability to affect lobster prices or the amount of lobster in the ocean, we can look at the diversity of the local economy.

The diversity of our economy is a change from other island communities in Maine. Although many people still travel to the mainland for bulk grocery or other supplies, the island supports numerous restaurants, the grocery store, a lumber yard, and various retail stores. Retaining and attracting young entrepreneurs will bring a new perspective and leadership to Downstreet and could help sustain our vibrant community.

Housing

Introduction

According to local records, approximately 52% of the parcels on the island are owned by people primarily residing in Vinalhaven. Over the last 10 years, 138 building (residential building) permits have been issued, 59% of those by year-round residents. There is a need for affordable house sales to support our younger populations. Rentals are not as large an issue as they were 10 years ago, but there are more and more late 20 – early 30 year olds looking to buy homes. With the rising population, it should also be considered necessary to explore housing opportunities for the elderly in the hopes of keeping them on the island.

State and Local Goal(s)

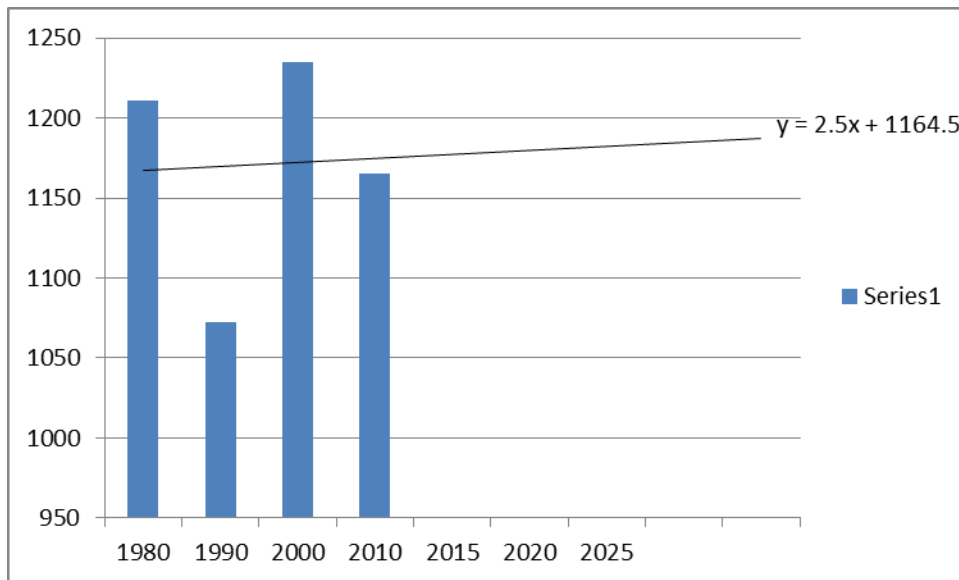
To encourage and promote affordable, decent housing opportunities for all Maine citizens.

Analyses

To generate minimum analyses to address state goals, use Conditions and Trends data in Section 3.8(C) to answer the following questions.

1. How many additional housing units (if any), including rental units, will be necessary to accommodate projected population and demographic changes during the planning period?

The population density of Vinalhaven is 50/mi², making it one of the highest densities among year-round island communities in Maine. Neighboring coastal towns of Rockland, Rockport, and Camden have densities well above this at 570, 152, and 262 per square mile respectively. The projected population growth over the next 15 years is expected to increase slightly. Given this, it is expected that the need for housing will also increase slightly.



2. Is housing, including rental housing, affordable to those earning the median income in the region? Is housing affordable to those earning 80% of the median income? If not, review local and regional efforts to address issue.

Affordability of housing is of concern as the demand to own island property is relatively high. Coupled with high assessments, this makes it difficult for average income earners to afford property that may have been in their family for generations. Currently, a 30-year mortgage at a fixed rate of 3.75% would cost a homeowner (based on year-round residency home values) \$1,120/month. Given a median household income of \$40,000, this is slightly above the “affordable” range (30% of income). Decent, year-round rental properties are limited and the average cost is estimated to be \$750/month. With three income-based housing buildings and the concern of high property values, there should be consideration of forming or joining a local or regional housing coalition/group.

Income - Median Household,	1990	2000	2010
Median Household Income	19,706	34,087	40,526
Margin of Error			6,334
Income - Per Capita,	Vinalhaven	2000	2009
Per capita income of previous 12 months		21,287	28,736
Margin of Error			5,793

Income - Percent Households Below Poverty, 2000	Vinalhaven	2000	2009
Households		557	433
Margin of Error		n/a	64
Below Pov		53	92
Margin of Error		n/a	33
At Or Above Pov		504	341
Margin of Error		n/a	59
% Households Below Poverty		9.5	21.25
Margin of Error		n/a	7

Source: US Census Bureau, American Community Survey, and US Bureau of Economic Analysis

Census data used in the two housing studies described below demonstrate the increased price of homes over the past 30 years:

Year	Year-round houses: %	Value	Year-round rents: %	Rent
1970	54%	less than \$10,000	100%	less than \$100
	25%	\$10,000 - 14,999		
	12%	\$15,000 - 19,999		
1980	19%	\$20,000 - 24,999	49% 38%	less than \$100 \$100 - 149
	31%	\$25,000 - 34,999		
	14%	\$35,000 - 49,999		
2000	32%	\$50,000 - 100,000	22% 50%	less than \$250 \$250 - 500
	26%	\$100,000 - 149,999		
	17%	\$150,000 - 199,999		
2012				
	10%	\$50,000 - 100,000	It is unclear at this time what the rent is for the island.	
	12%	\$100,000 - 149,999		
	10%	\$150,000 - 199,999		

In 2012, almost half of the properties on Vinalhaven were valued over \$200,000 while the remaining 19% were valued under \$50,000. Approximately two thirds of those properties are developed.

3. Are seasonal homes being converted to year-round use or vice-versa? What impact does this have on the community?

	1970	1980	1990	2000
Total housing units:	776	994	1,029	1,228
Vacant:	102	27	8	41
Year-round:	431	479	470	550
Seasonal:	243	488	551	637

Although new home construction has been evenly divided between year-round and seasonal residents during this time, the census figures demonstrate that seasonal owners are buying many of the houses formerly occupied year-round. Over the past 10 years, 150 properties have changed to seasonal ownership; that is 54% of the houses sold in that period. This puts additional pressure on housing options for middle income residents.

The seasonal housing stock in Vinalhaven represents approximately 45% of the total units. The average value of those homes is \$346,000 whereas the average value of a year-round home is \$272,000. This presents a major impediment for people interested in moving to Vinalhaven. The rising values of those seasonal homes have driven up property values and made affordable housing a problem for island residents.

4. Will additional low and moderate income family, senior, or assisted living housing be necessary to meet projected needs for the community? Will these needs be met locally or regionally?

Currently, there is one apartment building with six units for people over the age of 60. A second building is also available for people that qualify. Both of those buildings, regardless of age, are only eligible for year-round residents of Vinalhaven. The island also has an eldercare facility. Vinalhaven Eldercare Services offers eight beds (six for Maine Care patients and two private-pay patients).

Age	#	%
50 to 54	101	8.7
55 to 59	115	9.9
60 to 64	84	7.2
65 to 69	55	4.7
70 to 74	42	3.6
75 to 79	32	2.7
80 to 84	39	3.3
85 and over	26	2.2

Source: US Census Bureau 2010

As seen in the table above, there are a large number of people over 50, the age at which many organizations begin to offer benefits/discounts to people. This age demographic accounts for approximately 42% of Vinalhaven's population. It is reasonable to expect an increased need in services for this demographic. Locally, a committee or group could form to begin brainstorming ideas for housing.

5. Are there other major housing issues in the community, such as substandard housing?

Much of the housing stock on Vinalhaven is built pre-1970's. Poor insulation and high energy costs make these homes undesirable and a burden for those living in them. Beyond that, there are not a large number of substandard housing or major housing quality issues within the community.

6. How do existing local regulations encourage or discourage the development of affordable/workforce housing?

Affordable/workforce housing is encouraged, or allowed, in all zones as evidence from the Land Use/Zoning Ordinance. Density bonuses are given at 100% to those in the Village Overlay District and 50% in all other zones. Many times this serves as a livable unit for a family member or relative, or it may serve as an additional source of income. The island does not specifically speak to or provide for workforce housing. Many people live and work on the island. In the case for contractors coming to

work, they are usually able to travel via the Maine State Ferry and/or find accommodations at one of the various lodging opportunities.

Conditions and Trends

1. Information on existing local and regional affordable/workforce housing coalitions or similar efforts.

There are three affordable/income-based housing projects on Vinalhaven, all completed at different times. Two serve as low-income housing units while the third unit serves middle-income residents. In 2002, Vinalhaven had a local housing committee that responded to the need of housing, particularly affordable. Upon completion of the third housing unit, the committee disbanded as it fulfilled its purpose at the time.

2. A summary of local regulations that affect the development of affordable/workforce housing.

In the 1988 Comprehensive Plan, the observation was made that “A population with lower than average income is competing for a limited space with persons whose earning capacity is much greater.” This means that the existing housing stock and buildable properties are increasingly being acquired by seasonal residents. As previously mentioned, local records show 150 homes have been bought over the past 10 years by seasonal residents and approximately 10 have become year-round residents.

In order to alleviate the shortage of year-round rental housing, Section 16. II. of the Land Use Ordinance provides standards for conversion of existing buildings or new construction by granting a density bonus of 100 %.

Survey Results

Housing	Do you see a need for.....?	Yes	No	Unsure
Q 20	Single Family Homes	41%	34%	25%
Q 21	Year-Round Rental Properties	64%	16%	20%
Q 22	Low-Income Housing	56%	19%	24%
Q 23	Housing for Elderly	68%	12%	20%

Q 24	Affordable Housing	80%	7%	13%
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Issues of Public Concern

Aging in place programs and services, as mentioned in the Population and Demographics chapter, is something that could benefit our residents. There is a large group of people within that demographic range.

Another issue that has been expressed is the availability of affordable, decent year-round housing. While there are many decent homes they are often not affordable and conversely there are many affordable homes that are not decent. When you consider the population demographics, the large number of people above 65 may, or may not, be looking for a different living situation. Few people have mentioned the idea of an active senior-shared housing type of building where responsibilities are shared and someone could come in periodically to check on the residents. There are no solutions offered for the affordable, decent housing issue other than the consideration for a group or committee to begin brainstorming and considering the island's options.

Recreation

Introduction

Outdoor recreation is important to island residents as 62% of year-round residents find it most important and 78% of the seasonal residents find it important in determining their level of satisfaction for living on the island(see Survey Results Report for more info). With three primary public land groups conserving land on Vinalhaven's main island, there are numerous opportunities for outdoor recreation. The Town also maintains over half of a dozen town parks, most of which have trails. There are thousands of additional acres enrolled in some of the state's Current Use property tax programs, which are largely not open to the public, but they do help preserve neighboring open spaces. Development pressures are evident, but not of overwhelming concern at this time. This chapter highlights accessible open space.

State and Local Goal(s)

To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters.

Analyses

1. Will existing recreational facilities and programs in the community and region accommodate projected growth or changes in age groups in your community?

There are over 600 acres of parks, preserves, or other forms of public lands which accommodate the recreational needs of the current and projected populations. Based on results from the Community Survey, 96% of the people are either 'very satisfied' or 'satisfied' with existing 'Recreational Facilities', but recognize that pedestrian facilities are largely inadequate – 49% of the survey respondents. In addition to off-road pedestrian trails, there is a need for improving, and in some places, expanding sidewalk networks (refer to the Vinalhaven Condition Assessment and Maintenance & Development Plan prepared by the Sidewalk Committee in 2006).

Existing bike facilities seem to satisfy the survey respondents as 63% are either Very Satisfied or Satisfied. There is, however, support for making bike travel safer, 77%. Refer to the Transportation Chapter for more detailed info.

Access to the water is available at various points around the island. A 1989 Vinalhaven Coastal Access Study showed there were 39 Recreational Access Sites. Since that study, at least 22 of those 39 sites are still open to the public, which is actually five more than in 1989. See the Recreation Map for locations of the access points.

Given all of this info, it is safe to assume that the existing facilities are adequate, but will need continued maintenance. The projected change in demographics, particularly the age groups, show an increase in the elderly and that should be taken into consideration.

2. Is there a need for certain types of services or facilities or to upgrade or enlarge present facilities to either add capacity or make them more usable?

Based on community comments and survey results, there is a need to provide more recreational facilities. Both, the youth and the retired populations see a need for these facilities in order to get and stay fit, healthy, and out of trouble. The need for improvements to existing facilities has been expressed and includes the privately-owned gym and public trails. New facilities such as tennis courts, kayaking, and a swimming pool are just some of the suggestions. While not all of these facilities are approved by the general community, it is important to consider the needs of the youth and aging population.

There is concern over the lack of and/or condition of the existing sidewalks. There is a Town Sidewalk Committee that seeks to improve the sidewalk network on the island. See the Transportation chapter for an inventory of the Town's sidewalks.

Off-road facilities include lands managed by the Town, VLT, MCHT, and a few other public entities. As mentioned above, many of the residents are satisfied with the amount of hiking trails and recreational facilities, but feel pedestrian facilities are inadequate. These include connections in and around town for walkers, runners, cyclists, etc...

ATV riding is a popular form of recreation for some on the island, however, there is no area designated for riding. The town has not explored finding a legal place for riders. Most feel that even if an area were designated, this will not stop the illegal trespass. Illegal trespass occurs throughout the island, and it

poses a serious threat to the island's natural resources, including juvenile lobsters, and the species upon which they depend.

3. Are important tracts of open space commonly used for recreation publicly-owned or otherwise permanently conserved?

Vinalhaven has over 2,000 acres that are open to public recreation, and approximately 25 miles of trails and paths. In addition to the publically accessible land, there are 2,600+ acres permanently conserved or enrolled in one of the 3 state tax programs to conserve land. Some of the most frequently used parks and preserves include Lane's Island, Ambrust Hill, Skoog's Park, Huber Preserve, the Basin Trail, and Tip Toe Mountain.

Traditionally, much 'undeveloped' private land in Maine has been accessible to individuals for recreation, like hiking, access to water for boating, and sometimes hunting. However, as land changes hands, it is often posted by the new owners to discourage or prohibit its use by others. Sometimes this is done by out-of-state owners who do not have a relationship with local residents. Or, it is done after people leave trash, dump garbage, or damage trails (like ATV use in the spring). The higher value of land and increased property taxes and the privacy sought by new owners often leads to restricting public access.

4. Does the community have a mechanism, such as an open space fund or partnership with a land trust, to acquire important open spaces and access sites, either outright or through conservation easements?

The town does not seek out the ownership of open space or access sites. The town has maintained access to the working waterfront through restricted zoning and the town floats/boat launches highlighted in the marine resources chapter.

5. Does the public have access to each of the community's significant water bodies?

The town's significant water bodies can be accessed by the public. As the ocean is the most significant water body for the town of Vinalhaven, there are numerous places for the public to gain access. The

two town ramps and the town dock offer opportunities for recreational boaters to launch or tie up small boats. Portable boats such as kayaks can also be launched from the town ramps, Grimes Park, and from the town dock at the north end of the island. Other launching sites are available at spots along the Calderwood Neck Road, Granite Island Road and at Geary's Beach – though these are dependent upon high tide for ease of launching.

Inland water bodies that are significant include the recreational quarries, Round and Folly Ponds, the Basin Preserve, Perry's Creek, and Carver's Pond. The quarries are accessible to swimmers while the Basin Preserve and Carver's Pond each have roadside access for canoes or kayaks. Round and Folly Ponds are town water supplies and are therefore not for recreational use. Perry's Creek also has launch access for small recreational boats and a small parking facility.

6. Are recreational trails in the community adequately maintained? Are there use conflicts on these trails?

Trails in the community are maintained by the Town (via the Park Commission or Lane's Island Stewards), the VLT, or the MCHT. In the past, there have been numerous youth and community groups that have also contributed to trail building and maintenance.

The user conflicts on the public trails are minimal. None of the trails are open to off-road vehicles or bicycles and most of the trails prohibit pets. The only conflicts that may arise can be attributed to the narrow trails. Due to the shallow soils, many of the trails have roots, rocks, and water drainage issues making it difficult for everyone to enjoy

Continued maintenance is required for all trails to ensure the safety park visitors and the preservation of the trails.

7. Is traditional access to private lands being restricted?

While the majority of shoreline properties are non-resident landowners, mutual understanding allows people to access trails, roads, and waterways that have traditionally been available for use. During summer months (May – September), landowners have likely returned and there are less people

accessing the land. The “off-season” brings about a sense of exploration as residents are often found walking private roads. This benefits both resident types as year-round, or extended seasonal residents are able to exercise on these “trails” and the landowners benefit from their unscheduled visits. Many landowners believe it is the visit from others that ensures their properties do not get vandalized.

Condition and Trends

1. The community’s Comprehensive Planning Recreation Data Set prepared and provided to the community by the Department of Conservation, and the Office, or their designees.
2. A description of important public and private active recreation programs, land and water recreation areas (including hunting and fishing areas), and facilities in the community and region, including regional recreational opportunities as appropriate, and identification of unmet needs.

Local facilities and programs

- Parks and Preserves – approximately 25 parks and preserves on Vinalhaven of which, 20 are public and 5 are in easement with limited access.
- Quarries – Booth and Lawson Quarry are popular swimming holes during the summer months and are frequented in the winter by ice skaters.
- Vinalhaven Watershed Water District – This land is preserved for the purpose of protecting the town water supply. There are foot trails that provide low-impact recreation to the public.
- Rod and Gun Club – open to dues paying members
- Ball Ground – An old baseball field that is now flooded annually in the winter to provide a skating surface.
- Aerofit Fitness – A privately-owned gym that has weight training and aerobic equipment. Additionally, there are spaces available for people to rent should they like to host large group exercises. Currently, Zumba and Yoga are some of the programs that are offered.
- School facility
 - Ball fields – soccer, basketball, and baseball fields are available for the public use
 - Playground
 - Community theatre – 350 seat auditorium/stage hosts concerts and drama/musical performances

- Programs
 - VLT and MCHT nature walks happen nearly every weekend throughout the summer months and attract upwards of 30-50 people.
 - Seasonal races, concerts, and events
 - Commercial boat tours to neighboring islands provide an adventure for everyone whether they are avid bird enthusiasts or weekend sightseers.

Regional facilities and programs

- North Haven – Numerous recreation opportunities exist on the island immediately to the north. Some of those include Waterman Center, outdoor basketball courts, Mullins Head Park, Burnt Island, 9-hole golf course, and boating/sailing opportunities are all scattered across the island.
- Farnsworth Art Museum, Rockland: Images of sea and shore by one of Maine’s most beloved and prolific contemporary artists, including the Wyeths. Museum includes sculptures in wood and bronze, ink drawings and watercolors of the Maine coast and shore birds.
- PenBay YMCA – “With a commitment to nurturing the potential of kids, promoting healthy living and fostering a sense of social responsibility, the Y ensures that every individual has access to the essentials needed to learn, grow and thrive. The mission on the Penobscot Bay YMCA is to provide high quality services that meet the youth development, healthy living and social needs of individuals and families in the communities we serve” – from the organization’s website.
- Maine’s Lighthouse Museum, Rockland: Largest collection of lighthouse artifacts on display in U.S. Marine exhibits. Open daily June through mid-October.
- Owl’s Head Transportation Museum, Owl’s Head: Landmark, operating collection of World War 1 era aircraft, automobiles, motorcycles, bicycles, and carriages. Air shows and rallies of classic autos, foreign autos, trucks, tractors, commercial vehicles and military vehicles most summers and fall weekends. Several aerobatic shows each summer.
- Goose River Golf Club, Rockport: Nine holes, 3,049/3,096 yd., par 36/35. Season May - Nov
- Camden Hills State Park, Camden: 30 miles of hiking trails with access from five major trailheads, camp facilities with 112 sites with toilet facilities, picnic area, and rocky shoreline.
- Cellardoor Winery and Sculpture Garden, Lincolnville: Winery specializing in grape wine. Maine’s largest vineyard with 25 varieties of grapes. Wine tasting, tours, and sculpture garden including flame-cut steel sculpture depicting women, animals, birds, and plants.

3. An inventory of any fresh or salt water bodies in the community determined locally to have inadequate public access.

Currently, there is a desire to maintain the access in the harbor, and if anything, improve the docking/tie-up ability for skiffs related to commercial marine use. The town does have three public launches and three docking/tie-up areas (two of each are located in Carver's Harbor). The demand for fresh water access and recreation is really minimal. Folly Pond is used periodically for fishing and the quarries are used during the summer months.

4. A description of local and regional trail systems, trail management organizations, and conservation organizations that provide trails for all-terrain vehicles, snowmobiling, skiing, mountain biking, or hiking.

The Park Commission also tests water at the Watering Trough and Deborah Springs; keeps tools maintained and sharpened; and provides food for volunteers from groups such as Outward Bound and Maine Maritime Academy that help clear brush at the Parks.

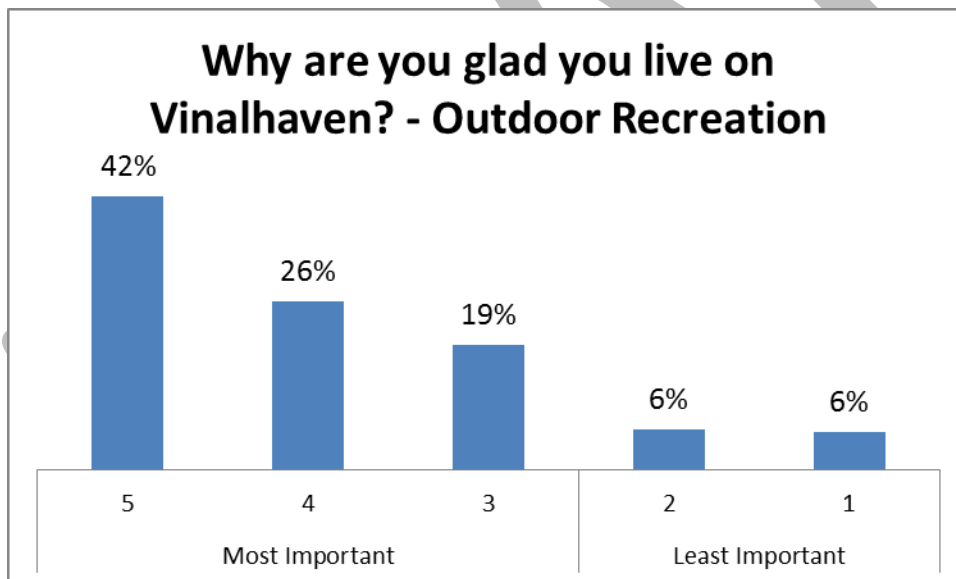
Trails on the island consist primarily for hiking and are maintained by Vinalhaven Land Trust, Maine Coast Heritage Trust, The Nature Conservancy, Town of Vinalhaven, or the Water District. The largest trail systems on Vinalhaven include The Basin Preserve and Fox Rocks/Perry Creek while the most frequented trail would likely be Lane's Island. See the table below for a list and description of public trails on Vinalhaven.

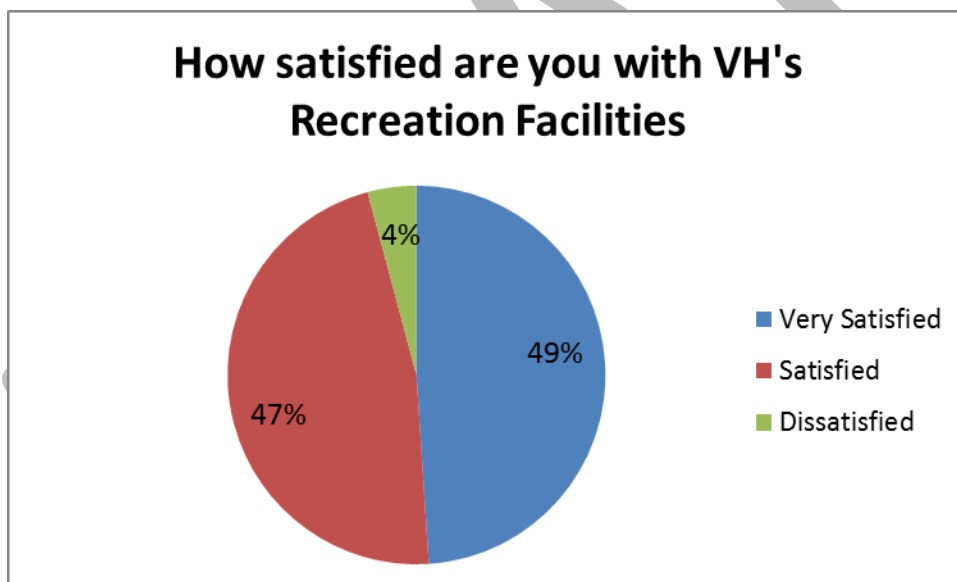
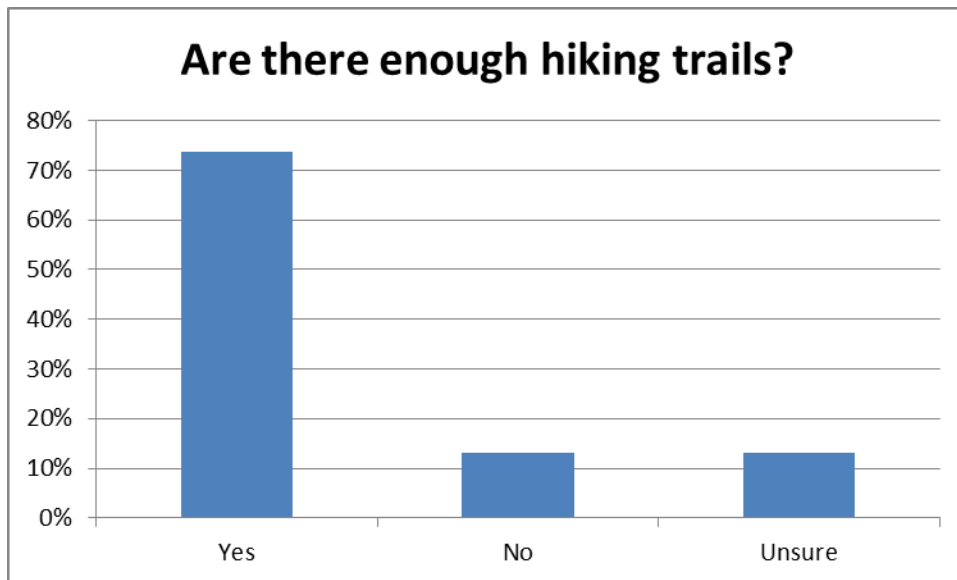
Trail/Park Name	Maintained by
Lane's Island	The Nature Conservancy
Ambrust Hill	Town of Vinalhaven
Huber Preserve	Maine Coast Heritage Trust
Perry's Creek North and South	Vinalhaven Land Trust
Basin Preserve	Vinalhaven Land Trust/Maine Coast

	Heritage Trust
Folly Pond Preserve	Vinalhaven Land Trust/Water District
Middle Mountain	Town of Vinalhaven
Isle au Haut Mountain	Town of Vinalhaven
Lower Mill River	Vinalhaven Land Trust
Starboard Rock	Vinalhaven Land Trust
Granite Island Trail	Vinalhaven Land Trust
Whitmore Pond Sanctuary	Vinalhaven Land Trust

5. A map or list of important publicly-used open spaces and their associated facilities, such as parking and toilet facilities.

Survey Results





Issues of Public Concern

Maintenance of the trails on the island is important to every user. With the wet seasons overlapping with high use, trails erode quickly. For some of the more remote trails, there is evidence of ATV use which causes concern for users as well as the stability of the trails. This misuse causes conflicts between user groups and property owners and a resolution should be considered between the groups.

Additionally, connections to town and public facilities in town are important and the maintenance of the sidewalks need to be considered. Years of neglect and the Northeast weather have taken their toll on many of our sidewalks. Refer to the Sidewalk Inventory Report for more details and recommendations.

DRAFT

Transportation

Introduction

The town maintains nearly 40 miles of public roads and there are an additional 50 miles of private roads. The purpose of this chapter is to plan for the efficient maintenance and improvement of the Town's transportation network in order to accommodate existing and anticipated development within Vinalhaven over the next ten-year period. Anticipated improvements include road paving/resurfacing and construction/maintenance of sidewalks. The survey results showed that there is a concern for vehicle speed in certain places on the island and general maintenance of the roadways. The results also showed support for improving bike/pedestrian facilities.

State and Local Goal(s)

To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

Analyses

1. What are the transportation system concerns in the community and region? What, if any, plans exist to address these concerns?

The Town is concerned with maintaining and improving the condition of Vinalhaven's roadways, local roads over which the Town has maintenance responsibility and the State aid roadways that provide the primary source of transportation within the Town for residents and businesses. Poor road conditions reduce safety and impede the local economy upon which citizens depend.

Highest priority road projects for the coming years include:

Name	Average Width (<i>feet</i>)	Length (<i>miles</i>)
Water Street	21	.10
Atlantic Avenue	18	.69
Clam Shell Alley	14	.13
Leo's Lane	13	.11
Beaver Dam Road	14.5	.09
Ava Street	11.5	.04

School Street	19.5	.27
Frog Hollow Road	12	.09
Indian Creek Road	12.6	.06
Lane's Island Road	14.6	.14
Medical Center Loop	11	.15
Round the Mountain Road	15.6	.24
Total	14.75 feet (<i>Average</i>)	2.11 miles

A 2003 Road Network Inventory and Road Surface Condition Survey including culverts, storm drains and guard rails found that numerous roads on Vinalhaven, paved and unpaved, are in very bad condition and have been neglected for a long time. From this survey were prioritized these road reconstruction and paving improvements:

- North Haven Road from Calderwoods Neck to the Thorofare - 5.3 miles
- Round the Island Road from Pequot Road to North Haven Road - 2.96 miles
- Calderwoods Neck Road from North Haven Road to End - 4.00 miles
- Roberts Cemetery Road from East Boston Road to End - .58 miles
- Dog Town Road from North Haven Road to Granite Island Road - 2.45 miles
- Causeway on Dog Town Road
- Lane's Island Bridge Post and Cable System

As of 2011, 5 of these improvements have been completed, one is not currently a priority, and the others remain to be undertaken.

In 1995, the Town adopted an Ordinance Restricting Vehicle Weight on Posted Ways. The ordinance was updated in 2006 to reflect changes in the town. The following roads have been posted with weight restrictions seasonally in recent years: Old Harbor Rd (from the Sands), North Haven Road (beyond Calderwood Neck), Calderwood Neck and all roads extending from it (past the North Haven Rd), Round the Island Rd and all roads extending from it, Pools Hill Rd (past Round the Island Rd), Roberts Cemetery Rd, East Boston (past Roberts Cemetery Rd). Seasonal postings are of concern because they can negatively affect local businesses and their movement of heavy goods. There are no closed roads or bridges in Town.

While Maine DOT records no high crash locations (where eight or more crashes have been reported within a three-year period on Vinalhaven roadways), local concern has been expressed for these road segments and intersections: Atlantic Ave/Water St., Main St/Atlantic Ave, and various straight-paved sections of road. Seasonal washouts and freeze/thaw cause many of the gravel roads to form holes or ruts making driving the posted speed difficult and dangerous.

Crashes 2008-2010 by Injury Type

Area	Total Crashes	Fatalities	Incapacitating Injury	Evident Injury	Possible Injury	Non-Injury
Vinalhaven	31	0	0	3	8	65
Knox County	2,067	16	62	287	463	3,686

Source: Maine DOT

Note: Crashes can involve more than one vehicle and more than one individual.

Contributing Factors in Crashes 2008-2010

Area	Driver Inattention, Distraction	Failure to Yield Right of Way	Following Too Close	Illegal Unsafe Speed	Other
Vinalhaven	13	4	1	11	16
Knox County	874	300	164	375	891

Source: Maine DOT

- Are conflicts caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well?

Vinalhaven has no State or US highways. Main St, East Main St, West Main St, and High St are State Aid roadways serving the village area. North Haven Rd, Calderwood Neck Rd, Pequot Rd and Round the Island Rd are among the principle roadways serving the larger town-wide area. Vinalhaven does not experience the same level of conflict as mainland towns with heavy volumes of through traffic traveling at higher speeds than local traffic on shared roadways. According to Maine DOT, 45 MPH is the highest

speed limit set on Vinalhaven roadways outside of the village area. Where the speed limit is not posted, the following limits apply:

- 15 mph in a school zone during recess or during opening or closing hours
- 25 mph in a business or residential area or built up portion
- 45 mph on all other public ways

During the busier months of the year, May-September, speeding is of concern on these roads: Main St, North Haven Rd, Pequot Rd. The increase in business activity, travel to and from work, and increased traffic from tourists (pedestrian and vehicular) cause concern and ongoing police enforcement would be costly. The use of traffic calming strategies in roadway design could decrease the amount of enforcement needed to reduce speeding on Town roads. The use of additional access management regulations for the siting of new entrances and driveways based upon current and sought posted speeds could reduce the creation of hidden driveways and crash prone entrances.

Housing development is spread throughout the Town on public and private roads. As development (mostly residential and commercial) increases along these roadways, more crashes can be expected if traffic calming designs and access management regulations are not put in place.

Level of service (LOS) is a measure of congestion shown on the Transportation Network map. With the exception of a portion of Main St, which is LOS B, all other roads are recorded as LOS A by Maine DOT, indicating that these roadways have not reached their maximum capacities and delays where the travel speed is lower than the posted speed are infrequent. Delays on roads within the village area occur mostly during the summer tourist season. LOS D is usually considered an indication of the maximum acceptable volume/capacity if current posted speeds and travel lanes are to be maintained.

See the Transportation Network map in the Appendix for factored annual average daily traffic volumes at key points on Vinalhaven roadways in 2010. Maine DOT estimated these figures, which are not based upon actual traffic counts. Main St had the highest estimated volume 3,180 vehicles daily. High St had an estimated 610 vehicles daily. Granite Island Rd had an estimated 460 vehicles daily. Pequot Rd had 430 vehicles daily. North Haven Rd had an estimated 50 to 100 vehicles daily. As of February 2012, there were approximately 1,500 vehicles registered in the Town (including heavy use trucks and seasonal-use resident vehicles). The Town believes the traffic count figures do not reflect actual volumes

observed for some of these roadways. Accordingly, Maine DOT should consider conducting traffic counts to obtain accurate volumes.

Seasonal volumes (highest in July and August) are roughly three times greater than the annual averages for roadways on Vinalhaven. Private passenger vehicles comprise nearly all of the traffic on Vinalhaven roadways, however, there are commercial trucks and equipment used to transport supplies to and from businesses to the boat. Consumer goods for sale in Vinalhaven are trucked via Ferry to the Town. Vinalhaven businesses depend upon the state ferry service, private ferry operators, private air service (Penobscot Island Air) and the town road network to transport most of their goods into or out of the Town.

3. To what extent do sidewalks connect residential areas with schools, neighborhood shopping areas, and other daily destinations?

Sidewalks in Vinalhaven are located on these streets in the village area: Main St, East Main St, West Main St, High St, Atlantic Ave, Arcola Lane, School St, Pleasant St, and Carver St. In 2011, a small section of sidewalk was poured in the village (Atlantic Ave), but the majority of sidewalks in the village are in fair/poor condition. Retail activities are focused in the village area.

Sidewalk connections to schools are primarily limited to homes located along High St and Main St. Many students get to school via bus or private auto. Approximately 28% are able to walk to school according to a school staff person. Most roads do not have sidewalks. Shoulders for pedestrian and bicycle use are limited or non-existent. These roads in particular would benefit from new sidewalks or wider shoulders: West Main St, School St, East Main St, Main St, Sands Rd, Lane's Island Rd, and Round-the-Mountain Rd. See the Appendix for the Sidewalk Access and Maintenance Plan.

4. How are walking and bicycling integrated into the community's transportation network (including access to schools, parks, and other community destinations)?

As noted above, pedestrian and bicycling opportunities are limited due to a lack of sidewalks outside of the village area and inadequate shoulders along portions of roadways. However, traffic volumes are low enough so that for much of the year, pedestrian use on roadways is relatively safe. Off-road pathways

to schools and parks include a path from East Boston Rd to the school, from Round-the-Mountain Rd to the Island Community Medical Center/Town Library, and the Historical Society (High St) to the Town Office (Washington School St). There are no public ATV/snowmobile trails on the island, however, old forest roads and private driveways serve as a safe mean to ride on the island.

Pedestrians and bicyclists use roadway shoulders, which are narrow in many places, or use the travel lanes in areas where there are no shoulders. Greater vehicular volumes in summer and speeding (year-round) threaten the safety of pedestrians and bicyclists. Increased bicycle use of roadways in summer impedes motor vehicle mobility. The addition of sidewalks and multi-use paths in certain areas as noted in the strategies section of this chapter could improve both of these issues, but would require the expenditure of public funds and the cooperation of private landowners.

5. How do state and regional transportation plans relate to your community?

The 2004-2025 Long Range Transportation Improvement Plan: Keeping Maine Moving, a technical amendment to the 2000-2020 Maine DOT 20-Year Plan, provides overall goals for the maintenance and improvement of the State transportation system to meet the needs of residents and businesses. These goals agree generally with this Comprehensive Plan. The Long Range Maine DOT plan suggests identifying long-term investments for Rockland's marine terminal and notes that demand is approaching or exceeding the capacity of service to Vinalhaven. The lack of adequate funding to preserve and enhance the State transportation network will affect Vinalhaven negatively along with many other Maine communities over the next ten years. The community should continue to lobby Maine DOT directly and through strategic planning processes for adequate transportation investments in Vinalhaven and the region.

The Maine DOT Biennial Capital Work Plan for Fiscal Years 2012-2013, dated April 2011, included no projects for Vinalhaven.

Maine DOT had no 2011 Light Capital Paving Program (LCP) contracted projects or other projects schedule in Vinalhaven.

The Maine DOT 2011 Construction Advertisement Plan (CAP) includes airstrip rehabilitation (resurfacing runway) for Vinalhaven (PIN 017454.01), with an estimated cost of \$81,900 to \$97,400. Also included in

this CAP are rehabilitation projects of the fender systems at the North Haven and Vinalhaven Transfer Bridges (PIN 018109.00), with a combined estimated cost of \$290,000 to \$349,000.

As of October 2011, no projects are scheduled to be advertised for Vinalhaven in the Maine DOT 2012 Construction Advertisement Plan (CAP).

6. What is the community's current and approximate future budget for road maintenance and improvement?

Road maintenance is an ongoing effort and municipal budgets are often stretched as the cost of such upkeep increases much faster than the costs of other goods and services, due principally to the costs of petroleum-based products like asphalt. The State and federal match for such work has always been important and has become even more crucial to maintain safe roadways.

The Town assesses road conditions throughout the year and makes an annual plan for improvements/repairs. For the most recent period of 2008-2011, approximately \$200,000 has been set aside for future work and will be used towards the repair/repave of multiple town roads. The anticipated/budgeted 2012 figures for the road maintenance plan total \$100,000.

The Urban-Rural Initiative Program State payments to Vinalhaven were \$43,596 per year in fiscal years 2008 through 2012. The funds have been used primarily for road repaving.

7. Are there parking issues in the community? If so what are they?

Parking is often insufficient in the village area during the busy summer months, requiring the use of off-site parking areas, including the Town Wharf, Public Works, and Webster's Field parking lot.

In 1990, the Town adopted a Parking Ordinance to restrict parking on certain roadways. That ordinance was most recently amended in 2008. Enforcement has been effective and ongoing.

8. If there are parking standards, do they discourage development in village or downtown areas?

Off-street parking requirements in the Land Use Ordinance (Section 16: T), including in village and shoreland areas, have not generally discouraged development in the village or pushed development out of the village. Existing lots in the village tend to be small, however, which therefore would require the

consolidation of lots or cooperative agreements with neighbors to provide for more off-street parking opportunities.

9. Do available transit services meet the current and foreseeable needs of community residents? If transit services are not adequate, how will the community address the needs?

The Maine State Ferry Service, private providers, water taxis, and private air service (Penobscot Island Air) generally meet the current needs of Vinalhaven residents. In the summer tourist season, demand for these services exceeds supply, especially vehicle transport via the State Ferry Service. Currently, the needs of the island are met. Additional transportation services would be more convenient for the busy summer months, but there is concern for having too many people with the current infrastructure. Multiple runs with a single school bus bring children to and from the public school and meet the current and anticipated need.

Maine State Ferry Service: Vinalhaven Annual Volumes

Year	Vehicles	Passengers
2010	37,352	144,719
2011	37,432	136,505
2012		

Source: Maine DOT

Note: Year is the State Fiscal Year

The frequency of scheduled bus service on the mainland is insufficient for most individuals to be able to use on a regular basis. The dispersed location of residents and of workplaces inhibits public transportation to some extent in the region as a whole.

Coastal Trans, Inc. (CTI) is a non-profit subsidiary of Methodist Conference Home, Inc. CTI is a State of Maine designated Regional Transportation Provider. CTI operates transportation services for residents of Knox, Lincoln, and Sagadahoc Counties and the Towns of Brunswick and Harpswell. CTI provides Non-Emergency Medical Transportation for MaineCare eligible riders, as well as services for riders who are elderly, have disabilities, and people with low income and transportation for the public.

Concord Coach (Trailways) offers daily service on their Maine Coastal Route between Orono and Boston's Logan Airport. Stops include Orono, Bangor, Searsport, Belfast, Lincolnville, Camden/Rockport, Rockland, Waldoboro, Damariscotta, Wiscasset, Bath, Bowdoin College, Brunswick, and Portland.

10. If the community hosts a transportation terminal, such as an airport, passenger rail station, or ferry terminal, how does it connect to other transportation modes (e.g. automobile, pedestrian, bicycle, transit)?

Vinalhaven hosts a ferry terminal and airfield. The Maine State Ferry Service connects Vinalhaven with Rockland and offers passage for motor vehicles, pedestrians, and cyclists. Private providers offer passenger and freight services as well. Air service is available with connections to Knox County Regional Airport in Owls Head. The Town-owned runway is leased to Penobscot Island Air Co which delivers mail, supplies, and passengers to the island.

11. If the community hosts or abuts any public airports, what coordination has been undertaken to ensure that required airspace is protected now and in the future? How does the community coordinate with the owner(s) of private airports?

The Land Use Ordinance defines an Airport Overlay District (AOD) whose purpose is to promote the compatibility of land uses in the vicinity of the airfield, to prevent interference with the safe and efficient operation of the airfield and to protect the public at large. This district limits structure height and uses to maintain the continued safe function of the airstrip.

12. If you are a coastal community, are land-side or water-side transportation facilities needed? How will the community address these needs?

Within Vinalhaven, public access to the Penobscot Bay is found at these locations: Fox Island Thorofare, Town Wharf, State Ferry Terminal, and Carver's Parking Lot, of which all have a landing for boaters. These facilities meet the current needs, but could be expanded to accommodate additional visitors.

The following marine related transportation facilities (and improvements) are needed in Vinalhaven: various boat launches and the pilings under the Carver's Harbor parking facility. Funding for these projects will be sought from State and Federal sources, as noted in the Capital Investment Plan of this

Comprehensive Plan. For more information, see the Marine Resources Chapter of this Comprehensive Plan.

13. Does the community have local access management or traffic permitting measures in place?

The Land Use Ordinance states, “At all intersections of roads and driveways with public roads a sight distance of two hundred fifty (250) feet on each side is required (Section 16: Y).” In addition, there are minimum sight distance standards for public and private rights-of-way that are created as part of a subdivision (200 feet, or at intersections: 400 feet public, 300 feet private) (Section 21: VI. B). For lots created as part of subdivision, there are minimum road frontage requirements (250 feet, or for cul-de-sacs: 50 feet) (Section 21: V. D). There are no similar road frontage requirements for lots that are not part of a subdivision.

In addition to local regulations, State access management rules apply to State Aid roads. The Town believes that these have been helpful in certain areas like Pequot Rd and North Haven Rd where the roadside tends to have thick vegetation.

14. Do the local road design standards support the community’s desired land use pattern?

The standards of the Land Use Ordinance for subdivision roads differentiate road design based upon two categories: public rights-of-way and private rights-of-way. Subdivisions containing thirty lots or more must have at least two road connections with existing public roads or roads on an approved development plan. For dead-end roads, the Planning Board may require the reservation of a 20 ft., 50 ft., or 66 ft. easement in line with the dead-end road to provide continuation of pedestrian traffic or utilities to the next road, or to access possible future subdivision or development. The Ordinance requires, however, that roads shall be designed to discourage through traffic within a subdivision (Section 21: VI). The Land Ordinance regulates roads and driveways within the shoreland zone (Section 16: Y). See the Land Use Chapter of this Comprehensive Plan for discussion of the community’s desired land use pattern.

15. Do the local road design standards support bicycle and pedestrian transportation?

As noted above, the Land Use Ordinance provides that for dead-end roads, the Planning Board may require the reservation of a 20 ft., 50 ft., or 66 ft. easement in line with the dead-end road to provide continuation of pedestrian traffic. Such connections would support bicycle and pedestrian use. Also, as part of subdivisions, “It shall be the responsibility of the developer to insure that all required improvements, such as roads, sidewalks ... shall be installed (Section 16: V. H).” However, the Ordinance does not specify suggested or required sidewalk standards or bicycle facilities.

16. Do planned or recently built subdivision roads (residential or commercial) simply dead-end or do they allow for expansion to adjacent land and encourage the creation of a network of local streets? Where dead-ends are unavoidable, are mechanisms in place to encourage shorter dead ends resulting in compact and efficient subdivision designs?

Since 2000, there have been 16 approved and built subdivisions in which new roads were constructed. Of these, 2 included dead-end roads (i.e., having just one access). These dead-end roads ranged in length from 500 to 1500 feet. The subdivision provisions of the Land Use Ordinance allow for the preservation of open space land that is not to be developed (Section 21: V. B). However, there are no standards for cluster subdivision developments, for example, allowing a smaller minimum lot size and smaller road frontage for developments that conserve some portion of the parent parcel.

The Town can allow and encourage housing development in areas close to existing public and private services, so that residents can choose to walk rather than drive, and so that public transportation with fixed-routes becomes more practical at sufficient development (housing) densities to provide adequate ridership levels. In less developed portions of the Town, the use of cluster (conservation) subdivisions can preserve habitats by setting aside ecologically sensitive but developable land into permanent conservation. See the Housing Chapter, Natural Resources Chapter and Land Use Chapter of this Comprehensive Plan for more information and related strategies.

C. Conditions and Trends

1. The community’s Comprehensive Planning Transportation Data Set prepared and provided to the community by the Department of Transportation, and the Office, or their designees.

Note: This data set has been incorporated and updated in the Transportation Network map and in the Analyses section of this chapter, as well as in the items that follow.

2. Location and overall condition of roads, bridges, sidewalks, and bicycle facilities, including any identified deficiencies or concerns.

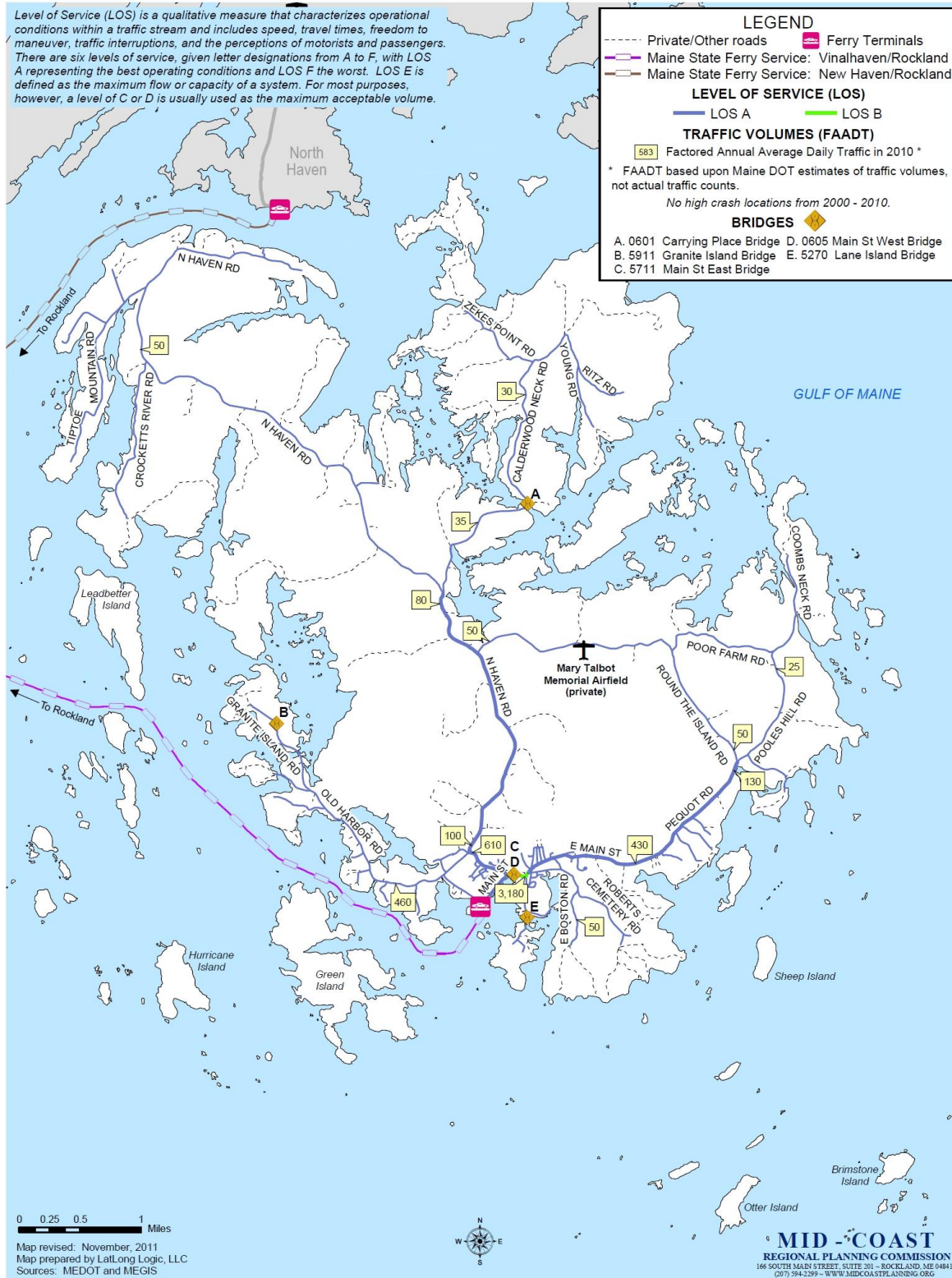
DRAFT

The Transportation Network map shows the locations of roads and bridges.

TRANSPORTATION NETWORK

Level of Service (LOS) is a qualitative measure that characterizes operational conditions within a traffic stream and includes speed, travel times, freedom to maneuver, traffic interruptions, and the perceptions of motorists and passengers. There are six levels of service, given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is defined as the maximum flow or capacity of a system. For most purposes, however, a level of C or D is usually used as the maximum acceptable volume.

TOWN OF VINALHAVEN



According to Maine DOT, the total length of State Aid Roads is 5.55 miles and goes from the intersection of Pequot and Round the Island Roads into town over High St. up the North Haven Road to its intersection with the Calderwood Neck Road. The remaining public roads on Vinalhaven account for approximately 34.29 miles. About 40% of the Town roads are paved. The Town's roads are vitally important as they allow residents to commute to work, school, stores, and around the Town. The overall condition (poor, fair, good, or excellent) of each roadway as judged by the Town is noted in the next table.

Vinalhaven PUBLIC Roadway Inventory 2012				
Roadway Name	Owner	Length (miles)	Surface	Overall Condition
Abigail Rock Rd	Town	0.05		
Arcola Ln	Town	0.22	P	E
Atlantic Ave	Town	0.69	P	F
Ava St	Town	0.04	P	F
Bay View Cemetery Rd	Town	0.46		
Beaver Dam Rd	Town	0.09	P	F
Blueberry Ln	Town	0.11		
Booths Quarry Rd	Town	0.36	G	F
Boston Rd	Town	0.05		
Brighton Ave	Town	0.14	P	F
Browns Headlight Rd	Town	0.56	G	F
Calderwood Neck Rd	Town	2.93	G	F
Carriage Ln	Town	0.08		
Carver St	Town	0.19	P	G
Chestnut St	Town	0.16	P	G
Clamshell Alley	Town	0.13	P	G
Clayter Hill Rd	Town	0.07		
Coombs Neck Rd	Town	0.53	G	F
Cottage St	Town	0.19	P	F
Crocketts River Rd	Town Summer	1.42	G	F
Cross St	Town	0.07		
Duschane Quarry Rd	Town	0.21	G	P
Dyers Island Rd	Town	0.29		
East Boston Rd	Town	0.77	P	G
East Main St	State Aid	0.9	P	G
Ferry Landing	Reserve	0.04		G
Fish Head Rd	Town	0.29		
Frog Hollow Rd	Town	0.09		

Granite Island Rd	Town	1.09	P	G
Grants Pond Rd	Town	0.29		
High St	State Aid	0.42	P	G
High St Cut	Town	0.04	P	G
Hopkins Point Rd	Town Summer	0.35		
Indian Creek Rd	Town	0.06		
Ingerson St	Town	0.09		
Lakeview St	Town	0.06		
Lanes Preserve	Town Summer	0.14	GP	G
Leos Ln	Town	0.11	P	
Lloyds Ln	Town	0.04	P	F
Main St	State Aid	0.18	P	G
Medical Center Loop	Town	0.15	P	P
Mills Farm Rd	Town Summer	0.2	G	F
Mountain St	Town	0.24	P	G
North Haven Rd	State Aid/ Town portions	7.82	P	G
Nortons Point Rd	Town	0.27	P	G
Ocean View Rd	Town	0.13		
Old Harbor Rd	Town	1.88	P	E
Pequot Rd	State Aid	1.29	P	F
Pleasant St	Town	0.13	P	G
Pond St	Town	0.37		
Pooles Hill Rd	Town	1.46		
Poor Farm Rd	Town	1.03	G	F
Pumpkin Ridge Rd	Town	0.07		
Reach Rd	Town	0.21		
Ritz Rd	Town	0.49		
Roberts Cemetery Rd	Town	0.65	G	F
Round the Island Rd	Town	2.89	P	F
Round the Mountain Rd	Town	0.24	P	G
Sands Rd	Town	0.39	P	G

School St	Town	0.27	P	G
Shore Acres Rd	Town	0.18		
Standpipe Ln	Town	0.03		
Starr St	Town	0.2		
State Beach Rd	Town	0.52	G	P
Strawson Rd	Town	0.14		
Summer St	Town	0.11	G	P
Tip Toe Mountain Rd	Town	1.81	G	F
Walls Rd	Town	0.07		
Washington School Rd	Town	0.12	P	G
Water St	Town	0.1	P	F
West Main St	State Aid	0.3	P	G
York Rd	Town	0.36		
Young Rd	Town	1		
Zekes Point Rd	Town Summer	0.78	G	F

Sources: Maine DOT (name, owner and length), and Town of Vinalhaven (surface and condition)

Note: These road names may differ from local sources.

Surface: (P)Paved or (G)Gravel

Condition: (G)Good, (F)Fair, or (P)Poor

According to the Town, Vinalhaven has approximately 50 miles of private roads. Named private subdivision roads and lanes (often, shared driveways listed with E-911) are shown in the next table.

Vinalhaven PRIVATE Roadway Inventory		
A W Smith Rd	Farago Rd	Narrows Island Rd
Barley Hill Rd	Flying Cow Rd	Nelson Rd
Baron Rd	Fogg Rd	Newbold Rd
Basin Falls Rd	Folly Pond Rd	Old Quarry Rd
Bay State Rd	Foote Hill Rd	Osgood Rd
Betty's Way	Gasperini Dr	Pease Cove Rd
Bickford Rd	Gates Rd	Petersons Rd
Birch Hill Rd	George Wright Rd	Petit Point Rd

Birgers Rd	Gill and Ash Ln	Pipers Ring Rd
Blair Rd	Gratwick Dr	Pleasant St
Blue Heron Rd	Guidoboni Wharf Rd	Pocus Point Rd
Blunder Ln	Hamilton Dr	Pollys Cove Rd
Boy Scout Point Rd	Harbor View Rd	River Mouth Rd `
Boyden Farm Rd	Harrison Hall Rd	Robinson Rd
Breakers Rd	Huntress Cove Rd	Round Tum Way
Bubs Rd	Islander Ln	Seal Bay Rd
Candlepin Cabin Ln	Isle au Haut Mountain Rd	Skoog Park Rd
City Point Rd	Jennings Rd	Squid Cove`Rd
Clam Cove Rd	Kelwick Farm Rd	Starboard Rock Rd
Company Point Rd	Kirk Rd	Stetsons Rd
Coop Rd	Kirkham Ln	Swamp Fox Rd
Cranberry Shores Rd	Lamont Rd	Swanson Rd
Creeds Cove Rd	Lawrence Rd	Tarrs Cove Rd
Creelman Ln	Lobster Ln	Terry Rd
Cripple Creek Rd	Lockwood Rd	Tinkers Lndg
Cummings Cem. Rd	Lois Ln	Tolman Rd
Dana St	Long Cove Rd	Vinal Cove Rd
Dean Ln	Louds Pit Rd	Wagon Wheels Rd
Dolphin St	Lunde Rd	Webster Rd
Eastholm Rd	Macks Pond Rd	Wharfs Quarry Rd
Eberhart Rd	Mary Wentworth Rd	Windy Way
Eislers Rd	Middle Mountain Rd	Wylie Rd
Elisofon Rd	Moyer St	

Source: Maine GIS

Note: These road names may differ from local sources.

Bridge locations are shown on the Transportation Network map. The next table shows bridge ownership, length, most recent inspection date and sufficiency rating (overall condition) as assessed by Maine DOT. The substructure and superstructure of the Carrying Place Bridge are in poor condition.

Vinalhaven Bridge Inventory

Bridge Name	MDOT ID #	Owner	Length (feet)	Inspection Date	Sufficiency Rating
Granite Island	5911	Town	13	10/14/2010	83.9
Main Street West	605	State	36	1/19/2012	76.4
Main Street East	5711	State	47	1/19/2012	80.0
Lane's Island	5270	State	111	1/19/2012	50.6
Carrying Place	601	Town	21	10/14/2010	32.9

Source: Maine DOT

Sidewalks in Town are located in the village area and extend to the Vinalhaven School on Arcola Ln, which total approximately 1.5 miles. In 2006, a sidewalk inventory was conducted and identified the conditions of, the priority level to improve, and recommendations for the placement of town sidewalks. The overall condition of sidewalks is noted in the next table. In 2012, a quick assessment was done to verify any changes or improvements that may have occurred in the past six years.

Road with Sidewalks	Length (feet)	One/Both Sides	Overall Condition
High St	1,900	One	Good
W. Main St	577	One	Average
Main St	1,140	One	Good
Atlantic Ave	1,181	One	Average
Pleasant St	453	One	Good
Chestnut St	80	One	Good
Carver St	88	One	Good
E. Main St	630	One	Good
School St	836	One	Average
Arcola Ln	390	One	Excellent
School Walkway	270	One	Average

Source: Town of Vinalhaven: Sidewalk Committee Sidewalk Inventory 2006

In addition to the sidewalks noted above and shoulders along State Aid and Town roads, the Town has paths including the public access walkway at the Thorofare, Ambrust Hill, Middle Mountain, Booths Quarry, State Beach and Isle au Haut Mountain. The Town has limited bicycle facilities which include a couple bike racks along Main St; one at the Tidewater Motel and another at Vinalhaven Public Library.

3. Identify potential on and off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, waterfronts and other activity centers.

Connections that are recommended can be seen in the Sidewalk Access and Maintenance Plan located in the Appendix.

4. Identify major traffic (including pedestrian) generators, such as schools, large businesses, public gathering areas/activities, etc. and related hours of their operations.

Major Traffic Generators	Location	Hours of Operation
Vinalhaven School	22 Arcola Lane	7:30 – 4 Sept - June
Town Wharf	West Main St	Parking daily, primarily fishermen
Dump	Round the Island Road	7:30 AM – 4 PM Sun, Mon, Wed, Thurs
Ferry	West Main St	7 AM – 6 PM Sun-Sat
Post Office	Main St	8 - 4 Mon – Fri and 8 – 1 Saturday
Flea Market	Bandstand Field	9 AM – 12 PM Saturdays (June-Aug)

Source: Town of Vinalhaven

Major Events/Activities	Location	Dates
School Events (games, musicals, etc..)	Vinalhaven School, Arcola Ln	Periodically September-June
Holiday Parades (Memorial Day, 4 th of July, Parade of Lights)	Main St	May, July, December

Source: Town of Vinalhaven

5. Identify policies and standards for the design, construction and maintenance of public and private roads.

The Town is concerned that all roadways and bridges be well engineered and built to last so that potential damage will be minimized from flooding and adverse weather and vehicular use. Substandard design or construction will result in higher costs to taxpayers and/or subdivision associations for repair and remediation. Road damage from flooding, adverse weather conditions and from use, especially heavy trucking activity, requires that roads be built to appropriate standards, including sufficient sub-bases, drainage systems and grading. While this may result in higher development costs upfront, in the long-term it will reduce costs for the taxpayers, residents, and business owners, all of whom depend on the road network.

The Land Use Ordinance has road design provisions. The purposes of these provisions are to provide for safe access to and from public and private roads. See the responses in the Analyses section, questions 13 and 14 for examples of these provisions as well as the Ordinance itself for specific standards.

6. List and locate municipal parking areas including capacity and usage.

Municipal/Public Parking Lots Name/Location	Spaces	Overall Condition	Usage
Town Office	15	Good	Town Business
Town Wharf	40	Good	Employee/General
Maine State Ferry Terminal	60	Excellent	General/Transportation
Carver's Parking Lot (Main St)	50	Excellent	Main St Business

7. Identify airports within or adjacent to the community and describe applicable airport zoning and airspace protection ordinances in place.

There is one airfield within Vinalhaven. The Land Use Ordinance defines an Airport Overlay District (AOD) whose purpose is to promote the compatibility of land uses in the vicinity of the airfield, to prevent interference with the safe and efficient operation of the airfield and to protect the public at

large. This district limits structure height and uses to maintain the continued safe function of the airfield.

The closest full service airport is the Knox County Regional Airport located in Owls Head. Knox County owns property beyond the immediate area of the runways, tarmac and airport facilities in order to prevent non-compatible development from occurring nearby.

8. Identify bus and van services.

Coastal Trans, Inc. (CTI) is a non-profit subsidiary of Methodist Conference Home, Inc. CTI is a State of Maine designated Regional Transportation Provider. CTI operates transportation services for residents of Knox, Lincoln, and Sagadahoc Counties and the Towns of Brunswick and Harpswell. CTI provides Non-Emergency Medical Transportation for MaineCare eligible riders, as well as services for riders who are elderly, have disabilities, and people with low income and transportation for the public. They currently work with a number of agencies to provide connections to services for mental health, medical care, and adult rehabilitation services. CTI operates a fleet of agency vehicles that include ADA accessible buses, as well as sedans and vans to provide transportation services. They operate Demand-Response services for riders, and a Midcoast Shuttle that provides round-trip morning and afternoon service from Brunswick to Edgecomb.

Concord Coach (Trailways) offers daily service on their Maine Coastal Route between Orono and Boston's Logan Airport. Stops include Orono, Bangor, Searsport, Belfast, Lincolnville, Camden/Rockport, Rockland, Waldoboro, Damariscotta, Wiscasset, Bath, Bowdoin College, Brunswick, and Portland.

9. Identify existing and proposed marine and rail terminals within your community including potential expansions.

There is one marine terminal in Vinalhaven (see the Transportation Network map), from which the Maine State Ferry Service offers service to its terminal in Rockland on two vessels. No additional terminals are proposed for Vinalhaven. The crossing distance is 15 miles and the crossing time is one hour and 15 minutes. There are six daily departures and arrivals, except for Sundays in the winter when there are four daily departures and arrivals.

The closest rail line, serving freight and seasonal (tourist) passengers, is located in Rockland.

10. If coastal communities identify public ferry service and private boat transportation support facilities (may be covered under Marine Resources with cross reference) including related water-side (docks/piers/wharves) and land-side (parking) facilities.

As noted, Vinalhaven is served by the Maine State Ferry Service. Private ferry services are also provided. Private water taxi transportation services are available in Rockland and Vinalhaven. Proposed docks, piers, wharves and related parking facilities are noted in the Marine Resources Chapter and the Capital Investment Plan of this Comprehensive Plan.

Survey Results

Transportation	Yes	No	Unsure
Are pedestrian facilities adequate?	41%	49%	10%
Do you support making bicycle travel more safe?	77%	15%	8%
Are you satisfied with the ferry service?	86%	9%	6%
Are there enough hiking trails?	74%	13%	13%
Are there concerns about vehicle speeds on VH roadways?	65%	27%	8%

Issues of Public Concern

Pedestrian/bicycle travel often conflicts with motor vehicle travel outside of town as roadways are narrow and there are many blind curves. Solutions to out-of-town issues will likely be expensive as the road will have to be expanded to accommodate for a shoulder or bike-lane.

Maintenance of the island's paved and unpaved roads continue to get the attention of island residents. Considerations for paving dirt roads raise questions about cost and the frequency of maintaining the dirt roads make the thought of paving seem easier. In either case, maintaining the roads takes a significant amount of the town's time and money.

Public Facilities and Services

Introduction

Updates to the town water supply and a recent addition of the Wastewater Treatment facility are just the beginnings of recent improvements to public facilities and services. The town provides Fire/EMS, Administrative, Road, Harbor, Solid Waste, and Library services to the island. In addition, there is also a Pre-K-12 school, Fox Island Electric Cooperative, Knox County Sherriff Deputy, and MSFS providing services to the residents of Vinalhaven. Ongoing maintenance of roads, sidewalks, and harbor access help keep the village area vibrant. These services are vital to sustaining our year-round island population.

State and Local Goal(s)

To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

Analyses

1. Are municipal services adequate to meeting changes in population and demographics?

The town offers an array of services including Fire/EMS, Public Works, and maintenance of parks and cemeteries. Survey respondents are generally satisfied with the services and no significant changes are necessary at this time.

Public Facilities/Services: For each service, please check your level of satisfaction:		Very Satisfied	Satisfied	Dissatisfied
	Ambulance	65%	34%	1%
	Cemeteries	19%	71%	11%
	Fire Protection	58%	40%	2%
	Law Enforcement	24%	61%	15%
	Property Tax Level	13%	67%	20%
	Recreation Facilities	49%	47%	4%

	Road Plowing	26%	60%	14%
	Road Repair	10%	58%	32%
	Town Office Services	44%	55%	1%
	Town Office Hours	43%	57%	0%
	Transportation Services	9%	60%	32%
	Parking	15%	72%	13%

2. Has the community partnered with neighboring communities to share services, reduce costs and/or improve services? In what ways?

North Haven is located at the north end of the island, approximately one half mile across the thoroughfare. There are few opportunities to partner with neighboring communities as the constraints of delivering the services still remain. There are, however, times when it makes sense to work together. Periodically, Fire/EMS services come together for training opportunities.

In addition, the Fox Island Electric Cooperative, the Rural Electric cooperative, formed for the purpose of selling energy to residents of the two islands. This consumer-owned utility is governed by a nine-member Board of Directors with additional governance provided by the Maine Public Utilities Commission. Two major projects in the past 10 years include the replacement of the submarine cable, originally installed in 1977, which provides a more stable energy supply. The cable installed designed to handle a larger load than the islands' demand. This made the second project possible. In 2010, three 1.5 MW wind turbines were erected and generate the energy equivalent to the total year's demand. Due to the time of year the power is generated, FIEC sells surplus energy during the winter months and continues to buy more than it generates in the summer.

While Knox County is not a single community, Vinalhaven does contract with their Sheriff's Office to provide coverage to the island. This relationship helps by reducing the financial burden on resident tax payers. The town agrees to cover the purchase cost and maintenance of the police cruiser, deputy salaries (half) and overtime, transportation, and housing.

3. If the community has a public sewer system, what issues or concerns are there currently and/or anticipated in the future? Is the sanitary district extension policy consistent with the Future Land Use Plan as required by (38 M.R.S.A. §1163), or will it be?

Extensions to the public sewer system are not anticipated, however, the sewer system has the ability for increased capacity. Individuals within the Village Overlay District that are not already hooked to the system may do so at their expense. As per the Town of Vinalhaven Sewer Use Ordinance, "If the Town does not elect to construct a sewer extension under public contract, the property owner, building, contractor, or developer may construct the necessary sewer extension... He, she, or they must pay for the entire installation, including all expenses incidental thereto."

4. If the community has a public water system are any public water supply expansions anticipated? If so, have suitable sources been identified and protected? Is the water district extension policy consistent with the Future Land Use Plan?

Supply expansion is not anticipated. We are currently operating below capacity and therefore do not see a need to expand the current water supply. As for an extension policy, not all landowners within the Village Overlay District are connected to the system. The current policy refers the Maine Public Utility Commission.

5. If the town does not have a public sewer or water systems, is this preventing the community from accommodating current and projected growth?

The town has a public sewer and water system, see above. The existing infrastructure is operating below capacity, which therefore, will allow for more development within the Village Overlay District.

6. Are existing stormwater management facilities adequately maintained? What improvements are needed? How might future development affect the existing system?

The wastewater treatment facility processes the stormwater that enters the catch basins/drainage system. There are other areas where water may flow directly into water bodies, potentially causing

concern from some residents as it relates to water quality. Most of the existing system is located in areas that are developed and therefore should see very little affect.

7. How do residents dispose of septic tank waste? Are there issues or concerns regarding septic tank waste?

Residents living outside of the Village Overlay District are responsible for designing, installing, managing, and disposing of their own septic waste. According to the Local Land Use Ordinance, septic installations “shall be installed in conformance with the State of Maine Subsurface Wastewater Disposal Rules.” As for the disposal of the septic waste, the Town has a contract with a waste disposal facility, per Maine Law, which allows for the disposal of sewage from the WWTF as well as the residential systems on the island. The disposal company transports the waste via Maine State Ferry multiple times per week.

8. Is school construction or expansion anticipated during the planning period? Are there opportunities to promote new residential development around existing and proposed schools?

The school facility was completed in 2003 and built to anticipate the projected growth. Currently, there is no need to expand the school to accommodate student populations. In addition, there are 11 undeveloped parcels that account 85 acres within a quarter mile of the school. New residential development within this area does not seem timely nor practical.

9. Is the community’s emergency response system adequate? Are improvements needed?

Vinalhaven is served by a voluntary Fire/EMS squad. Over the last 5 years, there has been an average of 34 volunteer firefighters and 13 EMS volunteers. In addition to the volunteers, there are two paid staff; one Fire Chief/Emergency Management Director and one Ambulance Director.

In 2010, the Town completed the transition to narrowband, which was required by the FCC for all emergency response agencies. The transition required various agencies to purchase upgraded radio equipment, was made possible by coordinating with Knox County. The following year, the Town obtained a grant from the Maine Emergency Management Agency to purchase a 30 KW generator.

	2011	2010	2009	2008
Fire	81	88	70	94
EMS	189	191	180	165

Improvements to these services include the need to replace some of the aging equipment. At 22 years old, the “basic pumper” truck could be replaced. Despite low mileage, it is important to operate reliable vehicles, particularly as mutual aid is very difficult to acquire. The estimated cost of replacing the truck is \$265,000 (2011 quotes). For both the Fire and EMS, reserve funds are established to collect and prepare for the costs of replacement vehicles and equipment as they are needed.

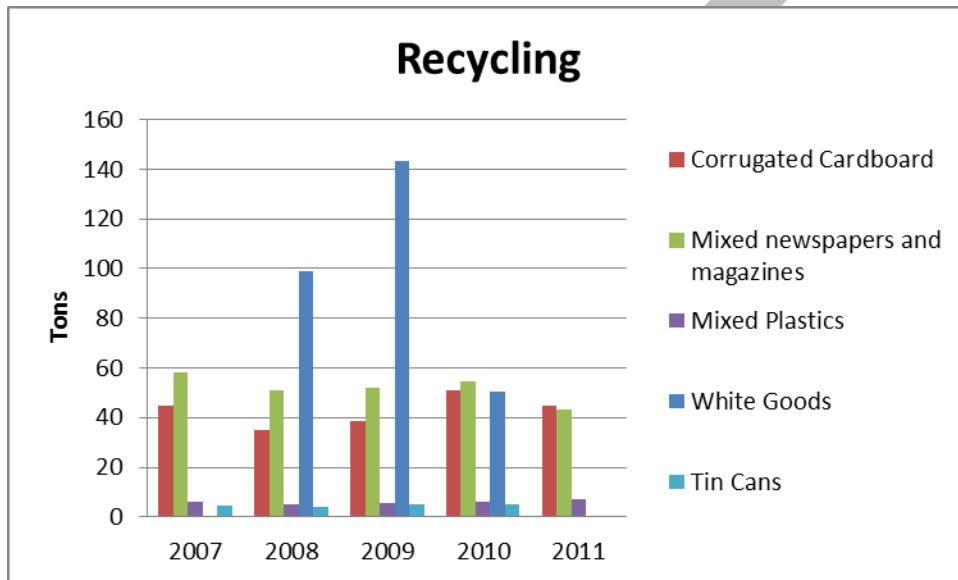
10. Is the solid waste management system meeting current needs? Is the community reducing the reliance on waste disposal and increasing recycling opportunities? Are improvements needed to meet future demand?

Over the past few years, the solid waste management system has met the community needs. The municipal transfer station operates Sunday, Monday, Wednesday & Thurs. – 7:30 to 4:00. Once MSW is compacted it is trucked off the island to mainland disposal facilities. Similarly, the recyclables leave the island regularly by way of tractor trailers. Over the past few years, MSW has decreased slightly while Mixed CDD has remained relatively constant, with a significant dip in 2010, see the figure below for annual numbers..



Soild Waste collection Source: local records

Recycling on the island has also seen simlar trends to that of Solid Waste. Cardboard and Mixed newspapers and magazines have remained generally the same averaging



11. Are improvements needed in the telecommunications and energy infrastructure?

Foreseeable future projects for telecommunication and energy are not anticipated, but will continue to be reviewed and considered based on the needs of the community. For example, over the past few years, the island has had improvements to both energy and telecommunications. Below are some examples.

Fox Islands Electric Cooperative has had two major projects in the past 10 years include the replacement of the submarine cable, originally installed in 1977, which provides a more stable energy supply. The cable installed designed to handle a larger load then the islands' demand. This made the second project possible. In 2010, three 1.5 MW wind turbines were erected and generate the energy equivalent to the total year's demand. Due to the time of year the power is generated, FIEC sells surplus energy during the winter months and continues to buy more than it generates in the summer.

Telecommunications on the island continue improve. There are numerous internet/cable/phone providers that service the island. New technology provides higher and more reliable quality options. In 2012, Tower Specialists erected a cell phone tower in the Mills' gravel pit and now carries a single service antenna. This represents a major step in the direction of cellular communication, currently limited to the northern and eastern sides of the island as they are able to utilize facilities located in neighboring communities.

12. Are local and regional health care facilities and public health and social service programs adequate to meet the needs of the community?

The needs of the community are met by an excellent medical services center. Island Community Medical Services provides primary care, dental services, physical therapy, and behavioral services to the island. The organization is governed by a board of trustees and has been the recipient of a Federal Grant over the past 5 years. The grant monies contribute to approximately 15% of the annual budget and help support the sliding fee schedule, reducing medical costs for low income families, and the 24 hour care that is critical to our safety and quality of life. Below is an overview of the patient visits for various services.

	2011	2010	2009	2008
Medical Visits	5,136	4,269	4,559	5,987
Dental Hygiene/Care visits	1,334	1,257	1,296	1,399
Physical Therapy Sessions	1,210	1,200	1,175	N/A
Family/Individual behavioral health therapy sessions	767	634	450	N/A

13. Will other public facilities, such as town offices, libraries, and cemeteries accommodate projected growth?

Public cemetery facilities on the island currently meet, and in some cases, exceed the demand of the community. Over the past 8 years, the Town Office has been consolidated and relocated into one building, the Washington School and the Town's Library has added a substantial addition that offers more space for the community to utilize. Town cemeteries currently meet the island's needs, but the cemetery committee should also be aware of and think about what happens when the lots become full.

14. To what extent are investments in facility improvements directed to growth areas?

Town owned/operated facilities fall almost entirely within the Growth Area. The only exception to this is the town's Transfer Station. Due to the location of the buildings, the majority of investments are for facilities in the Growth Area.

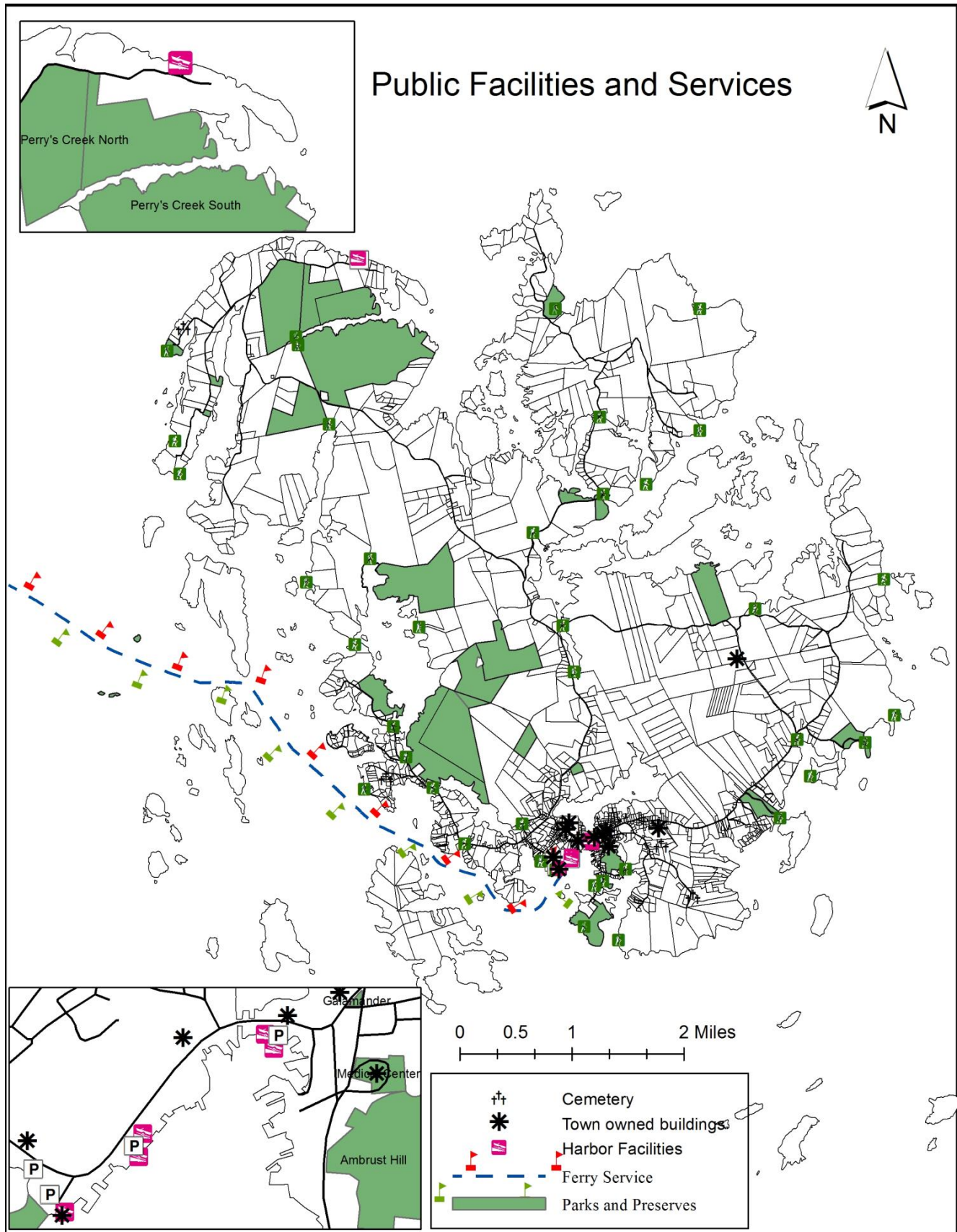
15. Does the community have a street tree program?

Vinalhaven does not participate in a street tree program. There has not been any expressed interest for such a program, but if it becomes suggested the town shall consider the opportunities it could provide.

Conditions and Trends

1. location of facilities and service areas:

The majority of the town's facilities and services are located near Carver's Harbor. The few exceptions include town parks, Brown's Head Lighthouse, the airstrip (publicly owned and leased to a single company), and the Transfer Station. See the following map for a location of all facilities and services.



2. general physical condition of facilities and equipment;

Facilities	Condition	Action	Estimated Cost*
Town Office	Excellent	None	N/A
Public Works Building* work to be completed is dependent upon a structural assessment to determine if the structure can be renovated or replaced. The building is currently in the Growth Area and any foreseeable placement options should it have to be relocated are also in the Growth Area.	Poor	Reserve fund has been established and the town will review opportunities for improvements over the next few years.	\$75,000 – 300,000
Wastewater Treatment Facility	Excellent	None	N/A
Memorial Fire Hall	Fair	A full restoration can be expected to be completed in 2013.	\$150,000 – majority privately funded
Public Safety Building	Excellent	None – recent additions and improvements meet the needs of the community.	N/A
Historical Society	Good	Roof should be re-shingled and back wall needs repair & paint.	\$30,000 - \$75,000
Public Library	Excellent	None	N/A
Airstrip	Good	Continued maintenance	
Transfer Station	Fair	Roof work and regular maintenance needed	
Washington School	Excellent	None	N/A
Brown's Head Lighthouse	Fair	Work on the retaining wall, replacing the stairs from the parking area, interior work, furnace, and chimney work.	\$50,000 - \$75,000

Island Community Medical Center	Good	Roof repair/replacement	\$15,000 - \$25,000
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*These estimates are not actual quotes or bids and they are not approved to be spent.

Town of Vinalhaven Vehicle Inventory

			Last Five Years	Estimated
	Date	Cost	Average Annual	Replacement
	Acquired	New	Maintenance	Date
FIRE DEPARTMENT:				
Engine #1 1985 Farrar	Jun-08	\$1,500		2014
Engine #2 1990 Ford F350 Pumper	Sep-90	\$46,816		2027
Engine #3 2004 GMC Metalfab Pumper	Mar-04	\$180,945		2035
Engine #4 1985 Chevy FMC Pumper	Jan-86	\$69,955		2019
Utility Jeep - 1996 Jeep Cherokee	Feb-97	\$22,033		
Fire Department Total				
Public Works:				
2012 Ford F350 Pickup	May-12	\$33,317	\$1,089	
2000 Ford F-550 3-yd Dump Truck	Sep-99	\$36,600	\$7,731	
2001 GMC 8500 7-yd Dumpt Truck	May-01	\$76,372	\$6,721	
2009 GMC Dump Truck and Plow	Feb-09	\$84,890	\$4,898	
2012 Caterpillar Backhoe Loader 420E	Aug-12	\$109,000	\$0	
1995 Eeger Beaver Chipper	1995		\$2,898	
1993 Caterpillar 120G Motor Grader	Aug-93	\$87,974	\$7,372	
2003 Interstate Trailer	Jul-03	\$12,376		
Transfer Station:				
1997 Caterpillar Backhoe Loader	Apr-97	\$48,500		
2011 S175 Bobcat Skid-Steer Loader	Jul-11	\$27,852		

2001 Utility Trailer	Jan-12	\$5,300		
1978 Fruehauf Box Trailer		\$2,500		
1971 Box Trailer				
Law Enforcement:				
Police Cruiser	2006	\$30,589	\$2,336	
Ambulance Department:				
2011 Ford F450	Jan-11	\$136,025		
1990 Ford	May-93	\$0		

3. capacity and anticipated demand during the planning period;

The Town Office relocated to the renovated Washington School in 2008. This move consolidated town services and currently provides office space for the Town Manager, Town Clerks, Assessor, Code Enforcement Officer, and various other office spaces as needed. In addition to office space, there are two community rooms in which people/groups are able to reserve space for conduct meetings or workshops.

The Public Works Department operates out of the Municipal Garage, located in an old quarry at the eastern end of Main Street, built in 1898 and known as “the Net Factory.” The Garage houses as many as 4 large trucks and serves as an office and storage space for various tools and equipment such as signs, tires, etc. The property around the Garage is used for storing sand/salt mix, cold asphalt mix and for parking other municipal vehicles. A wing of the building is used by the Vinalhaven Water District.

The Foreman of the Public Works Crew receives directions from the Town Manager and is required to obtain approval from the Town Manager for spending more than \$100 on any single purchase. The Foreman keeps a daily log of activities. Every couple of months he/she receives from the Town Manager, a summary of how much has been spent and how much remains.

The Public Works Department uses a private contractor for snow removal on Main Street. All other road plowing is handled by the Public Works crew. The Selectmen “close” some roads in the winter and these do not get plowed.

The Town's Public Safety building houses the Fire and EMS services for the island. The recent addition of the meeting room now provides a gathering place for training opportunities. In addition, the recent upgrades previously mentioned in this chapter also help indicate that our Fire/EMS services are now best able to serve the community.

4. identification of who owns/manages the systems;

All systems previously identified (Fire/EMS, Town Office, Public Works, Library) are owned and managed by the Town and the respective departments. Each department maintains an inventory of equipment and/or vehicles and provides regular reports to the Board of Selectmen. An assessment of condition and need of equipment is reviewed annually during the budgeting period.

5. estimated costs of needed capital improvements to public facilities; and

Considering the aforementioned information, it can be expected that between \$250,000 and \$400,000 may be spent for capital improvements during the life of the plan. In addition, the town is planning to replace two vehicles in the Fire Department during the life of this plan and may total between \$250,000 and \$350,000. Other costs for capital improvements may also be considered over the course of the plan as they become relevant. The town should review all serious proposals and be sure the project aligns with this plan.

6. the following information related to each of these public facilities and services:

- a) Sewerage and/or Water Supply – Identify number and types of users, and percent of households served

The wastewater treatment facility serves approximately 350 homes and businesses, and will include a gravity sewer collection system, a treatment plant, and outfall through Grimes Park into the outer harbor. The sewer treatment plant will initially be managed by the Town. Although there will be approximately 350 users on the system, some will be "equivalent users". Heavier users of the

system, such as restaurants or hotels, may be identified as being more than one equivalent user. There will be no reduction in rates (or equivalent user rating) for seasonal use.

The collection system will have gravity flow from homes and businesses to 9 pump stations located at low points throughout the town. Those pump stations will move the wastewater through a forced main to the main treatment plant located across from the ferry terminal. Raw wastewater will receive primary treatment in septic tanks. That effluent will be treated biologically in a vendor-provided packaged system. Following secondary treatment, effluent will be disinfected using an ultraviolet (UV) irradiation system, and pumped from the treatment plant to the outfall location at Grimes Point. Solids will be transported off of the Island to a licensed disposal facility. Some properties will not be able to gravity feed to the pump stations. On those properties, individual small grinder pump stations will be installed to pump the waste to the regional pump stations.

The \$9.8 million project was funded through grants from the Environmental Protection Agency (\$950,000), USDA Rural Development (\$2.8M), Special Appropriations (\$2.4M), the Maine Department of Environmental Protection (\$1.5M), and Community Development Block Grants (\$800,000) totaling approximately \$8.6M. In addition, USDA Rural Development awarded the Town two loans for a total of \$1.2M, payable over 28 years. The Town of Vinalhaven is the holder of the loan.

- b) Septage – Identify any community policies or regulations regarding septage collection and disposal.

Our Local Land Use Ordinance addresses both public sewage and those outside the service area. Septage collection and disposal is defined in our ordinance as “Subsurface sewage disposal system” – any system designed to dispose of waste or waste water on or beneath the surface of the earth; includes, but is not limited to: septic tanks; disposal fields; grandfathered cesspools; holding tanks; pretreatment filter, piping, or any other fixture, mechanism, or apparatus used for those purposes; does not include any discharge system licensed under 38 M.R.S.A Section 414, any surface waste water disposal system, or any municipal or quasi-municipal sewer or waste water treatment system.”

Sec 16 of the Land Use Standards AA. Septic Waste Disposal states:

1. Lots lawfully in existence as of the date of this ordinance are exempted from lot coverage requirements (see "Dimensional Requirements") for the purpose of wastewater disposal.
2. All subsurface sewage disposal systems shall be installed in conformance with the State of Maine Subsurface Wastewater Disposal Rules.
3. In the Shoreland Zone:
 - a. Clearing or removal of woody vegetation necessary to site a new system and any associated fill extensions, shall not extend closer than seventy-five (75) feet, horizontal distance, from the normal high water line of a water body or the upland edge of a wetland and,
 - b. A holding tank is not allowed for a first-time residential use in the shoreland zone.

Also noted in the Land Use Ordinance is Section 17. B. Administration: "If the property is not served by a public sewer, a valid plumbing permit or a completed application for a plumbing permit, including the site evaluation approved by the Plumbing Inspector, shall be submitted whenever the nature of the proposed structure would require the installation of a subsurface sewage disposal system."

- c) Solid Waste – Describe the community's solid waste management system. Identify types and amounts of municipal solid waste and recycled materials for the past five (5) years.

The transfer station is located on Round the Island Road at the site of the former landfill. The Town landfill was capped in 1997, a unique project that set a new precedent by using on-Island resources of crushed rock and clay as an alternative to imported material. The office and collection structure, built in 1996 and expanded for recycling space in 1998, is in fair condition and adequate for current operations.

(tons)	2011	2010	2009	2008	2007
MSW	626.8	640.19	584.22	656.86	716.35
Tires	5.18	9.1	.11	1.57	
Mixed CDD	371.21	259.47	368.74	375.86	

Recycling	2011	2010	2009	2008	2007
Corrugated Cardboard	44.8	51.2	38.4	35.2	44.8
Mixed newspapers and magazines	43.13	54.63	51.75	51.18	58.08
Mixed Plastics	7.17	6.1	5.63	4.96	5.93
White Goods		50.4	143.5	99	
Tin Cans		5.25	5	4.25	4.5

Ferry transport of regular waste is scheduled for a minimum of two trips per week, recycled materials and metal/junk cars usually each one trip per week and the demolition trailer as needed. Special waste, including hazardous material, is hauled off once a year. Vinalhaven generally has an excellent rating, compared to other Maine towns, for recycling; and composting at home has been encouraged through the distribution of containers for outdoor use.

- d) Stormwater Management – Identify combined sewer overflows. For Municipal Separate Stormwater System (MS4) communities, describe plan and status of the major goals of the MS4 requirements.

Vinalhaven is not an MS4 community, but does follow state recommendations for stormwater management where applicable.

- e) Power and Communications – Availability of 3-phase power, Internet (including broadband), and cable within the community.

Telephone/Internet/Cable services are available through multiple providers, some offering bundle packages for all three or specializing in one or two. Few companies house installation and maintenance equipment on the island for quicker service.

Mail delivery occurs daily by plane, weather permitting, or by ferry. Outgoing mail leaves on the next to last boat during the week and after the post office closes on Saturday.

Three – phase power became available with the submarine cable in 1977. In 2005, the cable was replaced and buried to reduce the potential threat of damage from fishing gear or other natural threats. This new cable provides a single 3-phase cable, versus the 3 individual cables that previously existed, as well as fiber optics and line capacity to sell power generated by the three 1.5 MW wind turbines.

Cellular phone transmission and reception on the island is erratic at best with some areas having good coverage and others almost none. There is a critical need for one or more transmission towers and /or relay antenna. In 2001, a permit for the construction of a tower was granted and construction of the tower was completed in May 2012. There are currently no contracts with service providers. The developer has stated a commitment to proceed with the cellular phone companies and to provide service to the Town and/or school if desired. There may still be some areas that will not have good service due to obstructions. These could be handled with relay antenna(s).

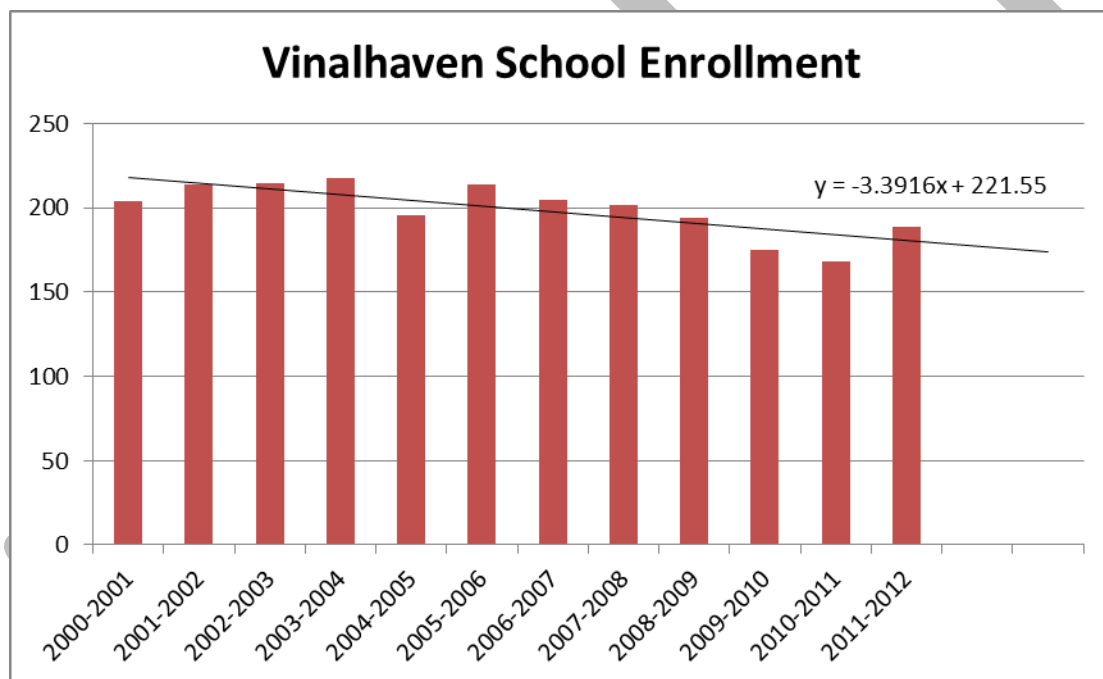
- f) Emergency Response System –Average call response times for fire, police, and emergency/rescue.

Response time to emergency calls is estimated to be 3-5 minutes; that is the time to get the response vehicles on the road. Response time to the scene of the incident, however, may vary greatly depending on the location. The Public Safety Building is located in the village area on the south side of the island, so those calls on Calderwood's Neck and near the Thoroughfare may take upwards of 20 minutes to reach the scene.

An emergency call system is available for elderly persons living independently under a program operated by Vinalhaven Eldercare Services, Inc. under the sponsorship of the Fox Island Electric Coop. There are approximately 45 now in use. Individual units cost \$350 and are made available on an ability to pay basis. This is an on-going program of Eldercare that requires operating financial assistance from the community.

- g) Education – Identify school administrative unit. Include primary/secondary school system enrollment for the most recent year information is available and for the ten (10) years after the anticipated adoption of plan.

MSAD #8 is the official name for Vinalhaven School and encompasses the single municipality of Vinalhaven. Enrollment over the past decade has generally declined (see figure below). The addition of a Pre-K program brought the total enrollment up from the previous two years. It is expected that the program will continue into the future and help to offer earlier development in the community's youth.



Using the previous 12 years as a baseline for projections, enrollments for the next 10 years will decline. Enrollment for 2016-2017 school year is expected to be 164 and 137 in the 2024-2025. It is hard to rely on these numbers as a basis or decision for large-scale projects, but should be considered before moving forward. Schools are one of the essential arteries for small communities and maintaining enrollment is vital to the community's success. Recognizing that, the school should continue to offer the same level, or higher, of education and care they have demonstrated and the island should continue to support the school.

- h) Health Care - Describe major health care facilities (hospitals, clinics) and other providers serving the community. Identify public health and social services supported by the community through municipal subsidy.

Islands Community Medical Services (ICMS) provides complete Family Medical Care, Emergency Medical Services, and Community Health services for Vinalhaven. ICMS, a Federally Qualified Health Center 501 C-3 organization, is governed by a board of year-round and seasonal residents.

The 6,500 square foot facility is municipally-owned constructed in 1964 using federal Hill-Burton funds. The current facility is complete with 4 exam rooms, x-ray room, emergency room, dispensary, dental office, and ambulance bay. The Atlantic Ave. facility is in need of repairs and additional space for ICMS to meet its 5-year service plan goals to the community. The K-12 School Health Center provides 130 square feet of space to serve students.

ICMS is provides numerous services to their customers including:

Family Practice Services: The ICMS service goal is to provide comprehensive Family Practice care for Vinalhaven's 1,200+ and Matinicus' 70 year-round residents, to reduce disease, and optimize health from cradle to grave. ICMS provides physician level acute and chronic care visits by appointment as well as state of the art emergency room services 24 hrs 7 days a week available by pager. Home visits, home hospice services, and community medicine clinics round out the services. The Lions diabetes screening clinic tests blood sugar, blood pressure, lipid, and prostate enzyme. The annual skin cancer screening clinic gives complete skin exams.

ICMS also serves approximately 2,000-3,000 long-term seasonal residents with an increasing number of weekly summer renters and day-trippers. Some long-term seasonal residents see ICMS as their primary physician home. ICMS also provides primary health care services for the island of Matinicus by telemedicine and on the Seacoast Mission boat, the Sunbeam.

Emergency Medical Services: Emergency medical ambulance services are provided 24 hours 7 days a week by EMTs on call. The ambulance service employs a part time EMS director who coordinates

the island's service which currently consists of 7 paid/volunteer EMTs operating two ambulances at the EMT-Basic and first responder levels.

Dental Services: The ICMS Dental Services (ICMS-DS) is a division of ICMS. Part-time visiting and resident dentists have served Vinalhaven since the 1950's. Since 2000, Dr. Tony Bates, DMD, the ICMS volunteer dental director, and Catherine Bunin-Stevenson, dental hygienist, along with other volunteer dentists are providing part-time visiting dental services. ICMS-DS hopes to have a part-time dentist on staff within the next two years.

Senior Citizen Facilities

The year round population of Vinalhaven has increased from around 1,100 in 1990 to nearly 1,300 in 2000, an increase of 18%. Extrapolation from related studies and State census data, however, reveals that the elderly population here on Vinalhaven, like elsewhere, has increased to a greater degree. Furthermore, Vinalhaven's attraction, particularly for retiring summer visitors, as an appealing place to spend the rest of their lives, makes it likely that the growth of our elderly population will continue to outpace that of the general population. We can expect Vinalhaven's elderly population to increase by at least 25% in the next decade.

In 1996 Vinalhaven Eldercare Services (VES), a non profit organization, was formed to help meet the needs of the elderly on Vinalhaven. A survey of the needs of the elderly still living in their own homes on the Island spawned a program of assistance to help those older islanders sustain themselves for as long as practical. VES volunteers now transport seniors to events, appointments, to run errands, and to visit with others. In concert with Fox Island Electric and the Cooperative Response Center, VES instituted a Medical Alert Program, whereby the costs of communication devices installed in the homes of about three dozen elderly, are carried by the users on a sliding scaling determined by the capacity to pay. -VES maintains a modest fund to serve the emergency needs of the elderly, sponsors the 'Meals on Wheels' program, and serves as an advocacy group for the older Island residents as needed.

VES was also formed to respond to the poignantly homesick circumstances of elderly islanders confined to health care facilities in unfamiliar surroundings on the mainland. The concept of our

own health care facility emerged from these concerns. There our own older people could live out their remaining years in the bosom of their own nurturing community. The Ivan Calderwood Homestead, an Adult Family Care Home, is now home to six older islanders, and is undergoing an expansion that will allow occupancy by two more. The facility was made possible through the generous bequest of two acres and a home by one of the Island's lifelong residents. Successful Island wide fundraising, plus various private, state and federal grants and loans paid for the original remodeling and the planned expansion.

Not surprisingly, given the rate of growth described above, the Homestead has a waiting list. Vinalhaven and VES can expect to address the needs of an ever increasing population of elderly and those needs will include the need for additional facilities like the Ivan Calderwood Homestead. Those growing needs and the tenuous circumstances that translate into state and federal funding, into individual bequests of real estate, and into large private contributions, cannot be addressed entirely by yard sales, concerts and annual fundraisers. VES has begun, in a big way, to address the needs of our older citizens, many of whom have lived here all their lives, and who have sacrificed and given of themselves to improve the circumstances of their children and fellow citizens. Future Planning on Vinalhaven must sustain and expand upon this effort.

- i) **Municipal Government Facilities and Services** – Describe facilities and staffing for municipal administrative, enforcement, and public works operations.

The town office is located at the Washington School and has 4 full-time staff, a Town Manager, Administrator, Bookkeeper, and a Clerk. The town also employs a part-time code enforcement officer and a part-time assessor who both have offices in the building.



The current building was renovated in 2004 which allowed for all of the services to be housed in one location. The major town-wide effort to complete this project was made possible by private funders and local taxes. There are two community spaces in the building used for meetings and activities.

j) Street Tree Program - Describe the community's street tree program.

The community is not enrolled in a Street Tree Program.

Survey Results

Public Facilities/Services: For each service, please check your level of satisfaction:		Very Satisfied	Satisfied	Dissatisfied
Q 47	Adult Education	8%	66%	26%
Q 48	Ambulance	65%	34%	1%
Q 49	Bicycle Facilities	10%	53%	36%
Q 50	Cemeteries	19%	71%	11%
Q 51	Farmers' Markets	18%	69%	13%
Q 52	Fire Protection	58%	40%	2%
Q 53	Law Enforcement	24%	61%	15%
Q 54	Property Tax Level	13%	67%	20%

Q 55	Vinalhaven School	32%	53%	14%
Q 56	Recreation Facilities	49%	47%	4%
Q 57	Road Plowing	26%	60%	14%
Q 58	Road Repair	10%	58%	32%
Q 59	Town Office Services	44%	55%	1%
Q 60	Town Office Hours	43%	57%	0%
Q 61	Transportation Services	9%	60%	32%
Q 62	Parking	15%	72%	13%
Q 63	Vocational Education	8%	66%	26%

Issues of Public Concern

As per the Community Survey results, there is dissatisfaction for the lack of a full-time doctor at the medical center. Currently they operate with three PAs and a DO that visits periodically and find that sufficient for the majority of patient needs. Maintenance of some town owned facilities is also of minor concern. Capital Reserve funds have been established in some cases, but plans for specific buildings have not been identified.

Fiscal Capacity and Capital Investment Plan

Introduction

Municipalities must be able to determine the expenditures necessary to provide basic services and the impact that this spending will have on townspeople. The primary funding source for municipal government is property tax revenue. In order to maintain a consistent mil rate year to year, town government must operate in a fiscally responsible manner. Large fluctuations in the tax rate can cause public outcry and can discourage economic development. Although the priorities of the Town may change from one election year to another, stable municipal finances are always a fundamental responsibility of Town government. It is important for Vinalhaven to budget diligently for the annual operating expenditures while at the same time plan for the Town's long-term objectives.

State/Local Goal(s)

To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

Analyses

1. How will future capital investments identified in the plan be funded?

Capital investments will continue to be funded through capital reserve funds supported by property tax revenues as well as through intergovernmental revenues (State aid), grants and loans from federal, State and private sources, and from municipal bonds.

2. If the community plans to borrow to pay for capital investments, does the community have sufficient borrowing capacity to obtain the necessary funds?

The community does have sufficient borrowing capacity. In fiscal year 2012, total municipal debt was well below the statutory limits as set forth in Title 30-A MRSA Section 5702. Total outstanding long-term obligations during a year can be no greater than 15% of the assessed value of taxable property as of the beginning of the fiscal year. As of June 30, 2012, the amount of outstanding long-term debt was equal of 1.6% of property valuation for the year then ended.

3. Have efforts been made by the community to participate in or explore sharing capital investments with neighboring communities? If so, what efforts have been made?

As noted in the Regional Coordination section of the Executive Summary, the Town does cooperate with neighboring communities and with Knox County in the provision of services. Services shared regionally include police protection, emergency services coordination, and pooled bidding for winter salt and sand. Sharing of capital investments has proven challenging for an island community. Purchase of a police vehicle has been considered through a pooled purchase plan with Knox County Sheriff's Office.

Conditions and Trends

1. Identify community revenues and expenditures by category for the last five (5) years and explain trends.

Total municipal revenues increased 12.9% over the last five years. Property taxes comprised 83% of revenues in 2008 and 88% of revenues in 2012. State revenue sharing decreased from 1.3% to .9% of total revenues during the same period. All sources of revenue, with the exception of property taxes, decreased in absolute terms over the last five years. These reductions reflect the sustained, overall economic downturn of the last ten years at the national, State and local levels, including lower total employment and lower housing values.

Actual Revenues for the years ending June 30 th						
Categories	2008	2009	2010	2011	2012	Percent Change
State Revenue Sharing	58,455	58,710	46,984	44,816	44,059	-24.6%
Homestead Reimbursement	19,782	20,504	21,021	16,111	16,191	-18.2%
Other State & Federal	86,475	108,226	75,501	75,625	82,699	-4.3%
Property Taxes	3,791,544	4,089,462	4,136,482	4,393,975	4,529,040	19.5%
Other Taxes	262,017	241,796	228,186	254,273	261,841	-.1%
Licenses, Permits and Fees	81,759	85,916	90,977	111,648	37,173	-54.5%
Transfer Station Fees	116,016	105,088	106,167	106,841	103,516	-10.8%

Actual Revenues for the years ending June 30 th						
Categories	2008	2009	2010	2011	2012	Percent Change
Other Charges for Services	70,268	34,145	46,295	49,235	48,758	-30.6%
Investment Interest	49,799	27,451	18,435	8,855	4,105	-91.8%
						--
						--
Grants and Miscellaneous	14,214	15,147	12,554	27,287	8,283	-41.7%
Total	4,550,329	4,786,445	4,782,602	5,088,666	5,135,665	12.9%

Source: Town Financial Audit Reports

Total expenditures increased 14% over the last five years. The increase is generally wage and benefit increases and market conditions. The largest single expense, education (over which municipal government has no control) increased 13.5% from 2008 to 2012, comprising 45.6% of total expenditures in 2008 and 45.4% of total expenditures in 2012.

County tax increased 7.6%, comprising 10.6% of total expenditures in 2008 and 10% in 2012. Debt service increased only 2.7%, comprising 6.3% in 2008, and 5.7% of total expenditures in 2012.

Overall, revenue and expenditures have remained stable and the ending Fund Balance has remained relatively the same for the past five years.

Actual Expenditures for the years ending June 30 th						
Categories	2008	2009	2010	2011	2012	Percent Change
General Government	373,310	413,287	399,033	410,558	419,046	12.3%
Public Works & Sanitation	648,171	644,042	658,368	588,081	707,387	9.1%
Public Safety	445,305	429,810	464,748	496,754	488,233	9.6%
Culture and Recreation	75,139	75,376	75,261	78,807	92,149	22.6%
School Assessment	2,053,965	2,280,752	2,331,911	2,331,910	2,331,118	13.5%
County Tax Assessment	478,895	501,748	483,916	496,208	515,492	7.6%
Fixed Charges	21,881	17,394	21,898	13,223	14,819	-32.3%
Public Health and Welfare	12,045	11,057	7,931	6,522	11,422	-5.2%
Debt Service	283,127	237,053	252,163	213,757	290,801	2.7%
Other Miscellaneous			10,438	9,902	11,622	11.3%
Net Transfers Out	110,576	181,996	61,158	442,840	255,466	131.0%
Total	4,502,414	4,792,515	4,766,825	5,088,562	5,137,555	14.1%
Net Change in Fund Balance	47,915	(6,070)	15,777	104	-1,890	
Ending Fund Balance	1,074,306	1,068,236	1,084,013	1,084,117	1,082,227	.7%

Source: Town Financial Audit Reports

2. Describe means of funding capital items (reserve funds, bonding, etc.) and identify any outside funding sources.

Capital investments are funded through capital reserve funds supported by property tax revenues as well as through intergovernmental revenues (State aid), grants and loans from federal and State sources, and from municipal bonds. Non-governmental (outside) funding sources have recently included estate bequeaths, gifts, and donations to the Library, Ambulance Department and Fire Department capital reserve funds.

3. Identify local and state valuations and local mil rates for the last five (5) years.

The local valuation of Vinalhaven increased 13.3% in the last five years.

Vinalhaven Local Valuations (Real and Personal Property) for the years ending June 30th						
2008	2009	2010	2011	2012	Change	Percent Change
447,292,061	475,272,925	491,132,693	504,898,458	506,820,200	59,528,139	13.3%

Source: Municipal Valuation Returns

The State valuation of the Town increased 24.9% in the last five years.

Vinalhaven State Valuations						
2008	2009	2010	2011	2012	Change	Percent Change
435,550,000	482,900,000	530,100,000	526,150,000	544,000,000	108,450,000	24.9%

Source: Maine Revenue Services

The Town's mil rate increased 6% in the last five years.

Vinalhaven Mil Rates for the years ending June 30 th

2008	2009	2010	2011	2012	Change	Percent Change
8.40	8.50	8.40	8.70	8.90	0.5	6.0%

Source: Municipal Valuation Returns.

4. How does total municipal debt (including shares of county, school and utility) compare with the statutory and Maine Bond Bank recommended limits on such debt?

Title 30-A MRSA Section 5702 contains a limitation on the amount of debt that municipalities may incur. From 2008 to 2012, the Town did not exceed the State statutory limit. The Town's long-term liability for fiscal year 2012 was \$1,177,322 in governmental activities and \$1,130,000 in business-type activities. Long-term debt in government activities included notes on the Washington School Town Office renovation, Sewer Construction, and Road Construction and Paving projects.

The Maine Bond Bank has no set policy on the amount of total debt a municipality can or should have outstanding other than to be sure that the municipality is in compliance with the provisions of Maine law regarding limitations on local debt. The Maine Bond Bank looks at outstanding debt, both direct and contingent, from such perspectives as debt per capita, percentage of operating budget to debt service, and total debt among other factors.

Issues of Public Concern

Valuations on Vinalhaven are significantly high and often price middle-class working families out of property that was owned by previous generations in their family. This is only of concern because of the important role fishing and access to the water has on the community. Maintaining the access to the water is vital for the community's role in the industry. Many efforts have been made to preserve the working waterfront in Carver's Harbor, which should help ensure that is available.

Capital Investment Plan

The comprehensive plan must include a capital investment plan that:

1. Identifies and summarizes anticipated capital investment needs within the planning period in order to implement the comprehensive plan, including estimated costs and timing, and identifies which are municipal growth-related capital investments;
2. Establishes general funding priorities among the community capital investments; and
3. Identifies potential funding sources and funding mechanisms.

For (1) through (3), see the table below titled Vinalhaven Capital Investment Plan Summary 2014-2024.

Purpose and Definition

The purpose of a capital investment plan (CIP) is to establish a framework for financing needed capital investments. A CIP guides budgeting and expenditures of tax revenues and identifies needs for which alternative sources of funding such as loans, grants or gifts will be sought.

Capital investments include the repair, renewal, replacement or purchase of capital items. Capital investments differ from operating expenses or consumables. The expense of consumables is ordinarily budgeted as operations. Capital investments generally have the following characteristics: they are relatively expensive (typically having an acquisition cost of \$5,000 or more); they usually do not recur annually; they last for several years (often having a useful life of three or more years); and they result in fixed assets. Capital items can include equipment and machinery, buildings, real property, utilities and long-term contracts and are funded through the establishment of financial reserves.

Capital investments are prioritized each year in the budget process based on the availability of funds and the political will of the community. A complete CIP describes expected yearly investment and allows for both changes in priorities and reduction of available funds. The CIP is intended to prevent a large capital investment from occurring in a single fiscal year. The unexpected purchase of a sizeable investment can overburden the tax rate and cause large fluctuations in tax bills from year to year. The annual provision for eventual replacement of capital investments depends on the useful life of the capital investments. It

is important that capital investments be financially accounted for each fiscal year, minimizing later expenses.

For the purposes of this plan, the total costs have been recognized with an indication of the expected period for each item that is desired based upon priority ratings. The Town is currently drafting a complete capital investment plan that will provide for a yearly allocation of available and applicable funds. Each year any necessary changes will be made to the CIP and it will be included in the annual budget. Each year the Budget Committee will review the funding requests and make a recommendation for Select Board review.

Priority Rankings

The capital investments identified below were assigned a priority based on the listed ratings. Logically, “A” investments would be implemented prior to “B” and so on. Lower priority items may be funded ahead of schedule if higher priority items have already been funded or are prohibitively expensive, or if other sources of revenue (such as donated funds) become available. In order to fund capital investment projects, it is necessary to begin to identify funding sources and set aside funds in advance of the projected time of funding.

Immediate need. A capital investment rated in this category would typically remedy a danger to public health, safety and welfare.

Necessary, to be accomplished within two to five years. A capital investment rated in this category would typically correct deficiencies in an existing facility or service.

Future investment or replacement, to be accomplished within five to ten years. A capital investment rated in this category would be desirable but is of no urgency. Funding would be flexible and there would be no immediate problem.

Desirable, but not necessarily feasible within the ten year period of this Comprehensive Plan.

Projects referenced in this Comprehensive Plan and existing reserve accounts are the basis for this capital investment plan and have been incorporated into the table below. As well, State and federal mandates necessitating some of these projects have been noted in the table. The need for each project is shown in parentheses.

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Vinalhaven Capital Investment Plan Summary 2013-2025					
Comprehensive Plan Chapter/Town Dept.	Anticipated Item and (Need)	Estimated Cost*	Priority	Responsible Party (ies)	Possible Funding Sources
Public Facilities & Services	Public Works Garage -	\$75,000-300,000	A	The Board of Selectmen approve the spending for all Capital Projects prior to town votes, therefore, we expect the Selectmen to be responsible for these projects and funds.	A combination of any or all of the following: Local Funding or Private, State, and/or Federal Grants
	Transfer Station/Dump	\$10,000-50,000	C		
	Historical Society	\$30,000-75,000	C		
	Brown's Head Lighthouse	\$50,000-75,000	C		
Transportation	Carrying Place Bridge		A		
	Lane's Island Bridge		B		
	Road Paving	\$500,000-2,000,000	B		
	Sidewalks	\$100,000-400,000	C		
Marine Resources	Public Boat Launches and Floats	\$5,000-20,000	B		
Vehicles	Fire Truck(s)	\$200,000-450,000	A		
	Utility Jeep	\$18,000-35,000	A		
	Police Cruiser	\$18,000-35,000	A		

Source: Town

*These estimates are not exact or from construction companies and not approved to be spent. These projects are all based on an evaluation of the current state of said facilities. Funding is not determined and projects may be completed during the life of the plan.

Existing Land Use

Introduction

The implementation of Shoreland Zoning in the early 1970's kick started the island's zoning regulations. As a result of the state mandated zone, islanders recognized the importance of protecting the rest of the island's resources and adopted their first comprehensive plan and zoning ordinance in 1974. Three zoning districts were created: Resource-Protection, Residential-Commercial, and Residential-Marine. Reflecting the importance of the fishing industry for the town, the Plan stated that it "should be a prime concern to allow each fisherman the right to continue his regular use of his property for the pursuit of his livelihood." Thus, in the Residential-Marine District, it was stated, "a landowner can build, maintain, and store all material necessary for conducting fishing and lobstering business." Changes have been made since its adoption to compliment the needs of the island and many seem to be satisfied with current zones. Development over the past 10 years has been slow and relatively distributed across the island with many new homes being built along North Haven Road and Round the Island Road.

State and Local Goal(s)

None required

Analysis

1. Is most of the recent development occurring: lot by lot; in subdivisions; or in planned developments? Is recent development consistent with the community's vision?

The community's vision, per 2012 Community Survey results, is to have slow-smart-growth, which echoes the 1988 Comprehensive Plan which showed the support for moderate-slow growth among year-round populations and slow/sustained growth the same for summer populations. Over the last two years, the majority of development has been lot-by-lot. The seven new buildings built between 2010 and 2011, according to local records, were scattered across the island and 4 different tax maps. Since 2000, a majority of the new residential building permits were issued along the North Haven Road and Round the Island Road.

2. What regulatory and non-regulatory measures would help promote development of a character, and in locations that are consistent with the community's vision?

To preserve island life for another generation, as that is the underlying vision for the community, we envision life mostly the same. The island-wide zoning has been in effect for over 40 years now and has guided development. Whether it was forward thinking or a mistake, it was simply a good idea. Many feel the zoning satisfies the needs and vision of the town and is flexible enough to allow for many of the things the community aspires to in preserving island life for another generation.

3. Is the community's administrative capacity adequate to manage its land use regulation program, including planning board and code enforcement officer?

Vinalhaven has a Code Enforcement Officer/Licensed Plumbing Inspector that is in the office weekly. In addition, there is an Assessor that is in the office monthly. The Planning Board meets twice monthly, once as a pre-meeting and the other as the official meeting in which permits are approved/denied. Currently, the system is effective and supports the land use regulation program.

4. Are floodplains adequately identified and protected? Does the community participate in the National Flood Insurance Program? If not, should it? If so, is the floodplain management ordinance up to date and consistently enforced? Is the floodplain management ordinance consistent with state and federal standards?

As stated in the Floodplain Management Ordinance, "The Town of Vinalhaven, Maine has chosen to become a participating community in the National Flood Insurance Program, and agrees to comply with the requirements of the National Flood Insurance Act of 1968 (P.L. 90-488, as amended) as delineated in this Floodplain Management Ordinance.

It is the intent of the Town of Vinalhaven, Maine to require the recognition and evaluation of flood hazards in all official actions relating to land use in the floodplain areas having special flood hazards. The Town of Vinalhaven has the legal authority to adopt land use and control measures to reduce future flood losses pursuant to Title 30-A MRSA, Sections 3001-3007, 4352, 4401-4407, and Title 38 MRSA, Section 440.

The National Flood Insurance Program, established in the aforesaid Act, provides that areas of the Town of Vinalhaven having a special flood hazard be identified by the Federal Emergency Management Agency and that floodplain management measures be applied in such flood hazard areas. This Ordinance establishes a Flood Hazard Development Permit system and review procedure for development activities in the designated flood hazard areas of the Town of Vinalhaven, Maine.

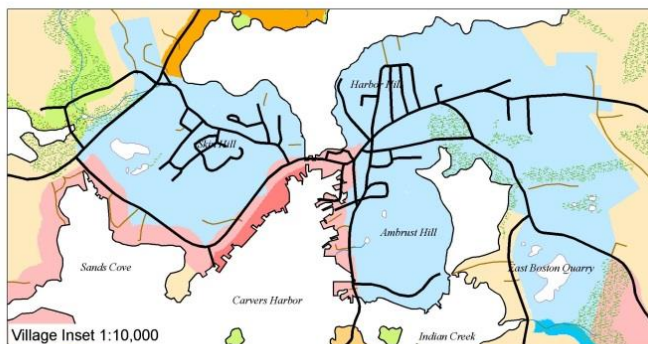
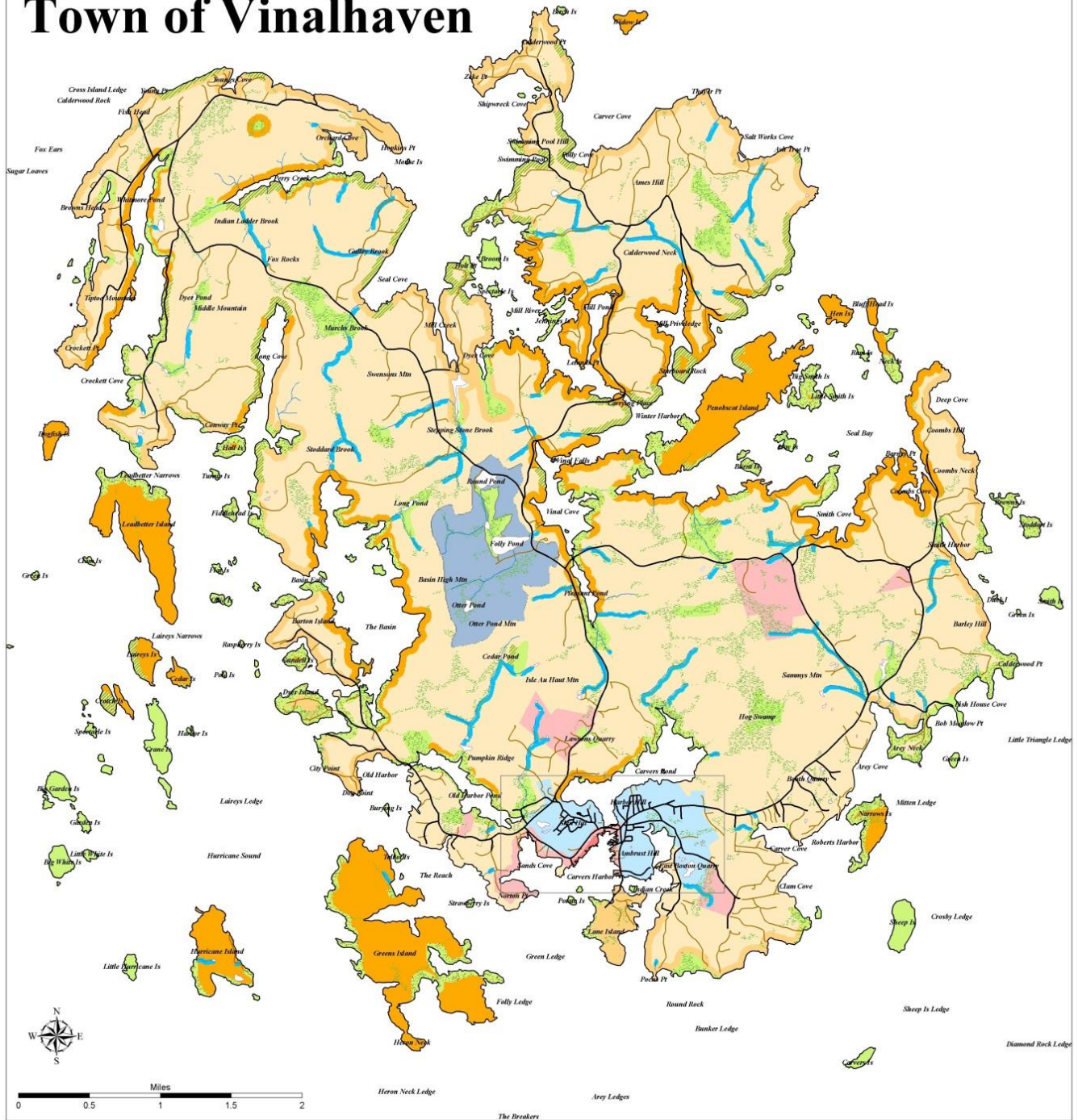
The areas of special flood hazard, Zones AE, and/or VE, are identified by the Federal Emergency Management Agency in a report entitled "Flood Insurance Study - Town of Vinalhaven, Maine, Knox County," dated May 16, 2007 with accompanying "Flood Insurance Rate Map" dated May 16, 2007, which is hereby adopted by reference and declared to be a part of this Ordinance.

Before any construction or other development (as defined in Article XIV), including the placement of manufactured homes, begins within any areas of special flood hazard established in Article I, a Flood Hazard Development Permit shall be obtained from the Code Enforcement Officer, except as provided in Article VII. This permit shall be in addition to any other permits which may be required pursuant to the codes and ordinances of the Town of Vinalhaven, Maine."

Conditions and Trends

1. An existing land use map, by land use classification (such as mixed-use, residential, commercial, institutional, industrial, agricultural, commercial forests, marine, park/recreational, conserved, and undeveloped land).

Town of Vinalhaven



Legend

Residential Marine 1	Resource Protection - Steep Slopes
Residential Marine 2	Stream Protection
Residential Marine 3	Water District
Residential-Commercial	Village Overlay District
Commercial Fisheries & Maritime Activities	Airport Overlay District
Resource Protection	Wetland
Resource Protection - Floodplain	Pond
Resource Protection - Hydric Soils	Stream

ZONING MAP
Updated April 2007

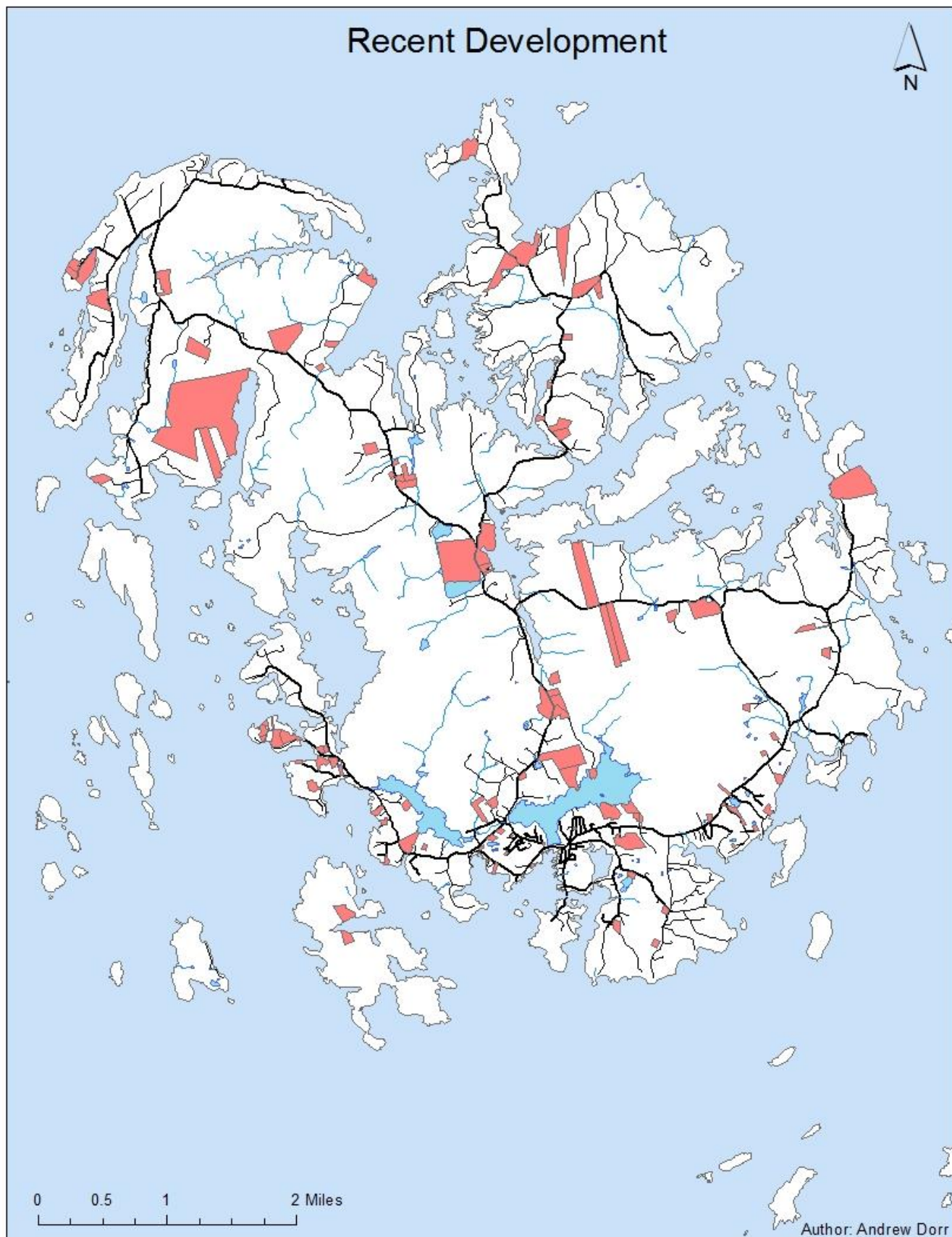
45° North
CARTOGRAPHIC

2. A summary of current lot dimensional standards.

	SP	WD	RP ⁽⁷⁾	RM1	RM2	RM3	RC	CF/MA
Minimum lot size	120,000	120,000	120,000	40,000	80,000	120,000	30,000	30,000
Minimum lot area per use:								
Single & 2 family dwellings	NA	NA	120,000	40,000 ⁽¹⁾	80,000 ⁽¹⁾	120,000 ⁽¹⁾	30,000 ⁽¹⁾	NA
Multi family dwellings per unit:								
Conversion of existing bldg.	NA	NA	120,000	10,000 ⁽¹⁾	20,000 ⁽¹⁾	NA	10,000 ⁽¹⁾	NA
New building	NA	NA	120,000	20,000 ⁽¹⁾	40,000 ⁽¹⁾	NA	20,000 ⁽¹⁾	NA
Lots on Carver's Harbor and Sand's Cove	NA	NA	NA	40,000 ⁽¹⁾	NA	NA	30,000 ⁽¹⁾	NA
Lodging facilities per unit								
Conversion of existing bldg.	NA	NA	NA	3,000	3,000	NA	2,000 ⁽¹⁰⁾	NA
New building	NA	NA	NA	NA	NA	NA	2,000 ⁽¹⁰⁾	NA
Commercial and industrial	NA	NA	NA	NA	NA	NA	4,000	4,000
Pub. & priv. Recreational facil.	NA	NA	120,000	40,000	80,000	120,000	30,000	3,000
Minimum shore frontage	NA	NA	200	150 tidal 200 non-tidal	200	200	100 ⁽³⁾ 50 ⁽⁴⁾	30
Minimum setback from NHW & Coastal Wetlands:								
Residences	NA	NA	125	100	100	125	75	NA
Non-residential/accessory	NA	NA	125	100	100	125	75	None
Recreational facility	NA	NA	125	100	100	125	75	None
Sewage drainage field	NA	NA	125	125	125	125	100	NA
Minimum setback from Freshwater Wetlands, non-tidal body of water:								
Residences	NA	NA	75	75	75	75	75	NA
Non-residential/accessory	NA	NA	75	75	75	75	75	NA
Recreational facility	NA	NA	75	75	75	75	75	NA
Sewage drainage field	NA	NA	125	125	125	125	100	NA
Minimum distance from edge of structure to road⁽⁶⁾⁽⁸⁾⁽⁹⁾	NA	NA	35	35	35	35	25	25
Minimum distance from lot line								
Residences	NA	NA	35	25	25	35	10	NA
Non-residential/accessory ⁽²⁾	NA	NA	35	Min.10	25	35	10	10
Recreational facility	NA	NA	35	35	Min.20	35	10	10
Decks	NA	NA	35	15	15	15	10	10
Maximum structure height⁽⁵⁾	NA	NA	30	30	30	30	30	30
Max. lot coverage by structures	NA	NA	5%	20%	10%	5%	25%	70%

Footnotes:

- (1) May be reduced by density bonus (see Land Use Standards: Year-Round Rental Housing).
 - (2) See Land Use Standards (Accessory Structures).
 - (3) For lots with on-site sewerage disposal.
 - (4) For dwellings with public or private discharge systems.
 - (5) Features of new structures not intended for human habitation, such as chimneys, ventilators, towers, and spires may exceed these heights but shall be set back from all lot lines a distance not less than the height of such feature.
 - (6) Where a proposal involves a structure which is abutted on the same street by another structure, or structures, whose setback is less than the required setback, the permitting authority may reduce the setback requirement for the proposed structure to the lesser setback of the abutting structure(s) but in no case shall the required setback be reduced to less than 10 feet.
 - (7) In areas zoned RP because of steep slopes structures may be allowed (see Establishment of Districts: Resource Protection).
 - (8) Construction within an established Right-of-way is prohibited.
 - (9) New roads must meet this setback from structures to the greatest extent practical.
 - (10) Excepting Map 18/Lot 61.
 - (11) Municipal and quasi-municipal facilities are exempt from the lot size, setback and lot coverage requirements of the WD, RM1, RM2 RM3, RC and CF/MA districts provided they meet the requirements of Section 16.A.2
 - (12) In the Village Overlay District, the minimum lot size for multi-family dwellings (conversion of existing buildings) is 4,000 square feet per unit.
 - (13) Maximum lot coverage by structures: Village Overlay District: 50%.
3. A description or map identifying the location of lots and primary structures created within the last ten years. Include residential, institutional, commercial, and industrial development.



The majority, with the exception of two of the highlighted parcels, have been residential development. The school and wastewater treatment facility have been built

4. Provide a brief description of existing land use regulations and other tools utilized to manage land use, including shoreland zoning, floodplain management, subdivision, site plan review, and zoning ordinances.

The Town of Vinalhaven adopted the Land Use Ordinance in 1993 with the most recent revision completed in 2009. The purposes of this Ordinance are to further the maintenance of safe and healthful conditions; to protect the quantity and quality of the limited supply of fresh groundwater available on Vinalhaven for drinking and other domestic uses; to avoid its depletion with consequent saltwater intrusion into private wells; to protect aquifer recharge areas; to prevent and control water pollution; to protect fish spawning grounds, aquatic life, bird and other wildlife habitat; to protect buildings and lands from flooding and accelerated erosion; to protect archaeological and historic resources; to protect commercial fishing and maritime industries; to protect freshwater and coastal wetlands; to control building sites, placement of structures and land uses; to conserve shore cover, and visual as well as actual points of access to inland and coastal waters; to conserve natural beauty and open space; to anticipate and respond to the impacts of development; and to provide the means for assessing development proposals for their fiscal impacts on the municipality's ability to provide and improve necessary public facilities and services.

5. Estimate the minimum amount of land needed to accommodate projected residential, institutional, commercial, or industrial development at least ten (10) years into the future.

Issuance of new residential building permits has decreased over the past few years and has met the needs of the island. It is expected that there is sufficient amount of land to accommodate development. Multiple buildings along Main Street are vacant/for sale and a few undeveloped lots will provide for the needs of any commercial or industrial development.

Survey Results

Development	Should we encourage the following....?	Yes	No	Unsure	
Q 25	Retail Shopping	58%	24%	17%	
Q 26	Business/Professional Buildings	38%	36%	26%	
Q 27	Home-based businesses	83%	4%	13%	
Q 28	Nursing/Assisted Living Homes	70%	15%	15%	
Q 29	Group Homes for Special Needs	35%	28%	38%	
Q 30	Seasonal Campgrounds/RV Parks	13%	78%	9%	
Planning	Should we....?	Yes	No	Unsure	
Q 31	Adopt building/energy/construction codes	65%	19%	16%	
Q 32	Adopt a Historic Building Code/Ordinance	72%	14%	15%	
Q 33	Support alternative energy projects	87%	8%	6%	
Q 34	Charge developers impact fees to cover related public costs	68%	7%	21%	
Q 35	Enhance communication services (broadband, cell phone, etc...)	77%	16%	8%	
Q 36	Provide tax incentives to attract businesses that bring jobs	50%	29%	21%	
Q 37	Allow owners of private planes and small jets to land on VH	12%	73%	14%	
Land Use	Should we do more, less, or the same to preserve...?	More	Less	Same	Unsure
Q 38	Rural Character	52%	3%	43%	3%
Q 39	Scenic Resources	55%	3%	41%	2%
Q 40	Wetlands	46%	5%	46%	3%
Q 41	Forests	44%	5%	49%	3%
Q 42	Hillsides/Ridgelines	37%	6%	47%	10%
Q 43	Public access to the shore	48%	3%	46%	3%
Q 44	Marine based businesses	58%	2%	35%	6%
Q 45	Moorings related to the marine economy	51%	2%	38%	8%
Q 46	Moorings for visitor use	30%	18%	45%	7%

Issues of Public Concern

There have been no concerns expressed with regards to land use over the period of this update.

Residential building permits have been down since 2008 and the island zoning has been in place since 1976. Given that, there is little reason to no reason to suggest there needs to be more or less restrictions.

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Future Land Use Plan

State and Local Goal(s)

To encourage orderly growth and development in appropriate areas of each community, while protecting the state's rural character, making efficient use of public services, and preventing development sprawl.

Analyses

1. Does the Future Land Use Plan align and/or conflict with the community's vision statement?

The Future Land Use Plan allows Vinalhaven to meet the needs of the community while preserving the island's social, environmental, and cultural resources. Since 1974, Vinalhaven has been enforcing zoning regulations and the current designations have been placed within the state's definitions of Growth, Rural, Critical Rural, and Critical Natural Resource Areas. Since Vinalhaven has a well-established zoning ordinance, we recommend that the state designations depicted in the following map act as overlays, thus not requiring new official designation.

2. Is the configuration of the growth area(s) shaped by natural opportunities and/or constraints (i.e. the physical suitability or unsuitability of land for development)? The location of public facilities? The transportation network?

The Growth Area identified in this plan is configured to align with the Village Overlay District. It is within this district that the majority of the town services are provided. Residents in this district, residents have public water, sewer, regular road maintenance, sidewalks, and the majority of the island businesses.

3. How does the Future Land Use Plan relate to recent development trends?

The Growth Area identified in this plan is largely developed and perhaps near capacity. Recent development has been evenly distributed across the island. Approximately 65% of the development over the last 10 years has been landlocked and in RM1 while the remaining development

4. Given current regulations, development trends, and population projections, estimate how many new residential units and how much commercial, institutional, and/or industrial development will likely occur in the planning period? Where is this development likely to go?

	2010	2020	2025
Population Projections	1,165	1,314	1,338

New Residential Units are projected to decrease and actually show no development into the future. With the market downturn in 2008, new home sales and construction are down, which makes it hard to accurately project the issuance of new permits.

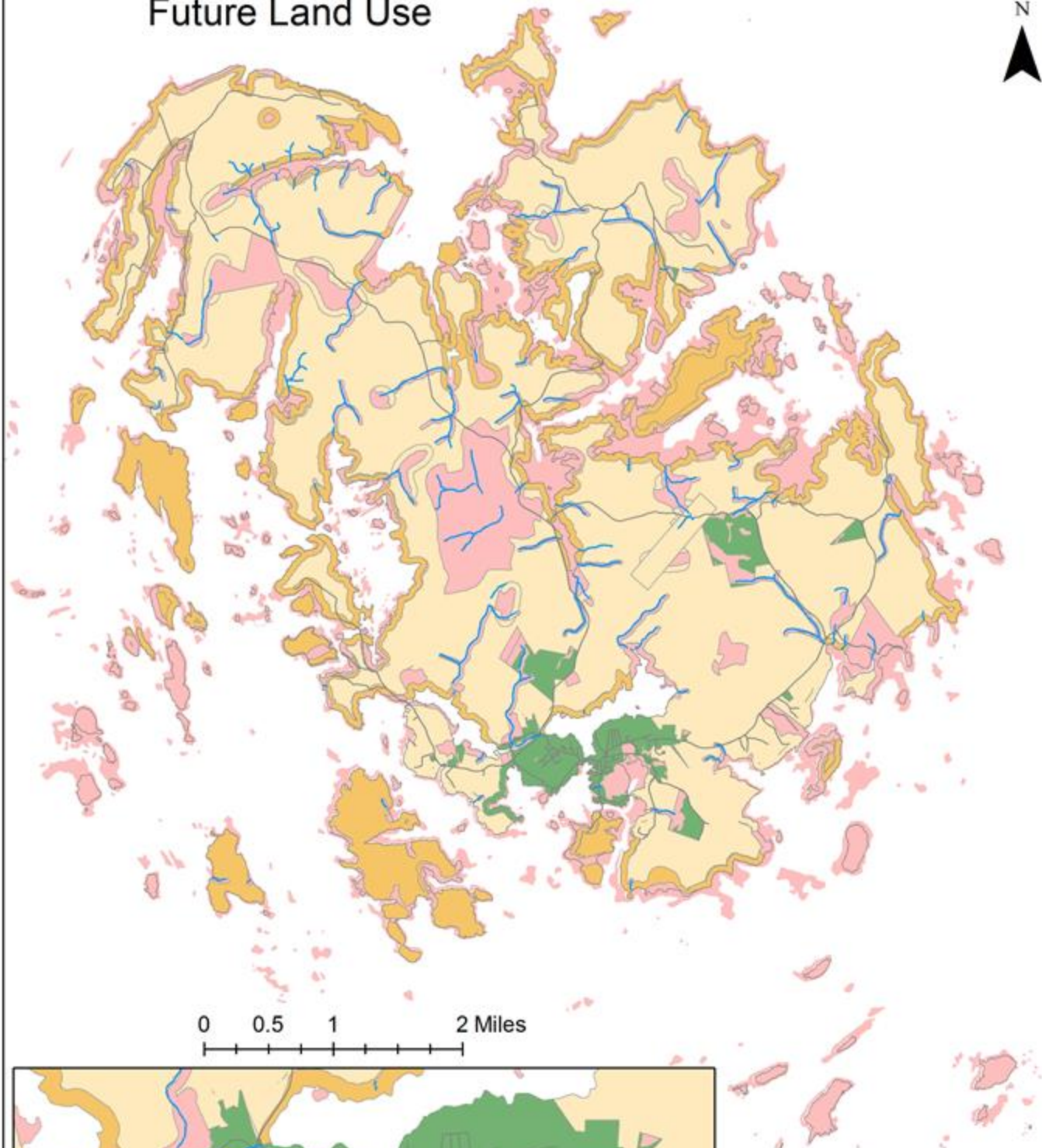
5. How can critical natural resources and important natural resources be effectively protected from future development impacts?

Many, if not all of the critical natural resources are currently protected. Through either local ordinance or state/federal permitting and restrictions, these resources are greatly protected from future development. Refer to Existing Land Use chapter for more details.

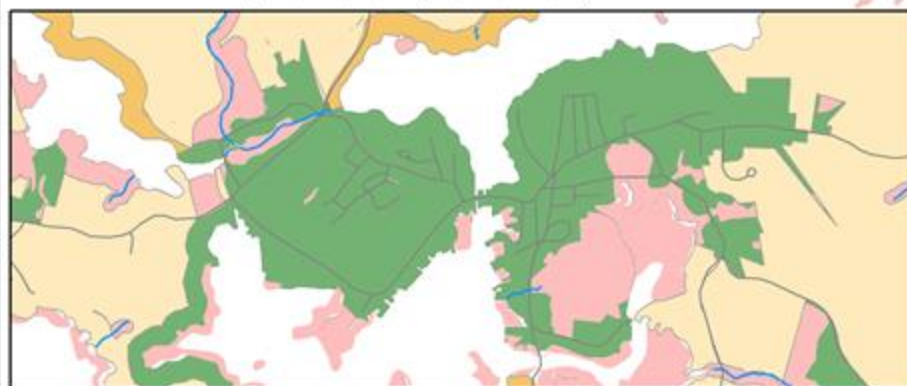
Components

1. A map or maps showing:
 - a. Growth area(s) (unless exempted) and Rural area(s) and any land use districts within each;
 - b. Critical Natural Resources in accordance with 4.3.F, above
 - c. Any of the following optional land use areas, if proposed, along with any land use districts within each: Transitional, Critical Rural, Critical Waterfront.
2. A map depicting the constraints to development identified in the plan (may be a combination of maps from other sections).

Future Land Use



0 0.5 1 2 Miles



- Growth Area
- Rural Area
- Critical Rural Area
- Critical Natural Resources

3. A narrative description of each land use district including:
- a. The district's relationship to the community's vision;
 - b. The district's natural opportunities and/or constraints;
 - c. The types and intensity of proposed land uses, including residential density;
 - d. The compatibility or incompatibility of proposed uses to current uses, critical natural resources and important natural resources within and around the district along with any special development considerations (e.g. need for additional buffers, conservation subdivision provisions, architectural design standards, etc.); and
 - e. Any anticipated major municipal capital investments needed to support the proposed land uses.

Area Designations	
State Area Definitions	Vinalhaven Current Zones and Current Shoreland Zoning (SZ) Districts
Growth Area: an area that is designated in a community's comprehensive plan as <u>suitable for orderly residential, commercial, or industrial development</u> , or any combinations of those types of development and related infrastructure, and into which <u>most development projected over 10 years is directed</u> .	<ol style="list-style-type: none"> 4. Village Overlay District 5. Commercial Fisheries/Maritime Activities District 6. Residential Commercial District
Rural area: a geographic area that is identified and designated in a community's comprehensive plan as an area that is <u>deserving of some level of regulatory protection from unrestricted development</u> for purposes that may include, but are not limited to, supporting agriculture, forestry, mining, open space, wildlife habitat, fisheries habitat, and scenic lands, and away from which most development projected over 10 years is diverted.	<ol style="list-style-type: none"> 3. Residential Marine 1 District 4. Airport Overlay District
Critical rural area: means a rural area that is specifically identified and designated by a community's comprehensive plan as <u>deserving maximum protection from development to preserve natural resources and related economic activities</u> that may include, but are not limited to, significant farmland, forest land or mineral resources; high-value wildlife or fisheries habitat; scenic areas; public water supplies; scarce or especially vulnerable natural resources; and open lands functionally necessary to support a vibrant rural economy.	<ol style="list-style-type: none"> 3. Residential Marine 2 District 4. Residential Marine 3 District
Critical Natural Resources: areas where the following natural resources, under federal and/or state law, warrant protection from the negative impacts of development: (1) Resource Protection District areas, (2) Wetlands, (3) Significant wildlife/plant habitat, (4) Threatened, endangered, and special concern animals/plant species habitat, (5) Significant freshwater fisheries spawning habitat, (6) Natural communities that are critically imperiled, (7) Coastal and sand dune systems, (8) Fragile mountain areas, or (9) National Natural Landmarks.	<ol style="list-style-type: none"> 7. Stream Protection District 8. Water District 9. Resource Protection District 10. Shoreland Zone 11. Wetlands 12. Coastal Wetlands

Policies

1. To coordinate the community's land use strategies with other local and regional land use planning efforts.
2. To support the locations, types, scales, and intensities of land uses the community desires as stated in its vision.
3. To support the level of financial commitment necessary to provide needed infrastructure in growth areas.
4. To establish efficient permitting procedures, especially in growth areas.
5. To protect critical rural and critical waterfront areas from the impacts of development.

Strategies

In addition to the strategies required below, include any strategies as necessary to support the establishment of any rate of growth or impact fee ordinances proposed. These may include strategies found in other sections of the plan.

1. Assign responsibility for implementing the Future Land Use Plan to the appropriate committee, board or municipal official.
2. Using the descriptions provided in the Future Land Use Plan narrative, maintain, enact or amend local ordinances as appropriate to:
 - a. Clearly define the desired scale, intensity, and location of future development;
 - b. Establish or maintain fair and efficient permitting procedures, and explore streamlining permitting procedures in growth areas; and
 - c. Clearly define protective measures for critical natural resources and, where applicable, important natural resources.

- d. Clearly define protective measures for any proposed critical rural areas and/or critical waterfront areas, if proposed.
-
- 3. Include in the Capital Investment Plan anticipated municipal capital investments needed to support proposed land uses.
 - 4. Meet with neighboring communities to coordinate land use designations and regulatory and non-regulatory strategies.
 - 5. Provide the code enforcement officer with the tools, training, and support necessary to enforce land use regulations, and ensure that the Code Enforcement Officer is certified in accordance with 30-A M.R.S.A. §4451.
 - 6. Track new development in the community by type and location.
 - 7. Direct a minimum of 75% of new municipal growth-related capital investments into designated growth areas identified in the Future Land Use Plan.
 - 8. Periodically (at least every five years) evaluate implementation of the plan in accordance with Section 2.7.

Maps

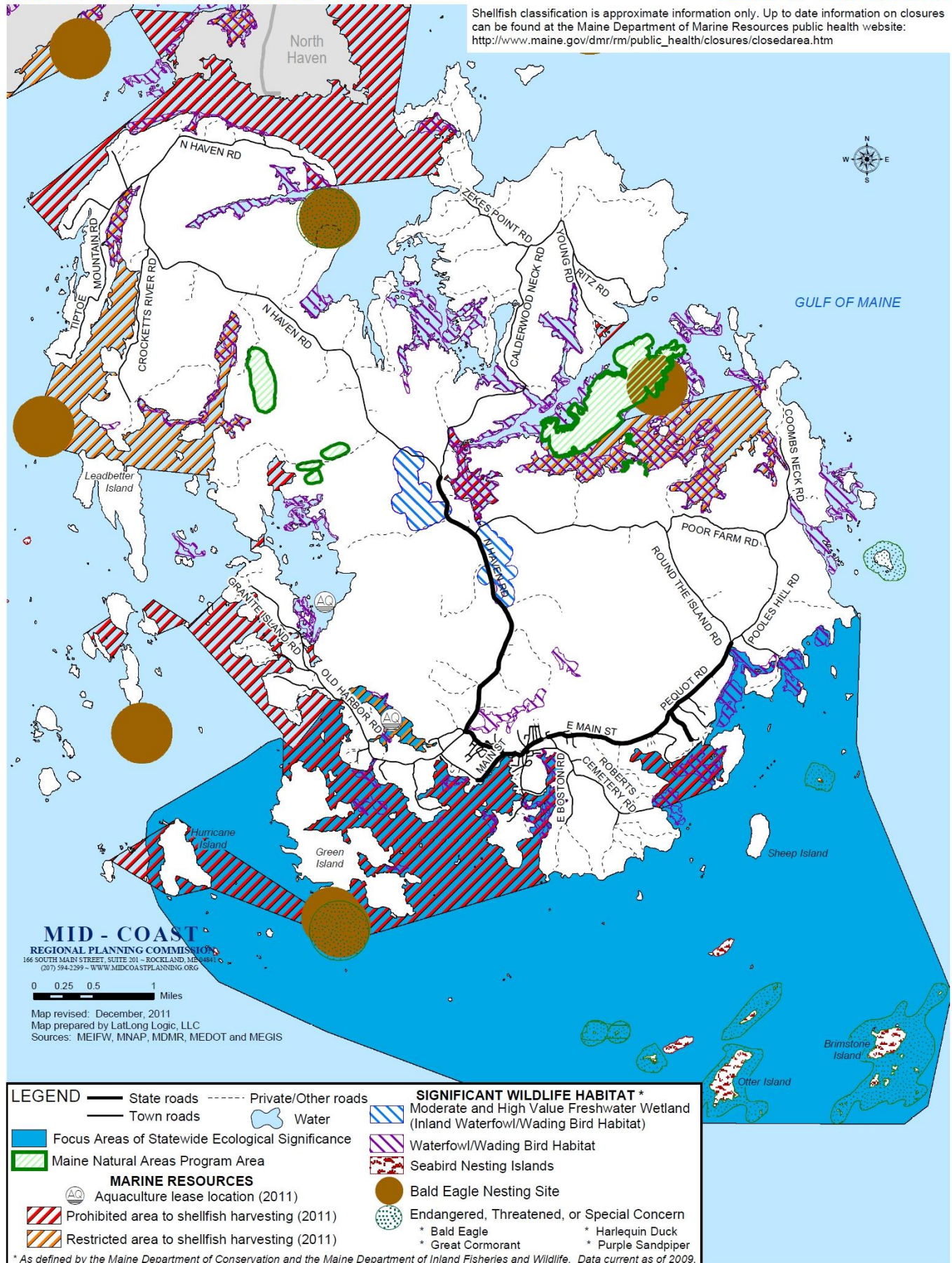
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*All maps are created by Andrew Dorr unless otherwise noted. Datasets available on the town GIS database.

HABITAT AND MARINE RESOURCES

TOWN OF VINALHAVEN

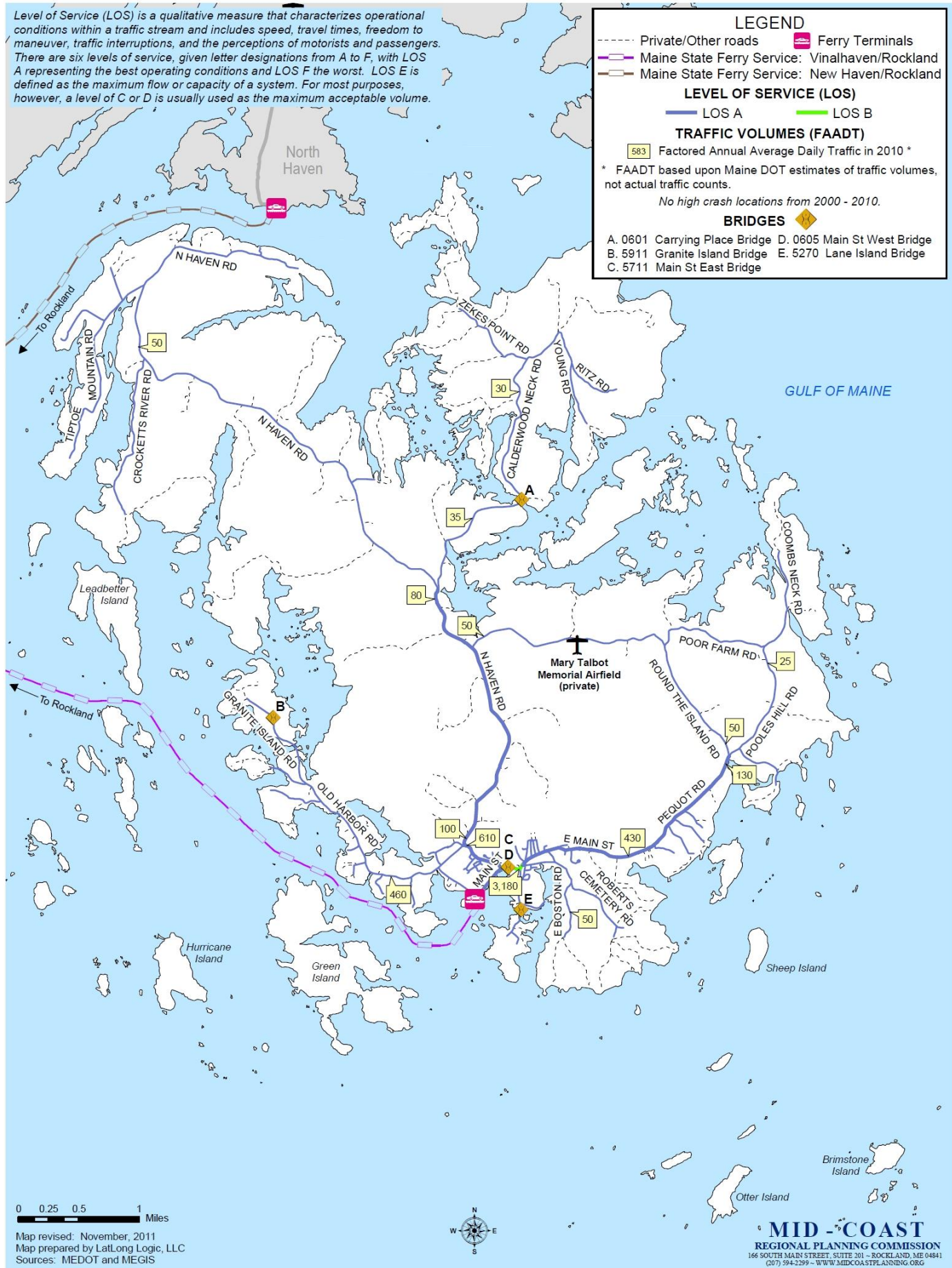
Shellfish classification is approximate information only. Up to date information on closures can be found at the Maine Department of Marine Resources public health website:
http://www.maine.gov/dmr/rm/public_health/closures/closedarea.htm



TRANSPORTATION NETWORK

Level of Service (LOS) is a qualitative measure that characterizes operational conditions within a traffic stream and includes speed, travel times, freedom to maneuver, traffic interruptions, and the perceptions of motorists and passengers. There are six levels of service, given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is defined as the maximum flow or capacity of a system. For most purposes, however, a level of C or D is usually used as the maximum acceptable volume.

TOWN OF VINALHAVEN

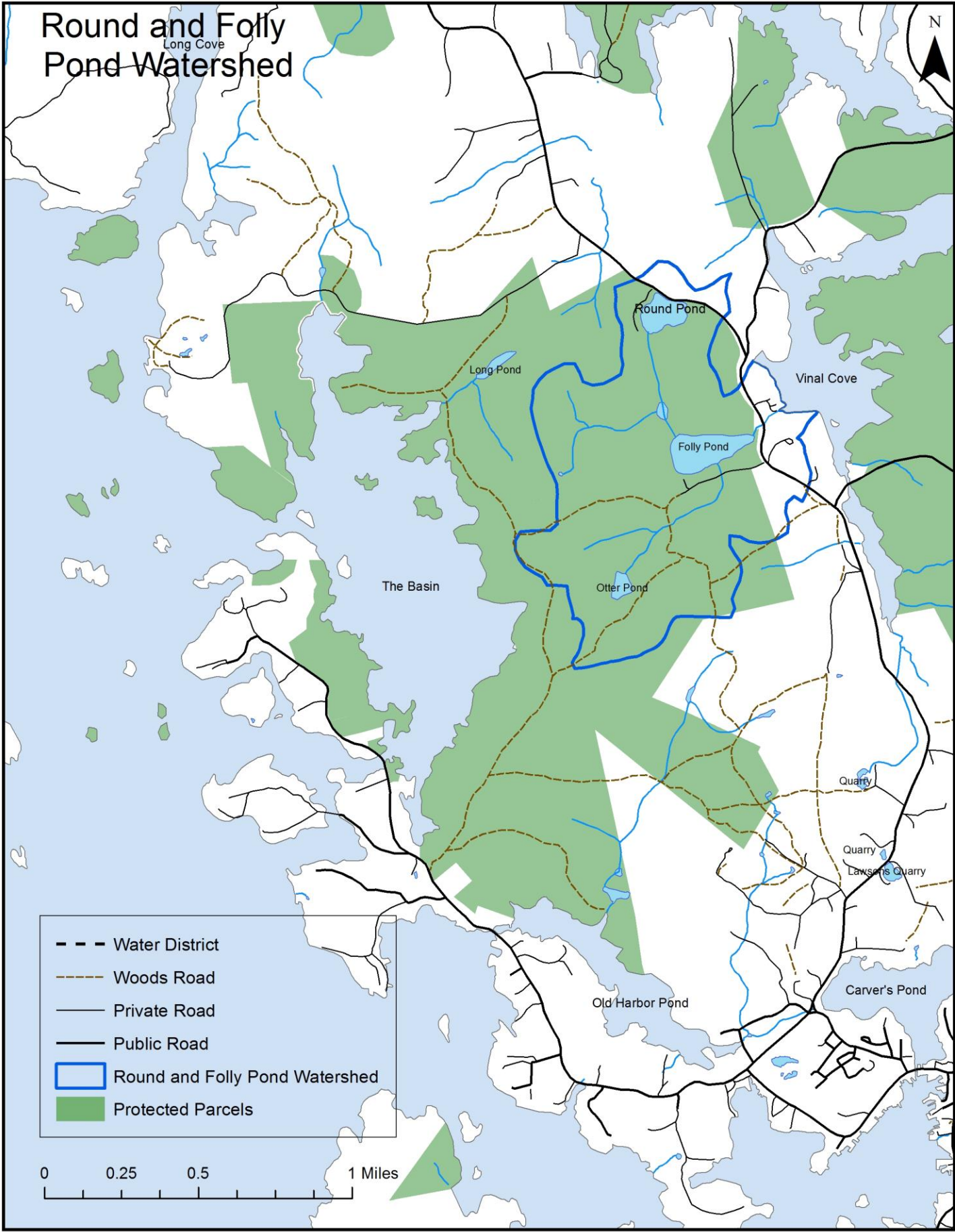


Water Resources

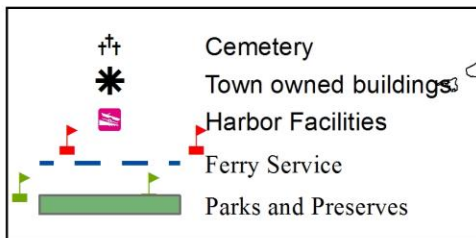
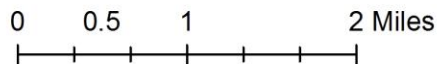
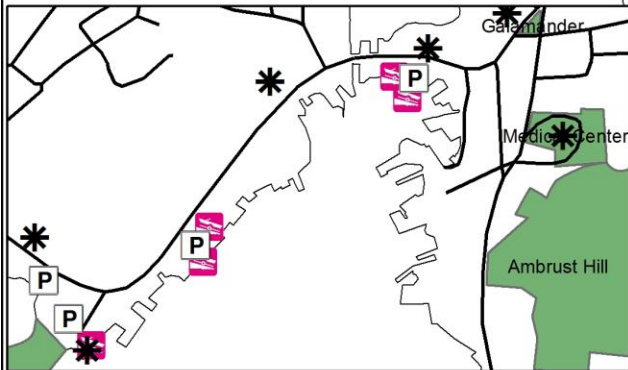
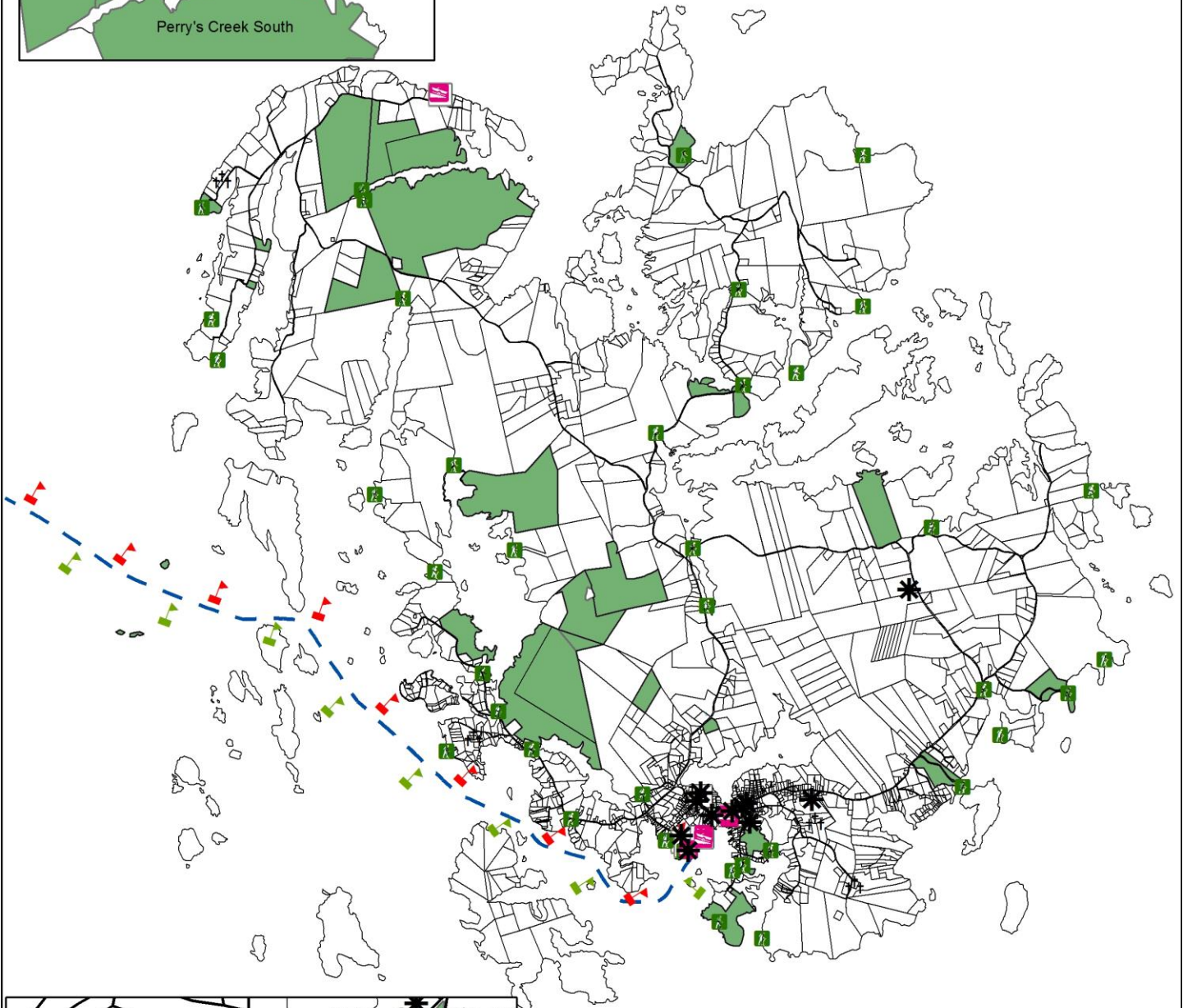
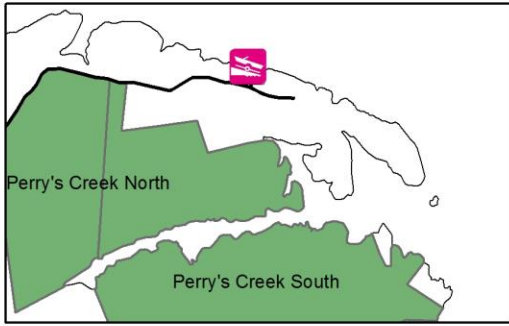


Stream	Wetland
Surface Water	Coastal Wetland
Pond	Estuary

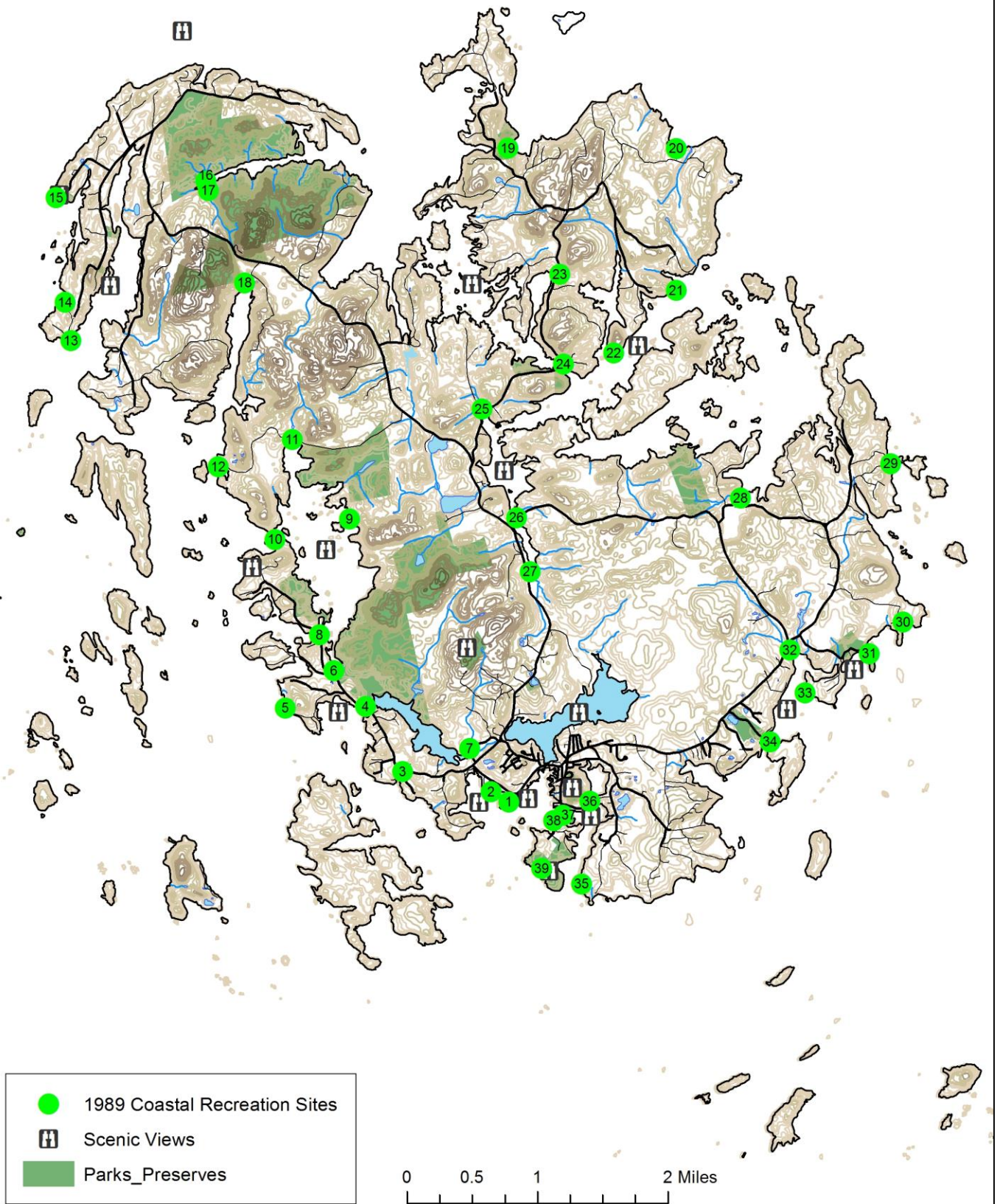
0 0.5 1 2 Miles



Public Facilities and Services



Vinalhaven Recreation Map



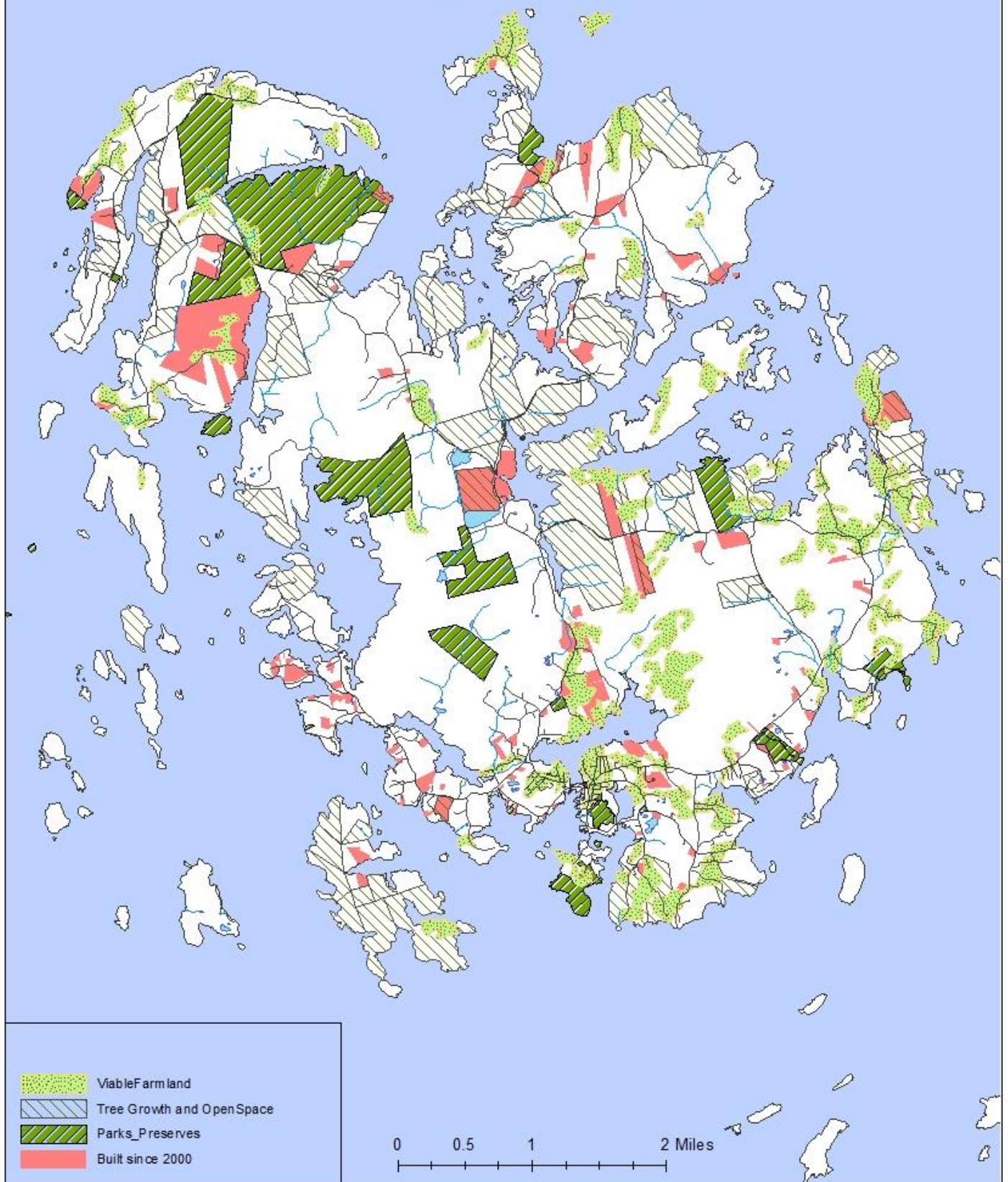
Recent Development



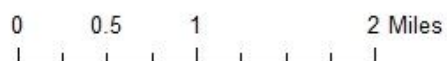
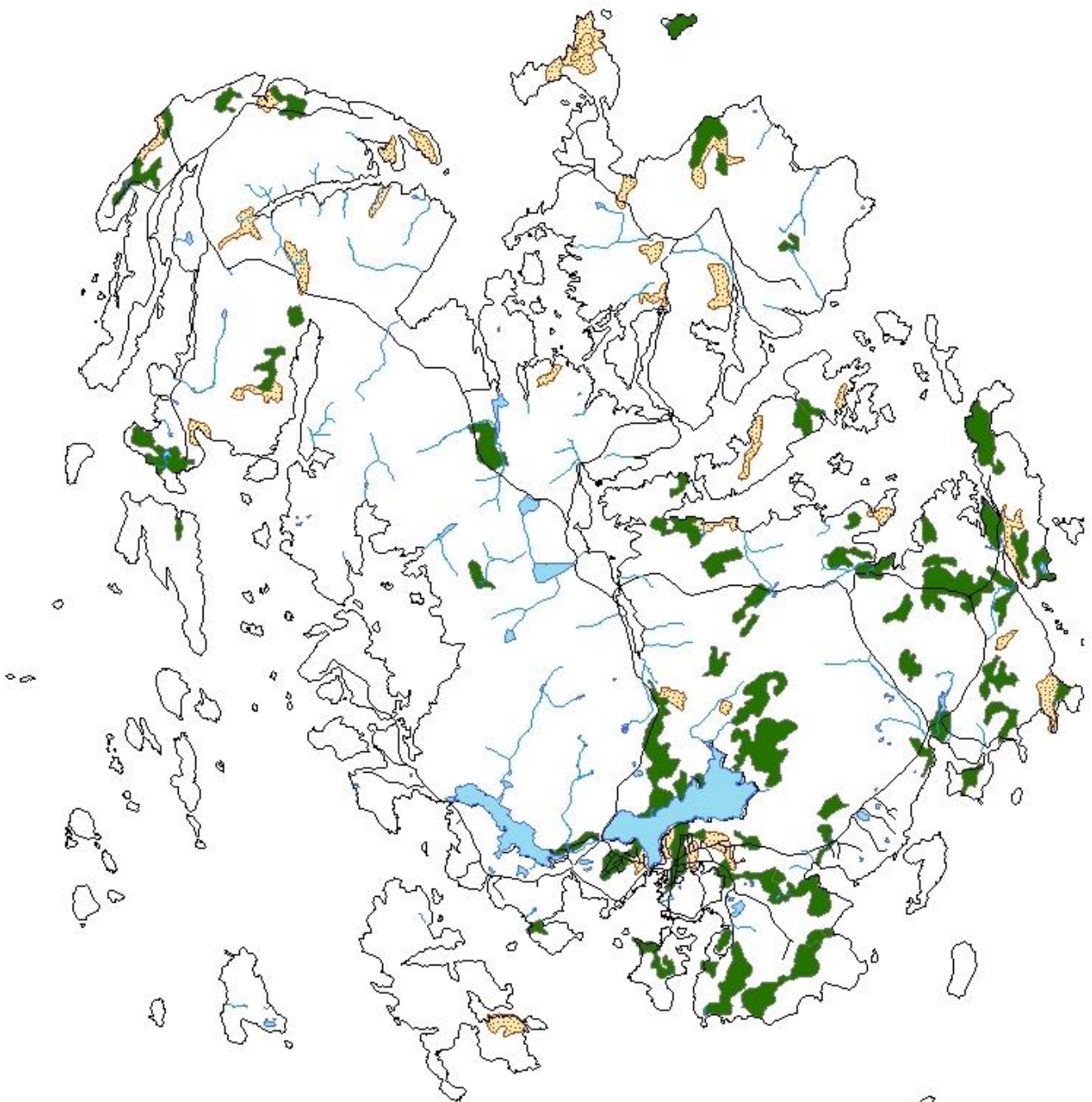
0 0.5 1 2 Miles

Author: Andrew Dorr

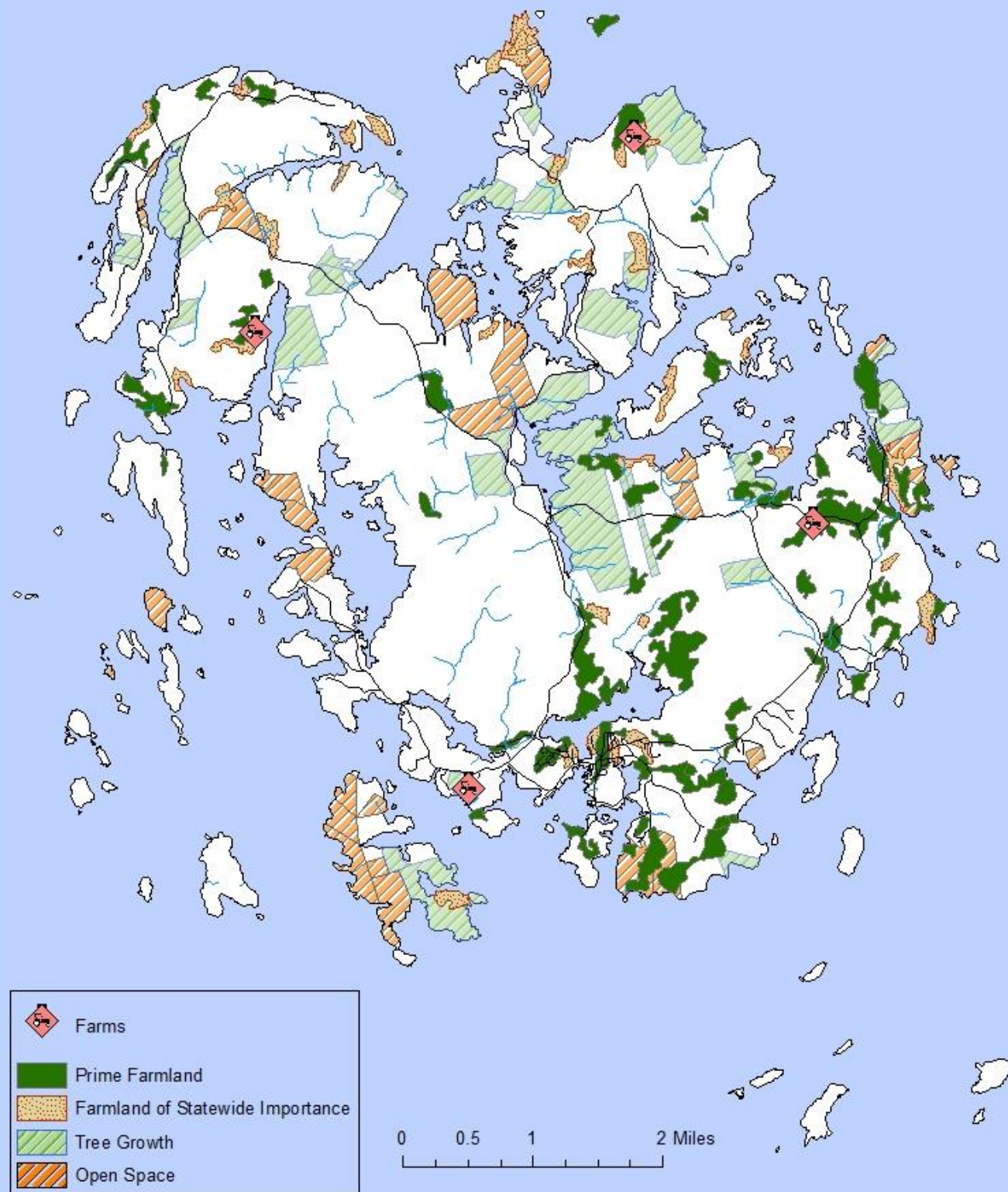
Recent Development near Farm and Forest Lands



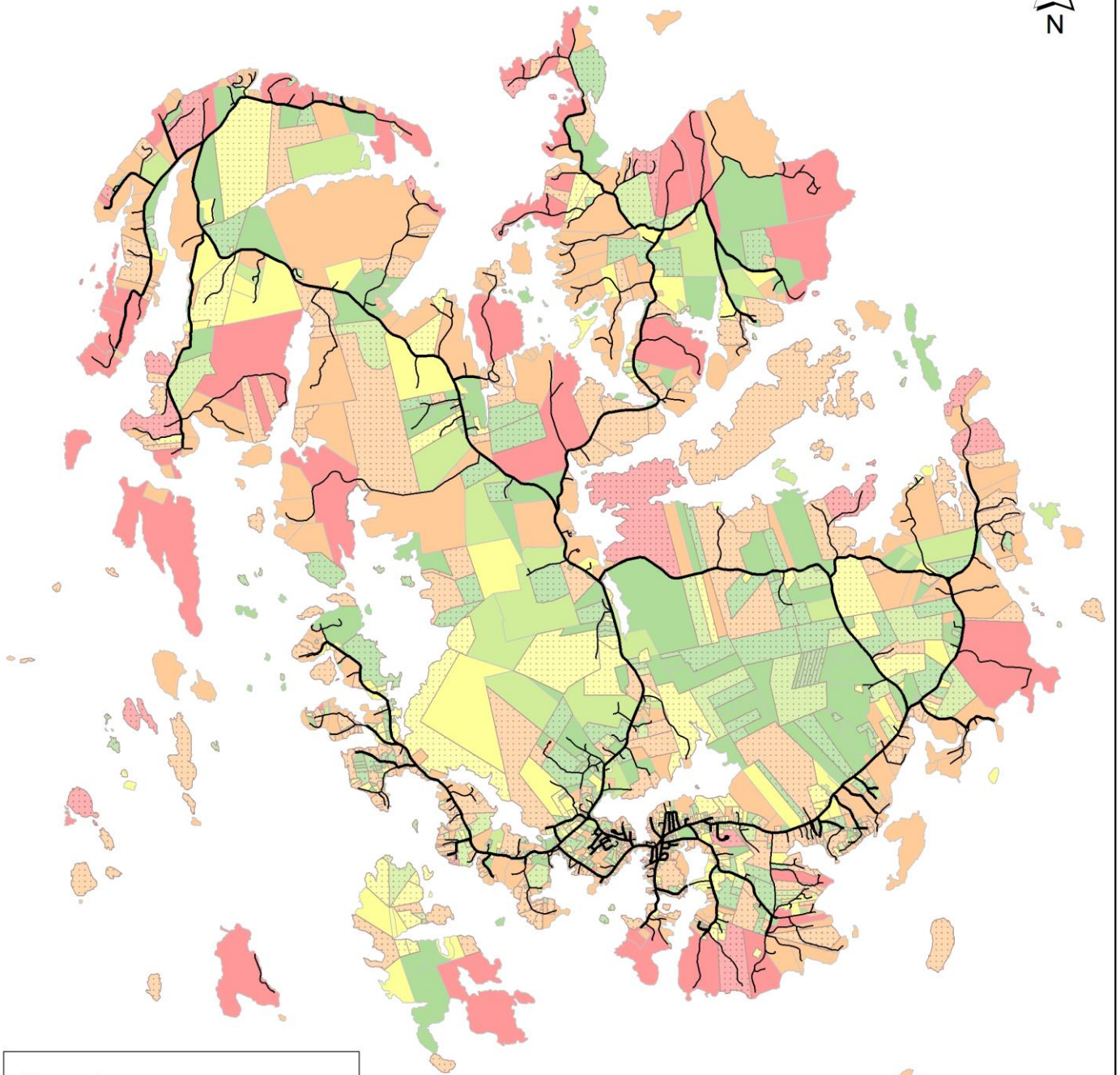
Suitable Farmland



Vinalhaven's Farm and Managed Forest Lands








Home Values




Parcels

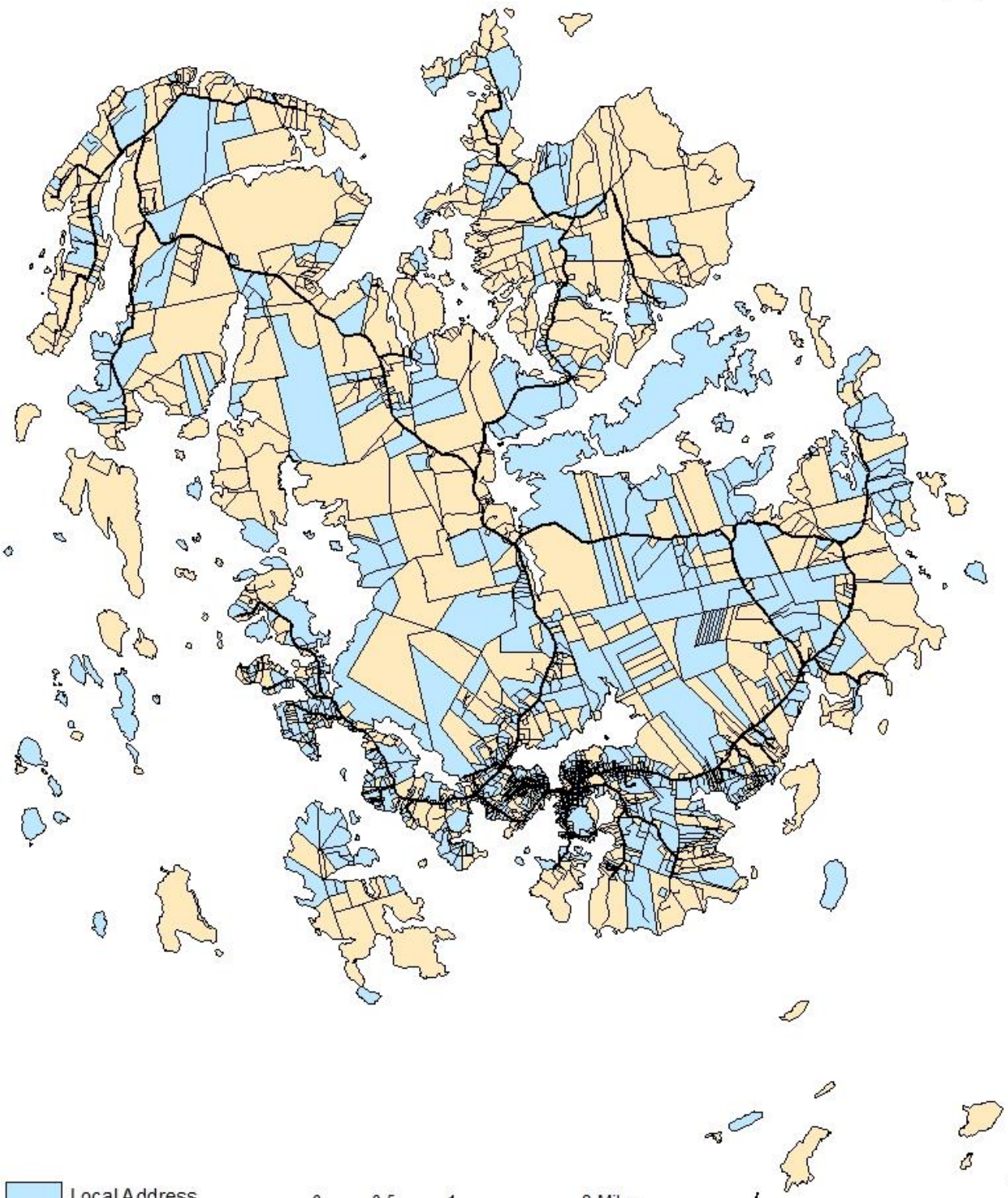
Property Value

	0.00 - 100000.00
	100000.01 - 150000.00
	150000.01 - 250000.00
	250000.01 - 1000000.00
	1000000.01 - 11237700.00

0 0.45 0.9 1.8 Miles



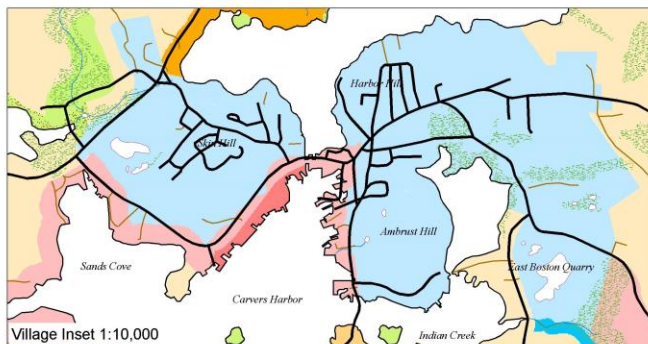
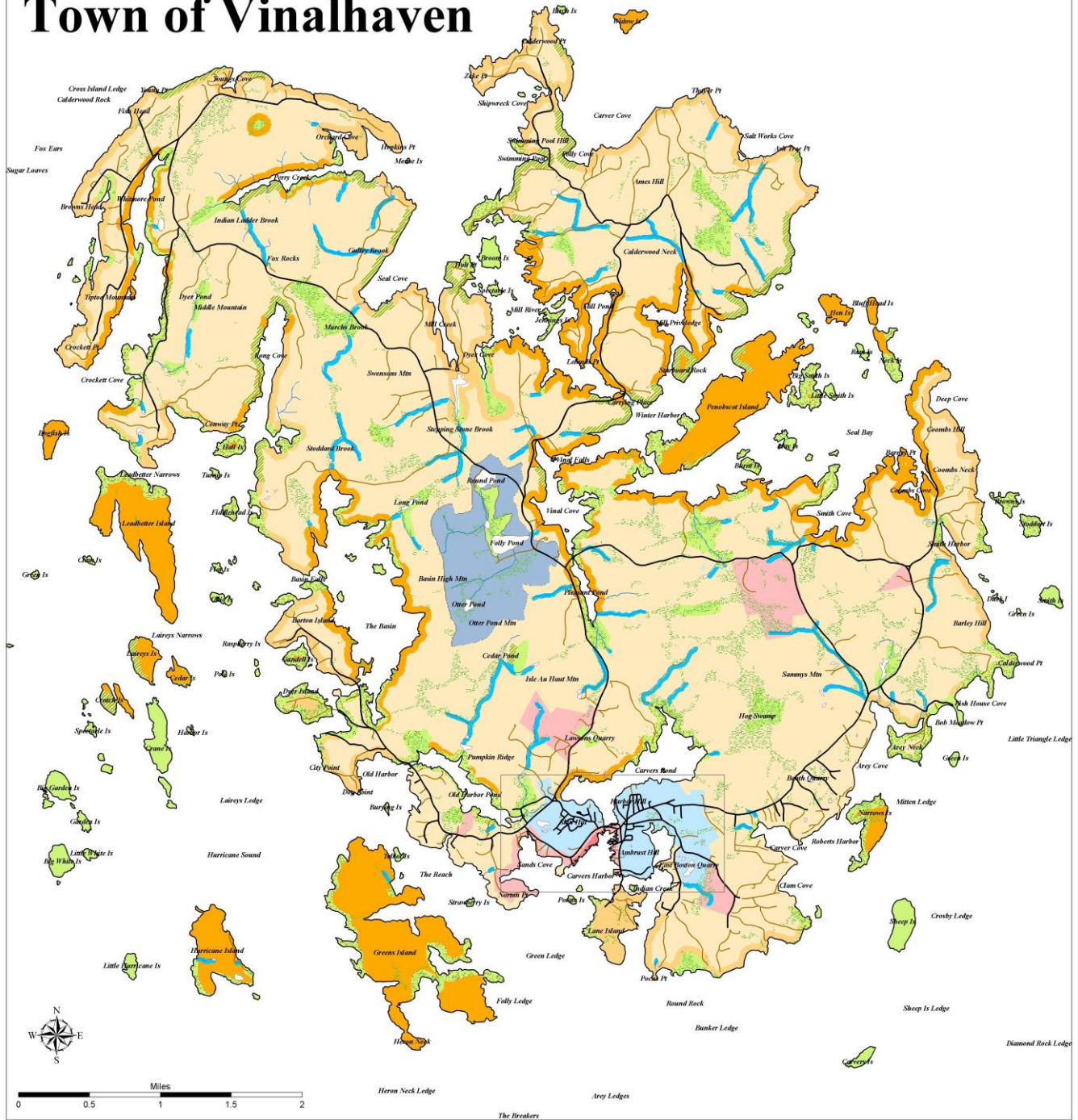
Property Owners



Local Address
Away Address

0 0.5 1 2 Miles

Town of Vinalhaven



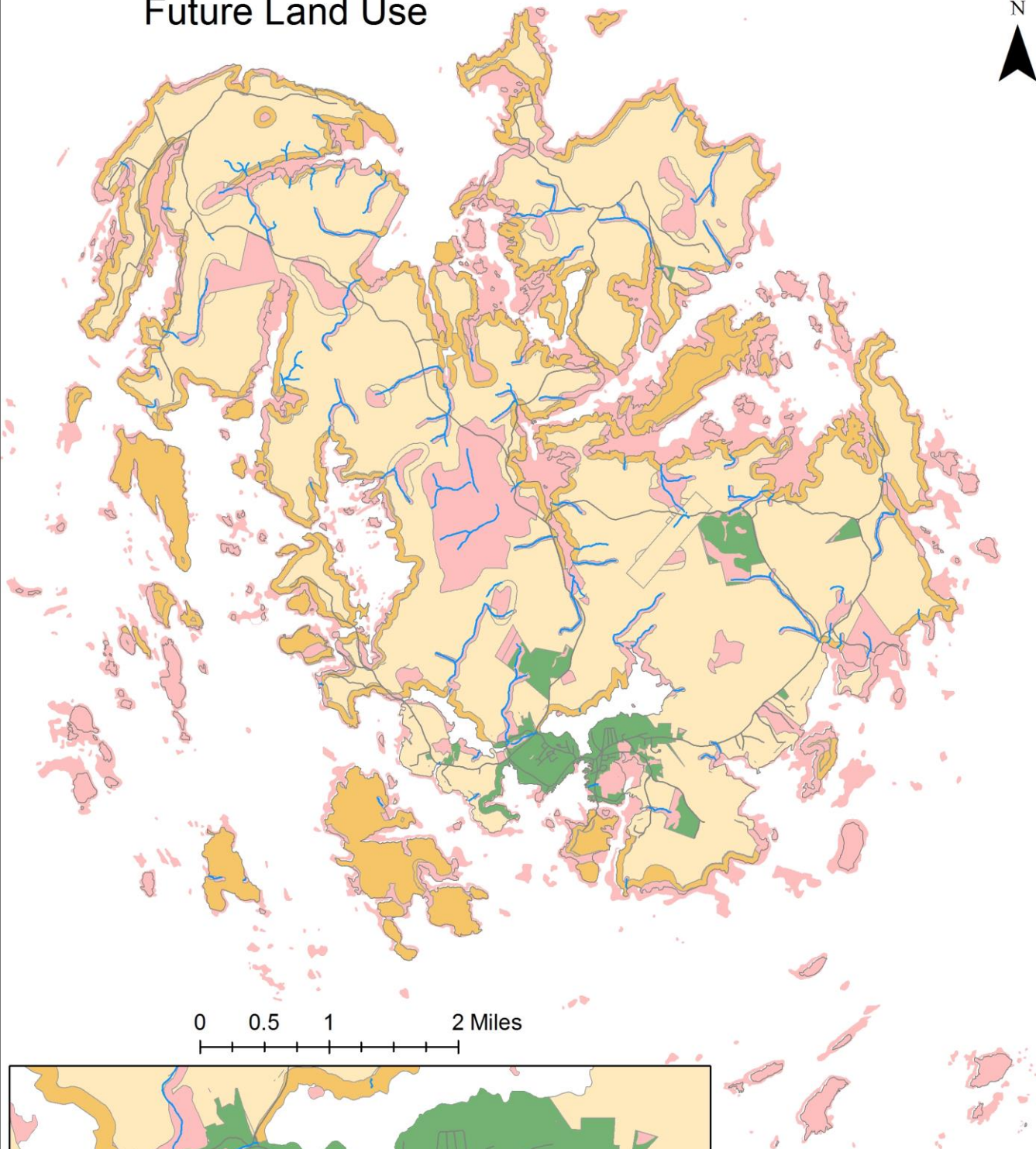
Legend

Residential Marine 1	Resource Protection - Steep Slopes
Residential Marine 2	Stream Protection
Residential Marine 3	Water District
Residential-Commercial	Village Overlay District
Commercial Fisheries & Maritime Activities	Airport Overlay District
Resource Protection	Wetland
Resource Protection - Floodplain	Pond
Resource Protection - Hydric Soils	Stream

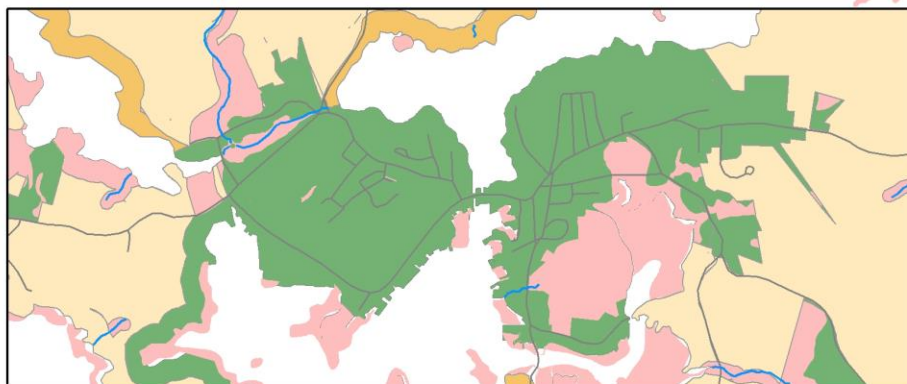
ZONING MAP
Updated April 2007

45° North
CARTOGRAPHIC

Future Land Use



0 0.5 1 2 Miles



- Growth Area
- Rural Area
- Critical Rural Area
- Critical Natural Resources

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Appendix A: Public Participation Plan

Vinalhaven Public Participation Plan

INTRODUCTION

Citizen participation is the process through which those with a stake in the community have had enough say in the plan that they will support (or at least won't oppose) putting its recommendations into action.

Municipality appoints planning committee = Planning Commission

Why is public participation important?

Without public participation, comprehensive plans may lack the broad views of the community.

Comprehensive plans should, at the very least, attempt to reach out to everyone in your community.

Getting the *RIGHT* people involved...

Potential Focus Group volunteers

- 2 residents of more than 25 years
- 2 residents of less than 5 years
- 2 members of "conservation committee"
- Builder
- Realtor
- Architect/designer
- Land Use attorney
- School board member
- Planning Board member
- VCC member (speak of business needs of the community)
- Large land owner
- Resident from particular zone
- Parent of school-age child
- Senior citizen or retiree
- Member of medical community

- Representative from “neighborhoods”

“official town family”, “section leaders”, “opinion leaders”, and broad-viewed people

One group of committee members will have voting privileges and a second group of people that are interested in the process will receive agendas and such, but will not retain voting rights.

GOALS

- Inform the CPC and the community how they can become involved in the VH Comprehensive Plan
- Provide an opportunity for the public to contribute ideas and feedback throughout the comprehensive planning process.

ROLE OF THE PLANNING COMMISSION

The Vinalhaven Planning Commission (VHPC) is comprised of 6 members, appointed by the Board of Selectmen (BOS), and charged with the task of overseeing the Comprehensive Plan (Plan), among other things. The VHPC focuses on issues that shape Vinalhaven including land use, transportation, housing, and environmental policy.

The VHPC will be involved throughout the planning process and assist in the development of the Comprehensive Plan as follows:

- The VHPC will advise the Focus Groups as to public participation and the general progress of the Plan.
- Some members will be part of the Focus Groups and oversee the Resource Inventory review in addition to policy & strategy recommendations.
- The VHPC will review and approve the Plan prior to presentation to the BOS.
- The VHPC will approve expenditures related to the Plan.

METHODS AND TOOLS

The overall objective of the Public Participation Plan is to establish how the CPC will engage the public during the course of the Plan. Public participation methods may vary by phase. This PPP has been drafted at the beginning of the process and it may be reviewed and refined throughout the Plan.

Various communication tools will be utilized to inform and update the public as to the status of the Plan. It is important to consider the limitations as well as recognize the unique opportunity the island Vinalhaven has for public participation opportunities. In a working waterfront community, largely devoted to a marine resource economy, the efforts to reach out to the community need to take into consideration the schedule of that group.

Traditional participation methods:

Community Resource Meetings – Identify key community facets and hold informal meetings to discuss objects of a comprehensive plan, answer the question of how the plan will impact them, ask the group if they have any hopes or fears regarding their focus, and encourage people to participate throughout the process.

Vision Building Workshops – Bring the community together to discuss:

- what is important to Vinalhaven,
- what some of the issues in the community are, and
- identify a common vision for the town.

Focus Group Meetings – The working groups responsible for each topic. Sub-Group meetings should provide an opportunity for focused discussions on specific topics regarding inventory, analysis, and strategic planning. The Sub-Groups shall recommend policies pertaining to their respective topic.

Community Presentations – An informal update of the Plan's progress and a chance for public discussion. This may be left for Sub-Groups to decide when appropriate to hold such meetings and such that it ensures a broad community view is represented throughout the Plan.

Community Display – A physical display, portable or stationary, that provides updates, news and events, and sharing of information regarding the Plan. This may act as a gathering place for people to discuss the plan amongst them and inform those that have not been able to participate in the planning process.

Public Hearings – Formal presentation/discussion of major findings. Typically, the Public Hearings will take place at the presentation of the Draft Plan. This is a venue for the community to see the plan in its entirety, ask questions, and express any concerns regarding the policy recommendations.

Online resources to communicate to the public include:

Website: www.townofvinalhaven.org/comp

E-mail: vhcompplan@gmail.com

Facebook: <https://www.facebook.com/vinalhaven.comprehensiveplan?fref=ts>

COMPREHENSIVE PLAN PROPOSED SCHEDULE

Phase I	Background/Inventory	Fall 2011 – Summer 2012
Phase II	Analysis/Strategic Planning	Summer 2012 –Spring 2013
Phase III	Approval	Fall 2013
Phase IV	Adoption/Implementation	Continuous

Appendix B: Community Survey

Vinalhaven Community Survey

This survey is being conducted as part of Vinalhaven's Comprehensive Planning process. Your opinions will help guide recommendations for Vinalhaven's future. This is not to say something is wrong, but to ensure we continue to do things right. A Comprehensive (Town) Plan should meet the needs and desires of the Vinalhaven residents; therefore your input on the anonymous survey is valuable.

Your time and effort in answering any or all of these questions is appreciated. Please return your completed survey by July 1, 2012 by mailing to *P.O. Box 815 Vinalhaven, ME 04863* or dropping it off at the Town Office. Please contact the town office (207) 863-2168 for another copy if more than one adult in your household would like to complete the survey. Thank you in advance for sharing your thoughts and comments.

~Vinalhaven Planning Commission and the Survey Advisory Group

GENERAL (Circle one):

Male or Female

18-24 25-34 35-44 45-54 55-64 65-74 75-84 85+

I am employed by... Self-Employed Private employer Public Sector Retired

I work... Part time Full time Seasonally Retired Unemployed

Do you own or rent your home? Own Rent

What is your current residency status on VH? Year-Round Seasonal Non-Resident Taxpayer

If you are currently a resident, how many years has Vinalhaven been your home? _____

If you are not a year-round resident, do you plan to become one in the future? Yes No Unsure

Why are you glad you live on Vinalhaven? Most Important Least Important

Friends/Family live here 5 4 3 2 1

Scenic Beauty 5 4 3 2 1

Sense of Community 5 4 3 2 1

Low crime rate/safe place to live 5 4 3 2 1

Quality of Life 5 4 3 2 1

Quality of Schools 5 4 3 2 1

Job Opportunities 5 4 3 2 1

Outdoor Recreation 5 4 3 2 1

Freedom from Mainland Pressures	5	4	3	2	1
Other _____	5	4	3	2	1
Other _____	5	4	3	2	1

Housing, Development and Preservation

Housing: Do you see a need for.....?

Single Family Homes:	Yes	No	Unsure
Year-Round Rental Properties:	Yes	No	Unsure
Low-Income Housing:	Yes	No	Unsure
Housing for Elderly:	Yes	No	Unsure
Affordable Housing:	Yes	No	Unsure

Development: Should we encourage the following....?

Retail Shopping:	Yes	No	Unsure
Business/Professional Buildings:	Yes	No	Unsure
Home-Based Businesses:	Yes	No	Unsure
Nursing / Assisted Living Homes:	Yes	No	Unsure
Group Homes for Special Needs:	Yes	No	Unsure
Seasonal Campgrounds/RV Parks:	Yes	No	Unsure

Planning: Should we.....?

Adopt Building /Energy/Construction Codes:	Yes	No	Unsure
Adopt a Historic Building Code/Ordinance:	Yes	No	Unsure
Support Alternative Energy projects (Energy Independence):	Yes	No	Unsure
Charge developers impact fees to cover related public costs:	Yes	No	Unsure
Enhance communication services (broadband, cell phone, etc..)	Yes	No	Unsure
Provide tax incentives to attract businesses that bring jobs:	Yes	No	Unsure
Allow owners of private planes and small jets to land on VH:	Yes	No	Unsure

Land Use: Should we do more, less or the same, to preserve....?

Rural Character:	More	Less	Same	Unsure
Scenic Resources:	More	Less	Same	Unsure
Wetlands:	More	Less	Same	Unsure
Forests:	More	Less	Same	Unsure
Hillsides/Ridgelines:	More	Less	Same	Unsure

Public access to the shore:	More	Less	Same	Unsure
Marine based businesses:	More	Less	Same	Unsure
Moorings related to the marine economy:	More	Less	Same	Unsure
Moorings for visitor use:	More	Less	Same	Unsure

Your Comments:

PUBLIC FACILITIES/SERVICES For each service, please check your level of satisfaction:

Adult Education	Very Satisfied	Satisfied	Dissatisfied
Ambulance	Very Satisfied	Satisfied	Dissatisfied
Bicycle Facilities (Rentals, Racks, Safe Routes, etc...)	Very Satisfied	Satisfied	Dissatisfied
Cemeteries	Very Satisfied	Satisfied	Dissatisfied
Farmers' Markets	Very Satisfied	Satisfied	Dissatisfied
Fire Protection	Very Satisfied	Satisfied	Dissatisfied
Law Enforcement	Very Satisfied	Satisfied	Dissatisfied
Property Tax Level	Very Satisfied	Satisfied	Dissatisfied
Vinalhaven School	Very Satisfied	Satisfied	Dissatisfied
Recreation Facilities (Trails, Quarries, etc...)	Very Satisfied	Satisfied	Dissatisfied
Road Plowing	Very Satisfied	Satisfied	Dissatisfied
Road Repair	Very Satisfied	Satisfied	Dissatisfied
Town Office Services	Very Satisfied	Satisfied	Dissatisfied
Town Office Hours	Very Satisfied	Satisfied	Dissatisfied
Transportation Services	Very Satisfied	Satisfied	Dissatisfied
Parking	Very Satisfied	Satisfied	Dissatisfied
Vocational Education	Very Satisfied	Satisfied	Dissatisfied

Your Comments:

Transportation

Are pedestrian facilities (trails, sidewalks, crosswalks, etc...) adequate?	Yes	No	Unsure
Do you support making bicycle travel more safe?	Yes	No	Unsure
Are you satisfied with the ferry service?	Yes	No	Unsure
Are there enough hiking trails?	Yes	No	Unsure

Are there concerns about vehicle speeds on VH roadways?	Yes	No	Unsure
---	-----	----	--------

Your Comments:

Historic and Archeological Resources

Do you favor preserving historic sites and town landmarks?	Yes	No	Unsure
--	-----	----	--------

Do you favor protecting archeological resources by limiting development?	Yes	No	Unsure
--	-----	----	--------

Would you like to continue maintaining (clean up, fix, preserve) cemeteries?	Yes	No	Unsure
--	-----	----	--------

Do you favor maintaining town parks, and quarries?	Yes	No	Unsure
--	-----	----	--------

Your Comments:

Economy

Are you concerned about the stability of VH's year-round economy?	Yes	No	Unsure
---	-----	----	--------

Are there enough year-round jobs to sustain our economy?	Yes	No	Unsure
--	-----	----	--------

Are there enough seasonal jobs to supplement our economy?	Yes	No	Unsure
---	-----	----	--------

Do you favor developing a tourism plan?	Yes	No	Unsure
---	-----	----	--------

Is shopping locally important for preserving local businesses?	Very important	Important	Unimportant
--	----------------	-----------	-------------

How much do you buy locally (Vinalhaven stores/services)	Everything	Most things	Some things
--	------------	-------------	-------------

Would you like to see any of the following businesses or industries EXPAND?

Auto & Small Engine Repair Services	Favor	Oppose	Undecided
-------------------------------------	-------	--------	-----------

Banking	Favor	Oppose	Undecided
---------	-------	--------	-----------

Bed & Breakfast	Favor	Oppose	Undecided
-----------------	-------	--------	-----------

Boat Building	Favor	Oppose	Undecided
---------------	-------	--------	-----------

Community Gardens	Favor	Oppose	Undecided
-------------------	-------	--------	-----------

Community-Supported Agriculture	Favor	Oppose	Undecided
---------------------------------	-------	--------	-----------

Construction	Favor	Oppose	Undecided
--------------	-------	--------	-----------

Craft Industries	Favor	Oppose	Undecided
------------------	-------	--------	-----------

Elder/Home Care Services	Favor	Oppose	Undecided
--------------------------	-------	--------	-----------

Farming	Favor	Oppose	Undecided
---------	-------	--------	-----------

Fast Food/Deli	Favor	Oppose	Undecided
----------------	-------	--------	-----------

Forestry Operations	Favor	Oppose	Undecided
---------------------	-------	--------	-----------

Hotels/Inns/Motels	Favor	Oppose	Undecided
Medical Services	Favor	Oppose	Undecided
Restaurants	Favor	Oppose	Undecided
Retail Stores	Favor	Oppose	Undecided

Would you like to see any of the following businesses or industries MOVE onto the Island?

Aquaculture	Favor	Oppose	Undecided
Auto Taxi Service	Favor	Oppose	Undecided
Camping/Campgrounds	Favor	Oppose	Undecided
Chain Stores (Retail, fast food, etc...)	Favor	Oppose	Undecided
Computer Services	Favor	Oppose	Undecided
Light Industry (processing, manufacturing, etc...)	Favor	Oppose	Undecided
Marina	Favor	Oppose	Undecided
Processing Farm Products	Favor	Oppose	Undecided
Recreation	Favor	Oppose	Undecided
Tourism	Favor	Oppose	Undecided
Trade Services	Favor	Oppose	Undecided
Water Taxi Services	Favor	Oppose	Undecided

How do you feel about the following job issues facing Vinalhaven?

Job Opportunities	Adequate	Needs Improvement	Undecided
Jobs for Young People	Adequate	Needs Improvement	Undecided
Jobs for Women	Adequate	Needs Improvement	Undecided
Jobs that Pay Well	Adequate	Needs Improvement	Undecided
Year-round Jobs	Adequate	Needs Improvement	Undecided
Your Comments:			

Water Resources

My residential water source is:	Well	Town Supply	Other_____
Are you satisfied with the quality of your water?		Yes	No
If you have a well, do you experience salt water intrusion?		Yes	No

Would you support a well monitoring study/program?	Yes	No
Is water quality of concern to you?	Yes	No
Is water quantity of concern to you?	Yes	No

Your Comments:

H. Likes, Dislikes, and *YOUR* Vision

What do you like most about the Town?

What do you dislike most about the Town?

What would you like to see in the future for the Town, what is your vision for the Town over the next 10 years?

Vinalhaven Community Survey Report

Prepared by:
Vinalhaven Planning Commission

September 2012

This report is a summary of the Community Survey results. The survey was conducted as part of Vinalhaven's Comprehensive Planning process. The results from this survey will help guide decisions for Vinalhaven's future.

I.) Overview

Why was this survey conducted?

The Town of Vinalhaven is currently updating their Comprehensive Plan. This survey was distributed in an effort to involve community members and get an understanding for what people living in Vinalhaven (VH) like, dislike, and see as challenges for the future. While the results of the survey are not definitive, nor was the survey the only time the public will have the opportunity to comment and offer input, it is a valuable starting point and the beginning for discussions that will guide recommendations and policies to complete the Comprehensive Plan (Comp Plan).

Who developed the survey?

In order to help create a holistic survey, a group consisting of 10 community members and representing multiple facets of the community was formed. Those facets are either vital to the Resource Inventory Chapters outlined in the Comprehensive Plan Review Criteria Rule (Chapter 208) or of significant importance as identified by community members in the data gathering process. The Survey Advisory Group met on four occasions over the course of three months before presenting the survey to the Vinalhaven Planning Commission (VHPC).

Table 1. Survey Advisory Group

Name	Representing
Bill Chilles	Historical and Archeological Resources
Dinah Moyer	Health Trends
Doug Littlefield	Marine Resources
Gigi Baas	Planning Commission
Jake Thompson	Marine Resources
Kris Davidson	Economy
Linda Lynch	Aging Population
Mark Candage	Emergency Response
Robb Warren	School and Community
Tuck Godfrey	Natural Resources and Recreation

Who was the target audience?

This survey was open to any homeowner, taxpayer, registered voter, and/or P.O. Box holder on the island. Vinalhaven, like many coastal and island communities in Maine, sees a significant seasonal population change. While there may be thousands of people who call the island their “other home,” they do not have the ability to vote on town matters, like the approval of a Comp Plan. This was noted by the Survey Advisory Group and there was never any consideration to leave that population out of the process. The survey represents only one of many ways that residents - seasonal and year-round - can voice their input.

Distribution process

Surveys were distributed to all active island mailboxes, rural and postal, effective May 4, 2012, using the United States Postal Service’s Every Door Direct Mail service. This service did not allow for the forwarding of mail, so many seasonal residents did not receive a copy of the survey at that time. The committee realized this method would not include everyone and due to limitations in funding, there were various outreach methods used to include those who did not receive a survey in the mail. Weekly reminders in *The Wind* (the island news weekly) and *The View From Vinalhaven* (an islander’s weekly e-newsletter highlighting town happenings) helped reach many people that did not receive a mailing and were instructed to contact the Island Fellow or print a copy off the Town’s website. Extra surveys were placed around town at the Fire House, Town Office, and the Public Library, in addition to being posted to print on the Town’s website. During the month of June, the Island Fellow set up a table at the flea market and was available to the public to answer questions Tuesday and Thursday nights at the Library.

II.) Respondents

Following the three-month period, 203 surveys were returned, representing a response rate of 23.8%. Of the 203 respondents, 65% were year-round residents, while 35% were seasonal residents and non-resident taxpayers (NRTs).

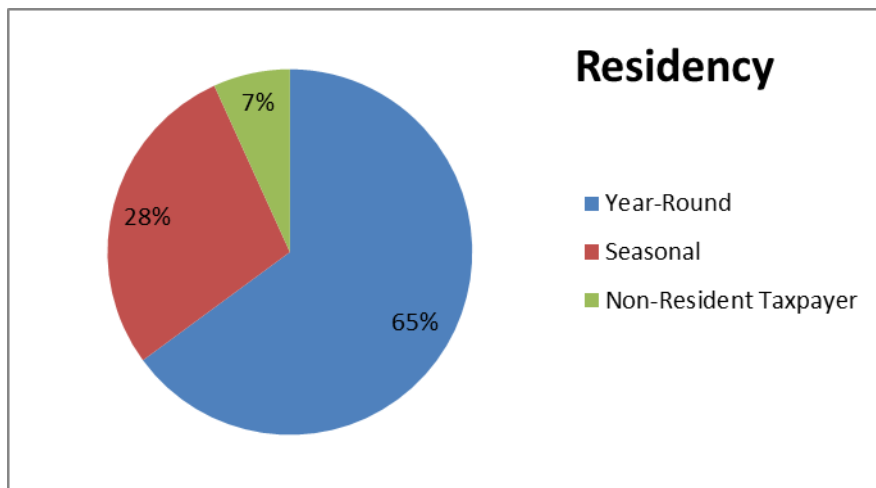


Figure 1. Residency of survey respondents

The age distribution of the respondents is much as expected. 50% of the survey-takers were between the ages of 55 and 74 and only 10% responded from the two youngest categories.

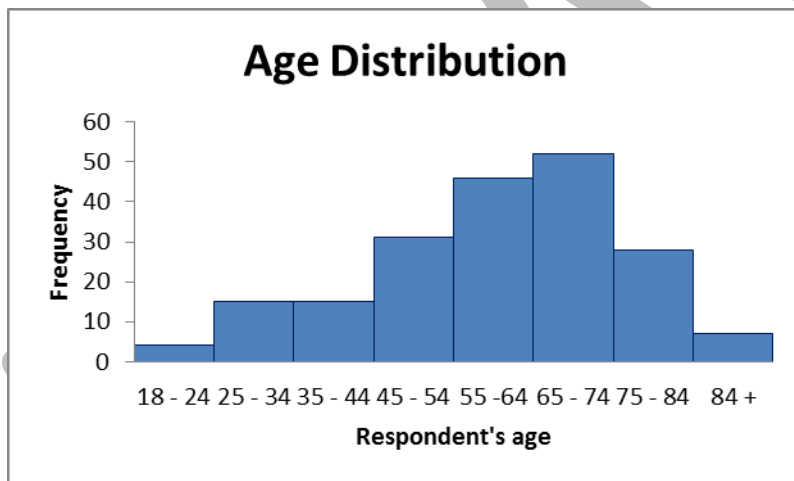


Figure 2. Age distribution of survey respondents

The majority of the respondents were year-round residents between the ages of 45 and 74, accounting for 39% of the total respondents. There were very few responses from people between the ages of 18 and 44 - 17% of the total - leaving many of their thoughts and visions of the town unknown. Further outreach should be taken under consideration to gauge their level of satisfaction regarding to town services and facilities and the potential for future development. See Table 2, below, for a detailed breakdown of the respondents.

Table 2. Age distribution of respondents with relation to their residency status

Age of Respondents	Age									
Q6	18-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	(blank)	Total
Year-Round	2%	8%	6%	12%	13%	14%	8%	2%	1%	65%
Seasonal	0%	0%	1%	3%	8%	10%	5%	1%	1%	28%
Non-Res Taxpayer	0%	0%	0%	1%	2%	3%	1%	1%	0%	7%
Total	2%	8%	7%	15%	23%	27%	14%	3%	2%	100%

The qualities of a place that attract people to buy a house and live in that community are numerous.

Respondents to the survey indicated the importance of nine qualities that contribute to reasons they are glad to live on Vinalhaven.

Table 3. Reasons Year-Round Residents enjoy living on Vinalhaven.

Year-Round Respondents		Most Important			Least Important	
Why are you glad you live on Vinalhaven?		5	4	3	2	1
Q9	Friends/Family live here	56%	21%	12%	6%	5%
	Scenic Beauty	53%	30%	15%	2%	0%
	Sense of Community	55%	31%	12%	1%	0%
	Low Crime rate/Safe place to live	53%	22%	17%	7%	1%
	Quality of Life	56%	31%	11%	2%	0%
	Quality of Schools	23%	28%	27%	12%	10%
	Job Opportunities	21%	15%	35%	8%	21%
	Outdoor Recreation	36%	26%	24%	8%	6%
	Freedom from Mainland Pressures	43%	22%	18%	4%	13%

For year-round residents of Vinalhaven, the most important things about living on Vinalhaven include proximity to family and friends, quality of life, sense of community, scenic beauty, and low crime rate/safe place to live. Job opportunities and quality of schools are of lesser importance to year-round residents when determining to live on Vinalhaven. This may be more representative of the age of the respondents, not necessarily the fact they are year-round residents. As seen in Figure 2, 50% of respondents were between the ages of 55 and 74. Many of those respondents no longer have children in the school system and fewer of them may be looking for work as they have reached or are approaching the age of retirement.

Table 4. Reasons Seasonal/NRT Residents enjoy living on Vinalhaven.

Seasonal/NRT Respondents		Most Important			Least Important	
Why are you glad you live on Vinalhaven?		5	4	3	2	1
Q9	Friends/Family live here	47%	23%	15%	11%	5%
	Scenic Beauty	93%	6%	1%	0%	0%
	Sense of Community	67%	27%	6%	0%	0%
	Low Crime rate/Safe place to live	38%	30%	26%	2%	5%
	Quality of Life	59%	36%	5%	0%	0%
	Quality of Schools	20%	20%	21%	18%	21%
	Job Opportunities	2%	4%	13%	22%	59%
	Outdoor Recreation	55%	23%	14%	3%	5%
	Freedom from Mainland Pressures	48%	31%	9%	6%	5%

Many of the same qualities hold true for seasonal and non-resident taxpaying residents as for year-round residents. 97% of seasonal/NRT respondents find scenic beauty of high importance, followed by sense of community, quality of life, and outdoor recreation. All of these qualities are consistent with an individual coming to Vinalhaven for a shorter period of time; that is, someone who frequents the island as a second home or vacation destination. While the qualities sought out by the two island groups vary slightly, recognizing these qualities is important for sustaining a vibrant community.

III.) Likes and Dislikes

Two of the last three questions on the survey asked community members what they like or dislike about Vinalhaven. The responses were qualitative and therefore more difficult to analyze. Having said that, a Wordle (Figures 3 and 4) was created to help identify the most common words (excluding the, and, is, etc...) among the respective responses. The Wordle displays frequent phrases or words from the responses and you will notice some words appear in both the likes and dislikes.

Likes

The following is a list of key words that show up most frequently and help describe what people like about Vinalhaven.



Figure 3. Common words reflecting what respondents like about Vinalhaven

Responses

1. The community, the closeness. The views, the "downtown" area, we're new here this year - working more than full-time, we have been embraced and welcomed by colleagues, coworkers, and neighbors. VH is a very special place.
2. From a summer resident point of view, the town is welcoming. Does well with businesses. Services are very professional from the ferry to road paving. I have disliked nothing for 75 years, except the day I leave.
3. It's comfortable small town safe feeling.
4. I like the small town feel, overall safety
5. Beauty; Independence; Sense of community and helping those who need it and knowing that you will be helped; Being out of the mainstream madness of the rest of the world.
6. At first the trees, water and scenic beauty catch your eye. Boats in the Marina, and houses around the island, all have a sense of character and lots of history. But nothing compares to the actual island life, the people, and the close knit community.
7. The people of VH are its strength. The feel of community is wonderful. Many wonderful scenic areas have been preserved and kept open to the public and this is important. The Land Trust has done a great job and provided so much to the school children and the community. As a person from away, I feel welcomed and am able to be a part of this wonderful community and i appreciate it.
8. Quality of life, good environment, child friendly
9. Unique blend of personalities, Fine health care, lots of community spirit and activities
10. That everyone is here and has to work to get along. How everyone looks out for you.

11. Quality of life, caring, supportive community. Dedication of EMS, Fire, teams exceptional.
12. Sense of community, but this needs work. Seasonal people and year-round residents have some stereotyping to shed. Care for the environment and a deeper commitment, including education.
Wind turbines, the Basin, Lanes Preserve
13. The natural surroundings, quiet tranquility, and non-commercialism
14. The people. It's not the scenery, it's the people. The small town deep sense of community, island pride, historical context and culture of hard working waterfront.
15. People, friendliness, sense of community, slower pace, less modern amenities, natural resources, recreational opportunities
16. I value the familiarity we all enjoy, the natural beauty of the island and its surroundings, the fact that everyone can be a big fish in a little pond and the enormous degree to which we benefit from the selfless contributions of our summer community.
17. The caring quality of the islanders; lack of social indifference. The work ethic and independence.
18. The homey feeling, the walkability, the pride of the community, the town's willingness to accept all kinds of people.
19. No to chain stores, etc. Limit tourism, commercialism
20. I love how it's not filled with things people don't need! I love how quaint it is - how it may change but doesn't really! I sense there's a need for places for people to be together - coffee spot? Hardware store? I love how people seem to know each other, and how authentic community seems.
21. I like that for the most part it has retained its historic integrity. I would like to see a vibrant business community and possibly see new businesses come in but not at the expense of the environment or the natural beauty.
22. Walks on Lane's Island. Library. Island soul. Quarries. Land Trust. The Book Store. Ark. People.
23. New seasonal owner learning about island life and issues - like the natural, individual character of the island and town.
24. Small, people rally around when there is a need. Plenty of opportunities to serve the town for retired people like me. It is a mix of fishermen and artists that give the community a unique composition.
25. A beautiful place with down-to-earth working class population, a mingling of cultures, a supportive close-knit community, realism.

26. It is compact, attractive and good use of old historic buildings.

27. Its history, its people, and its desire to be independent. I admire the people who serve on boards and fill positions that make the town run. It has not succumbed to easy solutions that might change the nature and life style of VH people. You want the island to prosper and be a viable place for young people in the future. I think most seasonal people like the island the way it is or else they wouldn't keep coming back.

Dislikes

The following is a list of key words that describe what respondents dislike about Vinalhaven followed by key comments from the surveys.



Figure 4. Common words reflecting what respondents dislike about Vinalhaven

Responses

1. The amount of drinking underage that goes on, the drinking and driving, the littering all over the sides of the roads, lack of recycling facilities in school/public buildings.
2. People that come here saying they love our island then they try to change the things they don't like cause they haven't been here their whole lives.
3. Divide between 'Islanders' and people 'from away' - understandable, but frustrating. Seeming lack of concern for the environment.

4. The difficulty in getting goods and services. I worry a lot about people's difficulty making a living, making ends meet.
5. People who expect services to be there and not contribute any money or time themselves like the auditorium or school.
6. The lack of a full-time doctor. The clinic does not provide some of the services we need (x-ray pic). Water is expensive; everyone should pay for it instead of just the town residents, since everyone uses it anyways at restaurants and businesses.
7. Without a church minister, a doctor, leading citizens, a voice from the fishing community, the village seems leader-less. School supers quit or get fired. Lack of good stores sends folks over to the mainland. Like before, can VH even support all that it misses? Does in fact can VH be any more than it is? And does it really want to be more than it is? Some want a quiet life - as it is. Where is leadership coming from? Can it be developed? By who and how? Do we need a leadership change? An intrusion of new people.
8. So few people want to contribute volunteer time for Town improvement
9. There is nothing for the young people for fun - skating rink or gathering place.
10. Dirt on sidewalks, in gutters. Uneveled sidewalks from ferry terminal out to Old Harbor Rd and out to Town. Narrow sidewalks in some locations. Empty windows in storefronts that are vacant. Fill them with interesting marine-like objects for viewing.
11. I am anguished by the short sightedness of a few, by the perception of those who resent our summer community and seasonal influx and who feel that tourism cannot co-exist with lobstering without somehow sully our image and by the casual disregard those same few have for our environment, our accomplishments, our potential and the degree to which life here wouldn't even be possible without both those economic engines.
12. The same people are on all the boards or many of them. Some are here only a few months and offer poor insight so the needs of year-rounders, and because some islanders are on multiple boards, it causes lack of interest, stale and dated ideas, and one comes away feeling they simply like to see their name in print. You ask a question about keeping businesses on Island, most Main St businesses don't shop or hire on Island - so why should they expect support.
13. Drugs and alcohol and related problems. Lack of police enforcement.
14. The high incidence of alcoholism among the population. The high incidence of hard drug use among the 16-30+ and the availability of those things.
15. Limited educational, cultural opportunities for adults year round.

16. Over the years one of the things I have disliked about the town is the inconsistency of business hours. It seems better than it used to be but I have stopped patronizing businesses who haven't been consistent and I'm not necessarily talking about seasonal hours or closings.
17. Inevitably I think, there is a division between those who have lived here all or most of their lives and those who stay for a few months or even weeks - some biases on either side of that division.
18. No place for dancing. Little choice in restaurants. No movie theatre. Should have more art and craft classes. More music. Needs doctor.
19. Acceptance of excessive alcohol and drug use. Over dependence on one industry (fishing) and one species (lobster) makes the future very difficult if there is some major change in the lobster landings. This could happen due to natural or manmade causes.
20. There isn't much I dislike. I am concerned about the use of ATV's by youngsters under the age of 16 on public roads. I don't like what I hear about excessive drinking and drug use and what it does to families - VH is not alone with this problem.
21. The disconnect between lobstermen and "the others". I wish the two could come together more than they are.

IV.) Housing/Development/Preservation

This section is perhaps one of the most important as it relates to the Comprehensive Plan. A plan is supposed to help direct or recommend areas of growth in a town based on the availability and/or preservation of resources. When associating Resource Inventories with a community vision, which includes the results from this survey, a plan can be built to help sustain the island.

Table 5. Respondents' support for housing

Do you see a need for...?	Yes	No	Unsure
Single Family Homes	41%	34%	25%
Year-Round Rental Properties	64%	16%	20%
Low-Income Housing	56%	19%	24%
Housing for Elderly	68%	12%	20%
Affordable Housing	80%	7%	13%

80% of the survey respondents see a high need for affordable housing opportunities. Affordable housing includes options that are reasonably low in rent, but not necessarily subsidized based on an

income level, like low-income housing, which was seen by 56% of the respondents as a need in the community. 68% of the respondents see a need for elderly housing options.

According to the 2010 U.S. Census, there has been a 60% increase in the island population between the ages of 50-64 and a 21% decrease of people 70 years of age and older over the past 10 years. The current availability for assisted living is limited to six rooms and 86% of survey respondents stated that they support expanding Elder/Home Care Services. It is unclear if there is a correlation between age and lack of available services, so more outreach is needed to identify ways of retaining the elderly population.

Table 6. Respondents support for land use and development.

Should we encourage the following....?	Yes	No	Unsure
Retail shopping	58%	24%	17%
Business/Professional buildings	38%	36%	26%
Home-based businesses	83%	4%	13%
Nursing/Assisted-living homes	70%	15%	15%
Group homes for special needs	35%	28%	38%
Seasonal campgrounds/RV parks	13%	78%	9%
Should we....?	Yes	No	Unsure
Adopt building/energy/construction codes	65%	19%	16%
Adopt a Historic Building Code/Ordinance	72%	14%	15%
Support alternative energy projects	87%	8%	6%
Charge developers impact fees to cover related public costs	68%	7%	21%
Enhance communication services (broadband, cell phone, etc...)	77%	16%	8%
Provide tax incentives to attract businesses that bring jobs	50%	29%	21%
Allow owners of private planes and small jets to land on VH	12%	73%	14%

Table 6 mostly references land use and development questions. For example, 83% of respondents say we should encourage home-based businesses, 70% are in favor of encouraging nursing/assisted living homes, and 78% do not think we should encourage seasonal campgrounds/RV parks. Respondents generally seem unsure about the idea of encouraging group homes for special needs and business/professional buildings, and perhaps understandably as they are not something that has historically been a primary focus within the town.

There is an overwhelming consensus (73%) from survey respondents to not allow owners of private planes and small jets to land on Vinalhaven as there is concern for what increased air traffic and accessibility will do to the amount of visitors to the island. Many people indicated the importance of keeping the airstrip limited-entry, allowing only Penobscot Island Air and Life Flight to land their aircrafts.

Following the erection of 3 1.5 MW wind turbines on Vinalhaven in 2010, there has been a buzz regarding the project's ability to lower energy costs. Nonetheless, an alternative energy project like the Fox Island Wind Project helps communities and natural ecosystems by reducing the dependence on fossil fuels. 87% of the respondents state that they would support alternative energy projects, not limited to wind turbines. This is a big step looking forward, as there may be a need to become less dependent on fossil fuel-based energy sources.

Like many services, communication services on the island are challenging to deliver consistently across the island population. There are multiple service providers on the island offering telephone, Internet, and television. Currently, there is limited cell phone reception as the cell tower, erected in May 2012, is without a carrier. 77% of survey respondents believe we should enhance communication services. Efforts are being made to provide broadband Internet connections to places on the island that are still using dial-up or have requested the services, which would only help encourage or sustain island-based businesses.

Section H of the survey showed the dissatisfaction toward the loss of significant historic structures, either to fire, disrepair, or transfer of ownership. The current zoning and land use ordinance does not address historic building codes. 72% of survey respondents would support such a code or ordinance to help preserve buildings or places of significance, which should be considered within the recommendations of the Comprehensive Plan.

Most likely the most controversial issue, in general, of a Comprehensive Plan is deciding where to limit or exclude growth by preserving resources. Table 7 shows the respondents' support for preserving various resources. In general, respondents favor more or the same amount of preservation for many of the resources.

Table 7. Respondents' support for preservation

Should we do more, less, or the same to preserve...?	More	Less	Same	Unsure
Rural Character	52%	3%	43%	3%
Scenic Resources	55%	3%	41%	2%
Wetlands	46%	5%	46%	3%
Forests	44%	5%	49%	3%

Hillsides/Ridgelines	37%	6%	47%	10%
Public access to the shore	48%	3%	46%	3%
Marine-based businesses	58%	2%	35%	6%
Moorings related to the marine economy	51%	2%	38%	8%
Moorings for visitor use	30%	18%	45%	7%

Only 75% of respondents favor more or the same amount of preservation for visitor moorings, whereas the other resources have even more support, 84% or higher in the same categories. Over 50% of respondents would like to do more to preserve rural character, scenic resources, marine-based businesses, and moorings related to the marine economy.

V.) Public Facilities/Services

The town offers many facilities and services for taxpayers, and as a result, indirectly for non-taxpaying visitors. The facilities and services in the survey encompass only some of those provided by the town, and others provided by nonprofit or community groups within the town that benefit the public. Refer to Table 8 to gauge a better understanding of the levels of satisfaction for those services.

Table 8. Respondents' level of satisfaction with public facilities/services

Public Facilities/Services: For each service, please check your level of satisfaction:		Very Satisfied	Satisfied	Dissatisfied
Q 47	Adult Education	8%	66%	26%
Q 48	Ambulance	65%	34%	1%
Q 49	Bicycle Facilities	10%	53%	36%
Q 50	Cemeteries	19%	71%	11%
Q 51	Farmers Markets	18%	69%	13%
Q 52	Fire Protection	58%	40%	2%
Q 53	Law Enforcement	24%	61%	15%
Q 54	Property Tax Level	13%	67%	20%
Q 55	Vinalhaven School	32%	53%	14%
Q 56	Recreation Facilities	49%	47%	4%

Q 57	Road Plowing	26%	60%	14%
Q 58	Road Repair	10%	58%	32%
Q 59	Town Office Services	44%	55%	1%
Q 60	Town Office Hours	43%	57%	0%
Q 61	Transportation Services	9%	60%	32%
Q 62	Parking	15%	72%	13%
Q 63	Vocational Education	8%	66%	26%

Survey respondents are generally satisfied with most services listed. Improvements to bicycle facilities, road repairs, and transportation services should be considered, as they yielded the most dissatisfaction among the facilities/services listed.

Fire protection, ambulance, and Town Office services have a level of satisfaction of 98% or higher. To clarify some of the other services in Table 8, Law Enforcement is regulated by Knox County. The town contracts with the county to provide coverage, and information from the survey shows overall support for the coverage with 85% of respondents satisfied or very satisfied. Facilities within the Town, but not necessarily managed by the Town, including recreational facilities, the K-12 school, and parking, are delivered at a high level of satisfaction of 86% or higher.

Some of the facilities/services that were not included on this list are the town library, transfer station, sewer, medical services, airport facility, and communication systems. While these are not all facilities/services paid for and managed by the town, they are all enjoyed and used by the majority of the public. These were also items that were commonly mentioned in the likes/dislikes (Section H) of the survey.

VI.) Transportation

Living on an island comes with its challenges. Living 15 miles off the coast of Maine makes transportation services one of the most crucial for residents and visitors. The one-hour and 15 minute State Ferry ride is the primary source of transportation for the island. Other services include a town-owned airport, managed by Penobscot Island Air and private boats.

Once one is on the island, the transportation services are in the hands of the Town. There is no formal taxi service or public transportation for the approximately 90 miles of roadway across the 24 square

mile island. For pedestrians, there are tens of miles of trails to hike and many miles of road to bike, although biking is not necessarily the safest mode of transportation, as indicated by the results in Table 9. 77% of survey respondents said they support making bicycle travel more safe and 36% of respondents are dissatisfied with bicycle facilities.

Table 9. Responses to transportation questions

Transportation	Yes	No	Unsure
Are pedestrian facilities adequate?	41%	49%	10%
Do you support making bicycle travel more safe?	77%	15%	8%
Are you satisfied with the ferry service?	86%	9%	6%
Are there enough hiking trails?	74%	13%	13%
Are there concerns about vehicle speeds on VH roadways?	65%	27%	8%

There is a significant concern from survey respondents regarding the speed of vehicles on the roadways. Most roadways lack a paved shoulder, have many blind curves or hills and, given the amount of driveways and private roads entering primary roadways, cause concern among island residents for vehicles traveling at unsafe speeds.

Most survey respondents are satisfied with the State Ferry service and the amount of hiking trails on the island but are generally unsure about the adequacy of pedestrian facilities. Responses from Section H of the survey indicate a need for public spaces within the downtown area, like public bathrooms, better sidewalks, and more greenspace or benches to just step off the main walk areas.

VII.) Historic and Archaeological Resources

Vinalhaven includes nearly 100 sites that reflect its maritime, farming, granite quarrying, social/fraternal, educational and religious heritage, as well as the historic role of tourism and other “Downstreet” commercial enterprises. Currently, there are:

- 82 prehistoric archaeological sites.
- 33 historic archaeological sites.
- 10 historic building structures/objects listed in the National Register of Historic Places.

Recent losses of local landmarks have spurred efforts to maintain some of the few remaining historic sites on the island, particularly in the Downstreet area. As seen in Table 10, 95% of survey respondents

favor preserving historic sites and town landmarks. 72% also support the adoption of a historic building code/ordinance.

Table 10. Responses to historic and archaeological resources

Historic and Archaeological Resources	Yes	No	Unsure
Do you favor preserving historic sites and town landmarks?	95%	2%	3%
Do you favor protecting archeological resources by limiting development?	69%	11%	20%
Would you like to continue maintaining (clean up, fix, preserve) cemeteries?	92%	2%	6%
Do you favor maintaining town parks and quarries?	99%	1%	0%

Limiting development in an effort to protect archaeological resources is supported by 69% of respondents, while 20% are unsure. State historic preservation professionals believe, while there are many sites of historic and prehistoric value on the island, there may be even more sites. Additional surveys are recommended to find those resources, which may then help identify areas in which development should, at the very least, be monitored.

VIII.) Economy

The island economy is predominately dependent upon marine resources, particularly lobstering, and supplemented by tourism. With over 250 lobster/crab licenses issued to Vinalhaven residents (2010) , local estimates indicate over 400 people on the island are directly employed by the industry. Boat captains, sternmen, dockworkers, truck drivers, trap makers, and many others involved in the lobstering industry all help sustain the island's year-round economy.

Figure 5, below, represents employment by sector for survey respondents. 35% are self-employed or retired, while 9% of the respondents work in the public sector, leaving 21% employed by the private sector. The amount of public sector jobs on the island is mostly limited to the Town Office, Maine State Ferry Service, Post Office, or the Vinalhaven School.

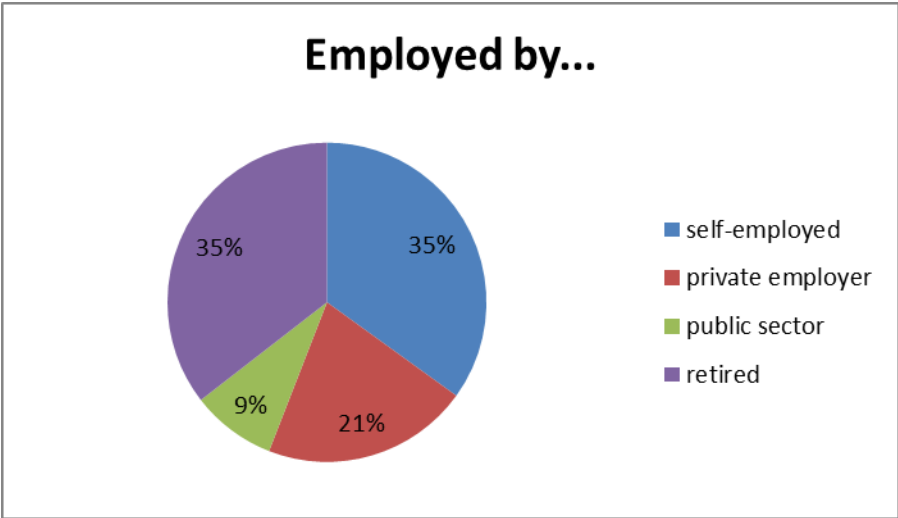


Figure 5. Respondents' thoughts about the stability of VH's year-round economy

Figure 6 shows the survey respondents' current work status among the different residency types. Whereas the majority of the year-round respondents work full-time, the majority of each seasonal and non-resident taxpayer is retired.

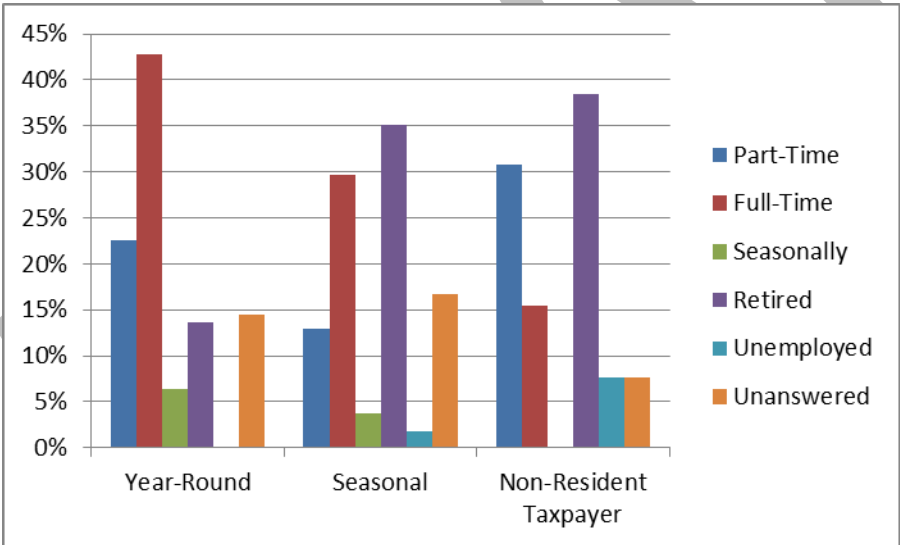


Figure 6. Respondents' current work status by residency

Many of the seasonal (43%) and year-round (67%) respondents were employed full or part-time. None of the year-round respondents reported they were unemployed. While the percentage of those working is high, there is still concern among the respondents for the stability of Vinalhaven's year-round economy (Figure 7).

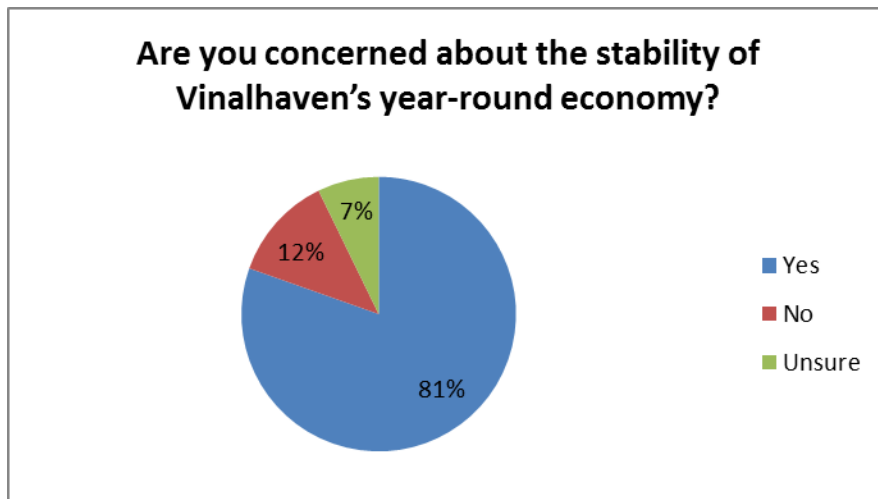


Figure 7. Respondents' employment by sector

With much concern about the stability of Vinalhaven's year-round economy, 50% of survey respondents don't feel there are enough year-round jobs to sustain the economy, as seen in Table 11. This is not to say there are issues of significance currently, but with recent issues in the lobster industry, the ripple effect runs deep in the community. Other seasonal jobs that help contribute to the well-being of the year-round economy include retail, constructions, and trade services, to name a few. 40% of respondents feel there are enough jobs to supplement the island's economy.

Table 11. Vinalhaven Economy

	Yes	No	Unsure
Are there enough year-round jobs to sustain our economy?	14%	50%	36%
Are there enough seasonal jobs to supplement our economy?	40%	23%	37%
Do you favor developing a tourism plan?	38%	38%	23%
Is shopping locally important for preserving local businesses?	Very Important	Important	Unimportant
	73%	25%	2%
How much do you buy locally (Vinalhaven stores/services)?	Everything	Most Things	Some Things
	10%	78%	12%

For survey respondents, 78% buy “most things” from Vinalhaven stores/services. While not everything is stocked on the island to meet the wants of residents, there is a great deal to meet their needs. Table 12 shows support for expanding particular businesses, with the top five being farming, elder/home care services, craft industries, medical services, and boat building.

Table 12. Expansion of island businesses

Would you like to see any of the following businesses or industries expand?	Favor	Oppose	Undecided
a) Auto & Small Engine Repair Services	72%	7%	21%
b) Banking	36%	35%	29%
c) Bed & Breakfast	62%	14%	24%
d) Boat Building	80%	2%	18%
e) Community Gardens	77%	9%	13%
f) Community-Supported Agriculture	76%	10%	14%
g) Construction	42%	21%	36%
h) Craft Industries	83%	3%	15%
i) Elder/Home Care Services	86%	2%	13%
j) Farming	88%	3%	10%

k) Fast Food/Deli	28%	52%	20%
l) Forestry Operations	46%	20%	35%
m) Hotels/Inns/Motels	33%	40%	27%
n) Medical Services	81%	5%	14%
o) Restaurants	73%	9%	18%
p) Retail Stores	63%	12%	26%

Conversely, there is less support for expanding banking, hotels/inns/motels, and fast food/delis, in ascending order. It is likely there are enough of each of those to meet the needs of the community, or at the very least, as it relates to the survey respondents. New businesses respondents would support on the island include computer services (66%), auto/water taxi services (56% and 54% respectively), and processing farm products (54%). There was a bit of confusion among respondents with the phrasing of the question, “move onto the island,” which some thought meant establishing businesses from off-island instead of utilizing local talents/entrepreneurs. Refer to Table 13 for complete results of new business support.

Table 13. Support for New Island Businesses

Would you like to see any of the following businesses or industries move onto the island?	Favor	Oppose	Undecided
a) Aquaculture	40%	36%	25%
b) Auto Taxi Service	56%	18%	26%
c) Camping/Campgrounds	18%	66%	16%
d) Chain Stores (Retail, fast food, etc...)	10%	83%	7%
e) Computer Services	66%	15%	19%
f) Light Industry (processing, manufacturing, etc...)	53%	22%	24%
g) Marina	44%	33%	23%
h) Processing Farm Products	54%	17%	30%
i) Recreation	53%	17%	30%
j) Tourism	36%	38%	26%
k) Trade Services	42%	14%	43%
l) Water Taxi Services	54%	22%	24%

Job opportunities on the island are generally seasonal and availability varies among age and gender groups. As seen in Table 14, improvements are needed in opportunities for young people, women, well-paying jobs, and year-round jobs. 73% of respondents feel there should be improvement with overall job opportunities and perhaps the most important demographic, in terms of sustaining island populations, are the job opportunities for young people, with 79% of respondents saying there is a need for improvement.

Table 14. Job issues among various demographics

How do you feel about the following job issues facing Vinalhaven?	Adequate	Needs Improvement	Undecided
a) Job Opportunities	15%	73%	12%
b) Jobs for Young People	12%	79%	9%
c) Jobs for Women	15%	69%	16%
d) Jobs that Pay Well	12%	76%	12%
e) Year-round Jobs	7%	75%	18%

IX.) Water Resources

Community water resources are perhaps the most vital of all natural resources, particularly on an island where actions have a direct and noticeable impact. Protecting the water supply, private wells and public aquifers, is something everyone should consider. 51% of survey respondents have their own well as their primary water source, while 48% utilize the town supply. The remaining respondents claim to have a different source of drinking water, utilizing either a spring, rainwater, or a quarry.

Table15: Survey respondents' thoughts toward water resources

	Well	Town Supply	Other
Water source is...	95	89	3
	Yes	No	
Are you satisfied with the quality of your water?	79%	21%	

If you have a well, do you experience salt water intrusion?	5%	94%
I would you support a well monitoring study/program?	73%	27%
Is water quality of concern to you?	83%	17%
Is water quantity of concern to you?	72%	27%

Most respondents are satisfied with their water quality, with only 21% dissatisfied, but 83% of respondents are generally concerned about the quality. The town supply is monitored and tested regularly, but monitoring personal wells is at the discretion of the user or landowner. Programs have been utilized on neighboring islands, like Islesboro, and could be duplicated or modified and applied here, with 73% of respondents in support of a well monitoring study/program. This is relevant today and even more so in the future, as the cost to cleanse or transport water to areas outside the Village Overlay District would be costly. It is important to have accurate information to ensure quality and quantity, which is also of concern for 73% of the respondents.

X.) Vision for the Future

The last question, or two, on the survey was an effort to understand what people want for Vinalhaven's near future. "What would you like to see in the future for the Town? What is your vision for the Town over the next 10 years?" These questions yielded similar responses from casual conversations around town in the months leading up to the survey distribution. The Wordle below represents the 25 most common words from the survey responses.



Figure 8: Characteristics people associate with Vinalhaven's future.

Coming to a town-wide consensus on issues and topics as important as the future of an island community, will always be challenging. This survey is not the first, only, or last opportunity to discuss Vinalhaven's vision for 2025. Figure 6 is a Wordle, or word cloud, representing characteristics or words most commonly used in the qualitative responses.

Responses

1. Mostly the same not a town that is geared just for summer people and tourists, like Freeport.
2. A balance between grow and preserving what we have here today. Too much growth and change could destroy the charm of Vinalhaven.
3. More jobs to keep our kids here
4. Opportunities for scientific research of supply of lobster. Sustainability experimentation. Studies of safer ways to harvest our marine resources, both for man and the ecosystem.
5. I would like to see jobs based on something other than lobstering so that there will be a fallback position for the island. I would also like the island to be as self-sufficient as possible in food and energy.
6. Slow sustained growth.
7. maintenance of historic buildings; continue island "way of life"; more emphasis on healthy lifestyles and education for at risk children

8. An overriding concern is the threat that the fishery could collapse. Diversification of ways to sustain the economy without becoming overly dependent on tourism is a must. On the other hand, tourists bring in much needed cash and have less of an impact year-round. Important not to create a tourism industry that is entertainment oriented. Average tourist that enjoy our natural beauty, trails, wildlife, quarries, and are happy to go to bed at 9:00 like the rest of us. This is not Cape Cod, Wells Beach, or Martha's Vineyard and hopefully never will be. People who need those amenities should go there. Let VH be VH.
9. The school is very important to attract young families.
10. I like Vinalhaven the way it is - except the movement for growth. Eg. More businesses, more tourists. I think we're pretty much the size we should be.
11. I would like to see some kind of industry come back to Vinalhaven, so many people need that. I would like to see more stores so we could shop on the island and not half to go to the mainland for items. I don't want Vinalhaven to be a tourist trap.
12. I want it to stay the way it is - basically a maritime community that supports conservation and the natural beauty of the island. I think there should be aesthetic standards for construction and development. I favor a form-based zoning by law in which Main St is maintained as an aesthetic space.
13. Farmers markets, more local food, dairy. Better local awareness and the importance of local economy. Less development and more affordable farm land. More grants for local businesses and getting local food into the schools.
14. I leave that up to the year-round community
15. Its charm and viability is due to its slow change. This is hard for those who live here to realize what they have. The mainland all about the country has changed and not in a good way.
16. That magic trick of continuing to have the same qualities but with sufficient additional employment opportunities so that the median age will diminish.
17. Build a public tennis court. Encourage biking and walking by building safe routes. Attract year round stable employment. Preserve the historical architectural character of our town.
18. To hold their "Maine heritage" close to all planning. Don't lose this!. There are not many kind places in the world anymore that are so scenic. Do not destroy the visual ambiance of the town with more modern buildings! It detracts from the beauty that has been here for years and will make VH just like every other town in the USA. Promote a VH look to future downtown building projects.

19. More community supported events to encourage tourism and provide _____ stable seasonal businesses and employment opportunities. If there was a marina, local tour guides, rental of bikes, scooters, canoes, kayaks. Events during the summer to draw residents and tourists. I would like VH to remain a vibrant year-round community with a diverse economic base that serves both year round and seasonal taxpayers. Preservation and enhancement of natural setting and resources. Outstanding school with diverse cultural offerings.
20. My vision and hope is for minimal change in the next 10 years - unless it is change that protects natural beauty and health of the island.
21. Foster new small businesses - which allow for local new jobs year round - Continue to protect the island, its traditions, its people while expanding its visibility to the world.
22. Stay the same, but with general prosperity for the year-round residents.
23. I'd like to see us reconcile ourselves to the critical need for that co-existence. The key to whether we retain our unique character, a component that is slipping quietly and quickly away, is economic viability. While lobstering drives about 50% of our economy and tourism drives the other half, the vibrant architectural downtown and equally vibrant retail sector that, for two centuries, stitched together the entire fabric of island life, is nearly dead. I'd like to see sustainability, all elements of sustainability, included in the school curriculum from K-12.
24. A mix between fishing industry and low resource impact tourism. The trail system is a gem that could be advertised more.
25. Our vision for VH over the next 10 years is for it to stay true to what has made it a special place for many. This means fostering the spirit of caring among residents and seasonal residents alike, by maintaining a community built on independent production; fishing and lobstering as much as resources will allow; craftsmen; boat builders and repair services; artists; and intellectual skills (writers, etc.). This will necessitate improvement in communication meaning internet service for the whole island. The second part of our vision is to maintain the absence of physical congestion and sprawl. We hope the work done by VLT is fostering open space and land conservation, including farming, will continue. This includes hiking trails, nature study, and appreciation of the wild physical beauty of the island. We hope tourism and over-development as exhibited in the "Nantucket Syndrome" can be avoided, as the result of housing values which exclude the original residents.
26. Preserving island sense of unique identity and community while implementing innovative ideas to enhance and encourage new businesses/revitalization.

27. That growth and progress be gradual and aimed at preserving strengths and resources, both human and natural, and building the future on these gifts.
28. strong local economy; a Doctor full-time
29. Hope the island keeps its focus on studying and measuring its natural environment and holds on to working waterfronts. Hope the island is able to diversify: light industry? Human services? Health care and education? To offset any drop in fishing that may occur. Jobs are important. Hope the island continues to push for green energy solutions - turbines are great. Tidal generators?
30. To stay just like it is, with reasonable growth in self sustainability.
31. Damn little - we have now town officials, roads, library, school, water and sewer, and lots of low'/reasonably homes and land for sale. KISS - keep it simple and don't ruin it.
32. Economic growth through sustainable enterprises (food, farming, forestry, fisheries, energy). A sustainable plan/sustainable comp plan. Grant funded projects that support community development opportunities.
33. I would like to see more historic preservation and stricter zoning laws that conform to maintaining the original character of the town. I would also like to see a downtown that is robust and a requirement for businesses to maintain consistent hours - (mostly restaurants)
34. More counseling for poor families and families threatened by marital breakups.
35. More born and bred islanders taking charge and running the town. There are too many "away" folk involved in, what ought to be, local initiatives (and I am from away)
36. Careful planning for economic sustainability balancing the needs and contributions of all constituents and preserving the beauty and distinctiveness of island life.
37. I would like to see the lobster industry thrive. However, I believe that it will probably decline. Hopefully the decline will be gradual and we can slowly improve our tourist services to recover some jobs and income.
38. I remember the old cinema. Good times there. Possible to find a spot for one?! I am happy with the town as is.
39. Support good jobs for year-round people, but find jobs that are compatible with the character of VH. Support lobstermen and all who live on the sea.
40. Maintain the small town feel, but allow for some changes that keep future generations living on the island.

Appendix D: Significant Marine Wildlife Habitat in Penobscot Bay

Carver Cove	Roberts-Hay-Otter Islands	Lairey's-Crane-Crotch Islands
Seal Bay	Greens Island	White Island
Stoddard-Smith Islands	Vinalhaven Town	Medric Rock-Green Ledge
Narrows-Sheep-Green Islands	Hurricane Island	Green-Dogfish Islands
Saddleback Ledge-Brimstone I.	The Basin	Crockett Point

CLASS A, B, C WILDLIFE HABITATS OF PENOBSCOT BAY

Class A	Class B	Class C
Narrows – Sheep – Green Is.	Seal Bay	Mill River
Saddleback Ledge – Brimstone I.	Stoddard – Smith Islands	Carver Cove
Roberts – Hay – Otter Islands	Greens Island	Vinalhaven Town
Lairey's – Crane – Crotch Is.	Hurricane Island	White Island
	The Basin	Crockett Point
	Medric Rock – Green Ledge	
	Green – Dogfish Islands	

COLONIAL NESTING SEABIRD ISLANDS OF PENOBSCOT BAY

Big Smith I. Ledge	Carvers Island	Hurricane Island Ledge
Green Ledge	Hay Island	Little Hurricane I. Ledge
Green Island	Otter Island	Flat Island
Brimstone Island	Roberts Island	Medric Rock
Little Brimstone I.	Deadman Ledge	

SHOREBIRD FEEDING AND ROOSTING SITES IN PENOBSCOT BAY

Stoddard – Smith Islands
Narrows – Sheep – Green Islands
Saddleback Ledge – Brimstone Island
Roberts – Hay – Otter Islands
Hurricane Island
Lairey's – Crane – Crotch Islands
Medric Rock – Green Ledge

Crockett Point

VINALHAVEN: Marine Wildlife of Penobscot Bay by Wildlife Area and Season of occurrence.

(W=winter, S=spring migration, N=nesting, P=post nesting, F=fall migration)

P061 North Haven Town

Black-Backed Gulls (S,N)	Cormorants (F)
Eiders (W,S,P,F)	Gulls (W,N*)
Goldeneye/Bufflehead (W,S,F)	Herring Gulls (W,S,N,F)
Loons (S,F*)	Mergansers (W)
Old Squaws (W,F)	Unid. Waterfowl (W,N*,F*)

P066 Kill River

Black Ducks (W)	Black-Backed Gulls (P)
Cormorants (F*)	Eiders (S,N,P)
Great Blue Herons (N)	Goldeneye/Bufflehead (W*,S*)
Herring Gulls (W,S,N)	Harbor Seals (N)
Loons (W*,F)	Mergansers (W)
Osprey Nests (N*)	Old Squaws (W)
Shorebirds (F)	Terns (P)
Unid. Waterfowl (W*,S,N*)	

P067 Carver Cove

Black-Backed Gulls (N,P,F)	Cormorants (N,P,F)
Eiders (W,S,N,F)	Gulls (W*)
Goldeneye/Bufflehead (W,S,F)	Herring Gulls (W,S,N,P,F)
Harbor Seals (F)	Loons (W,S*,F*)
Mergansers (N,F)	Ospreys (N*)
Old Squaws (W,S,F*)	Scoters (N*)
Shorebirds (W,F)	Terns (P)
Uni. Waterfowl (W,S*,N)	

P068 Seal Bay

Black Ducks (W)	Black-Backed Gulls (S,P,F)
Cormorants (N,P,F)	Canada Geese M
Eiders (W,S,N,P,F)	Eagle Nests (N*)
Gulls (W*)	Goldeneye/Bufflehead (W*,S*)
Herring Gulls (W*,S,N,P,F)	Harbor Seals (W,N,F)
Loons (W,S*)	Old Squaws (W*,S,F)
Shorebirds (W,N*,P,F)	Terns (N,P)
Unid. Waterfowl (W*,S,N)	

P069 Stoddard-Smith Islands

Black Ducks (W)	Black-Backed Gulls (W,S,N,P,F)
Cormorants (W*,P,F)	Eiders (W*,S,N,P,F)
Gulls (W*)	Goldeneye/Bufflehead (W,S,F)
Herring Gulls (W,S,N,P,F)	Harbor Seals (W*,N,F)
Loons (W,F)	Mergansers (S)
Old Squaws (W,S,F)	Shorebirds (W*,P,F)
Small Gulls (P)	Terns (P)
Unid. Waterfowl (S*,N)	

P070 Narrows-Sheep-Green Islands

Black Ducks (W*)	Black-Backed Gulls (W,S,N,P,F*)
Cormorants (N*,P*,F*)	Eiders (W*,S,N,P,F)
Gulls (P*,F*)	Goldeneye/Bufflehead (W,S,N*,F)
Guillemots (N,P)	Herring Gulls (W,S*,N,P*,F*)
Harbor Seals (N,P,F)	Loons (S,F)
Mergansers (W,S*,F)	Old Squaws (W,S,F*)
Shorebirds (W*,S*,N,P*,F*)	Unid. Waterfowl (S*,P*)

P071 Saddleback Ledge-Brimstone I

Black Ducks (S)	Black-Backed Gulls (S,N*,P*,F*)
Cormorants (W*,S*,N,P*,F*)	Eiders (W*,S,N*,P*,F*)
Gulls (N*,P*)	Goldeneye/Bufflehead (W)
Guillemots (N*,P*)	Herring Gulls (W,S,N*,P*,F*)
Harbor Seals (N*,P,F*)	Petrels (N,P)
Shorebirds (W,S,P*,F)	Terns (P)
Unid. Waterfowl (S*)	

P072 Roberts-Hay-Otter Islands

Black Ducks (W)	Black-Backed Gulls (S,N*,P*,F*)
Cormorants (N*,P*,F*)	Eiders (W*,S,N*,P,F*)
Gulls (P,F*)	Guillemots (N*,P*)
Herring Gulls (W,N*,P*,F*)	Harbor Seals (N,P,F)
Loons (S,N*,F*)	Mergansers (W,S)
Old Squaws (W*,S,F*)	Petrels (N,P)
Shorebirds (W*,S*,P*)	Unid. Waterfowl (S)

P073 Greens Island

Black-Backed Gulls (S,N,P,F)	Cormorants (N,P,F)
Eiders (W,S,N,P,F)	Gulls (W*,F)
Great Blue Herons (N)	Goldeneye/Bufflehead (W,S)
Herring Gulls (W,S,N,P*,F)	Harbor Seals (N,F)
Loons (W*,S*,N*,P*,F*)	Mergansers (W,S*)
Osprey Nests (N*)	Old Squaws (W,S,F)
Shorebirds (P,F)	Unid. Waterfowl (W-,S,F)

P074 Vinalhaven Town

Black Ducks (F*)	Black-Backed Gulls (W,P*,F)
Cormorants (N,P,F)	Canada Geese (F*)
Eiders (W,S,N,F)	Goldeneye/Bufflehead (W,S*,F)
Herring Gulls (W*,S,N*,P,F*)	Loons (W*,S,F)
Mergansers (S)	Osprey Nests (N)
Old Squaws (W,S,F)	Shorebirds (P)
Small Gulls (P)	Unid. Waterfowl (W,F*)

P075 Hurricane Island

Black-Backed Gulls (S,N,P*,F*)	Cormorants (W,S*,N,P,F*)
Eiders (W*,S,N,P,F*)	Goldeneye/Bufflehead (W,S)
Guillemots (N,P)	Herring Gulls (W,S,N,P,F*)
Harbor Seals (N)	Loons (W,S*)
Mergansers (W,S)	Old Squaws (W,S,F)
Shorebirds (N*,P,F)	Terns (P)
Unid. Waterfowl (W*)	

P076 The Basin

Black Ducks (W)	Black-Backed Gulls (W,N,P)
Cormorants (N,P,F)	Eiders (W,N,P,F)
Eagle Nests (N*)	Gulls OM
Great Blue Herons (N)	Goldeneye/Bufflehead (W,F*)
Herring Gulls (W,N,P,F)	Harbor Seals (F)
Loons (W,F)	Mergansers (W,F)
Ospreys (P*)	Osprey Nests (N*)
Old Squaws (W*,F*)	Scoters (N*)
Shorebirds OM	Terns (N)
Unid. Waterfowl (W)	

Lairey's-Crane-Crotch Islands

Black-Backed Gulls (N,P)
 Eiders (W*,S*,N,P,F)
 Gulls (F)
 Herring Gulls (W,S,N,P,F)
 Mergansers (W*,S*)
 Old Squaws (W*,S,F*)
 Small Gulls (P)
 Unid. Waterfowl (W*,S)

Cormorants (W,N,P,F).
 Eagle Nests (N*)
 Goldeneye/Bufflehead (W*,S)
 Loons (W*,S*,F*)
 Osprey Nests (N)
 Shorebirds (S*,P)
 Terns (P)

P078 White Island

Black-Backed Gulls (P,F*)
 Eiders (W,S,N,P,F*)
 Goldeneye/Bufflehead (W,S)
 Harbor Seals (F)
 Mergansers (W,S)
 Old Squaws (W,F)
 Unid. Waterfowl (W,S)

Cormorants (P,F*)
 Gulls 6M
 Herring Gulls (W,S,P,F)
 Loons (W,S*)
 Osprey Nests (N*)
 Shorebirds (P,F)

*Indicates the presence of greater than 1% of the species' population in Penobscot Bay for the season identified.

Appendix E: Vinalhaven Sidewalk Condition and Assessment

CONDITION ASSESSMENT AND MAINTENANCE & DEVELOPMENT PLAN



Prepared by
Vinalhaven Sidewalk Committee
Spring 2006

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INTRODUCTION

For the automobile we have built an immense network of roads on which to drive, and we are quick to repair them when they age and become rough. Likewise, trains have their rails, airplanes have their airports, and even ferries have their slips and buoyed routes. But for a human pedestrian (often those of us with the most difficulty getting about) there is only the small and often overlooked sidewalk.

The Town of Vinalhaven, for its size, is lucky to already have a good network of sidewalks, many of which are leftover from a time when the island supported a much larger population. This network of sidewalks carries our children to school, helps our elderly to the market and supplies many of us with a safe place to walk for both our business and recreation. Clearly sidewalks are an important piece of our daily transportation whether we realize it or not. Just moving from our car to the Post Office, paying the light bill, then into the Grocery Store will have us traveling over a sidewalk a good distance, and more so if we decide to walk downstreet for these errands. Sidewalks are very important to our community in the following ways:

Safety: One of the most basic reasons for developing a network of sidewalks is for the safety of the pedestrian. Vinalhaven streets and roads are quite narrow and hilly, and forcing pedestrians to walk along the roads edge would create a dangerous situation for drivers and walkers alike. This factor becomes all the more important when we realize that a majority of our sidewalks' users are either too young or too old to drive, and that this population is the most likely to be unaware of potential hazards approaching them on the road. Providing these residents a safe place to walk is therefore of the utmost importance.

Summer influx: Each summer the population on Vinalhaven grows dramatically over its population the rest of the year. With our compact village and limited parking areas, a population swing such as we see can be hard on the island's infrastructure. Our network of sidewalks helps the island deal with this influx in two separate but equally important ways. First, it allows those of us who live close enough to town to run our errands without having to drive and park. Secondly, it makes the roads much safer and less congested by keeping pedestrians out of the roads.

Tourism development: It is indisputable that Vinalhaven is solidly on the tourist map. Many summer residents and day visitors come to the island from their respective homes looking for a quiet community

with a slower pace. Sidewalks allow visitors without a car the ability to safely get around the island, give visitors a safe and welcoming place to walk through our historic neighborhoods, provide homes with a buffer from the street, help calm traffic, and make a neighborhood more aesthetically pleasant. All of these factors have an impact on the island's existing and potential tourism.

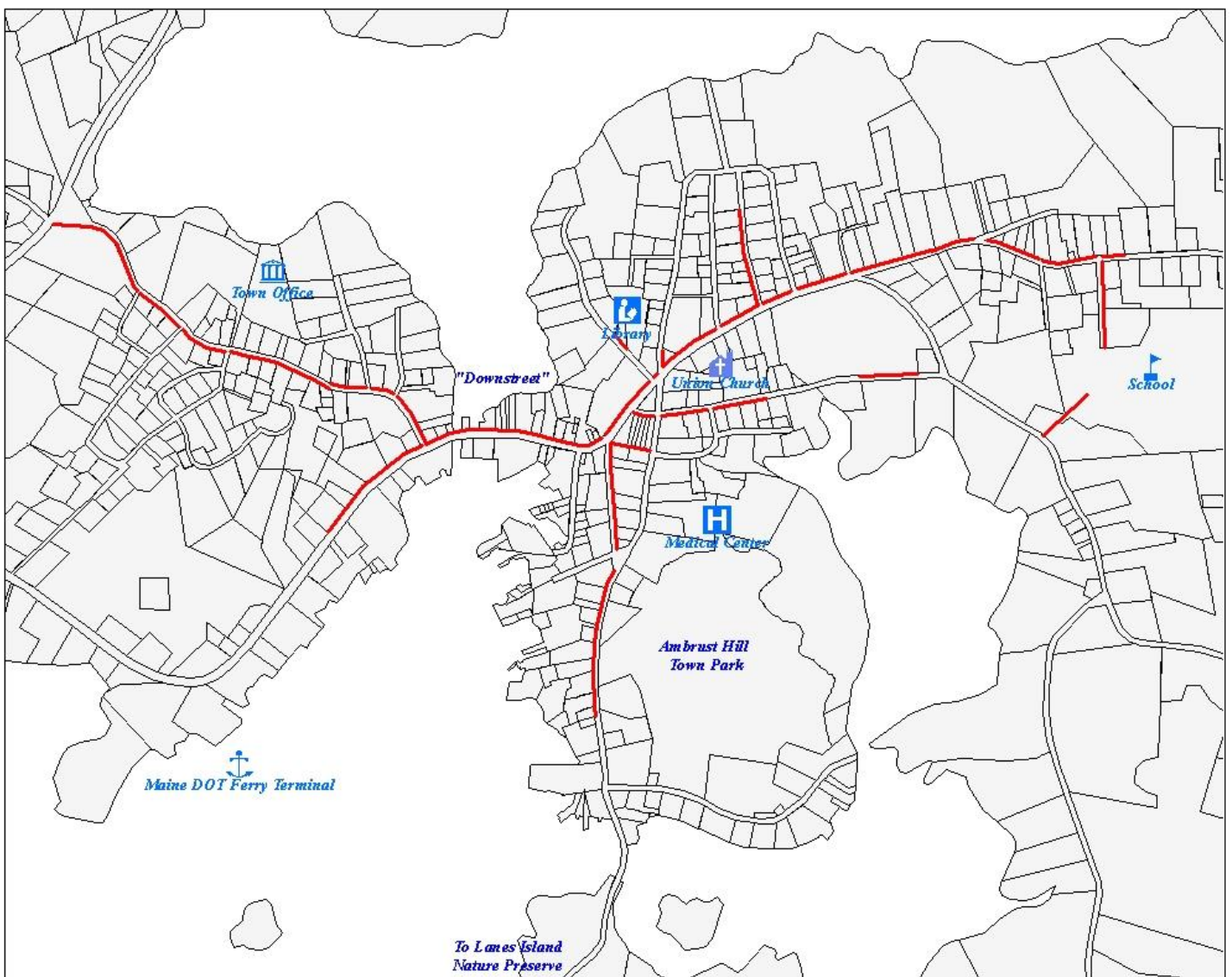
Health Benefits of Walking: Walking is one of the most basic exercises and one of the easiest for people to integrate into their daily routines. Studies show that people who walk regularly enjoy a markedly better health over their non-walking counterparts. To neglect the town's sidewalks would effectively discourage walking that much more. Upkeep of the town's sidewalks is an important piece of encouraging the citizenry to walk, particularly in our harsh climate, where walking can be unpleasant regardless of the condition of the sidewalks. The Town should encourage its residents to walk by maintaining the existing network.

Tie-in to Comprehensive Plan: Vinalhaven's existing Comprehensive Plan does not specifically address sidewalk maintenance or improvements. However, the draft plan developed in 2005 (which was ultimately voted down) did identify projects to improve and expand the sidewalks as a priority that would significantly improve the island's quality of life and ability to accommodate expected growth.

EXISTING SIDEWALK NETWORK

Vinalhaven currently has an extensive network of sidewalks connecting its major neighborhoods and destinations. However, there are a few critical locations which are not connected to the sidewalk network, such as the Ferry Terminal and the Lane's Island Nature Preserve. The map below shows the areas the existing sidewalk network does and does not serve.

Figure 1: Existing Sidewalk Network



OVERALL CONDITION ASSESSMENT

An assessment of the condition of the town's sidewalk network was performed on March 17, 2006. During this process, the following variables were assessed: Surface Condition, Base Condition, Sidewalk Width, Lateral Slope, Height above curb / ditch, Curb Condition, Drainage, and Overall Accessibility. Overall, there is a wide range in the condition of the sidewalks throughout town, and the most apparent observation is that one can walk from a portion of walk in excellent condition to a portion in poor condition in a matter of steps. In other words, there is little contiguity in the condition of the sidewalks throughout town.

Below are two examples of the condition of sidewalk encountered on Vinalhaven:



Condition



Poor Condition

Excellent

In addition to the above general observations, a vast majority of the sidewalks are deficient in at least one area. For instance, a sidewalk with a good surface may be too narrow or a sidewalk with a solid base may have a steep lateral slope. This leaves the community with very few areas where the sidewalks are appropriate, and many areas where improvement in at least one aspect is needed. In some cases, the needed improvements are minor, in other places the needed repairs are major.

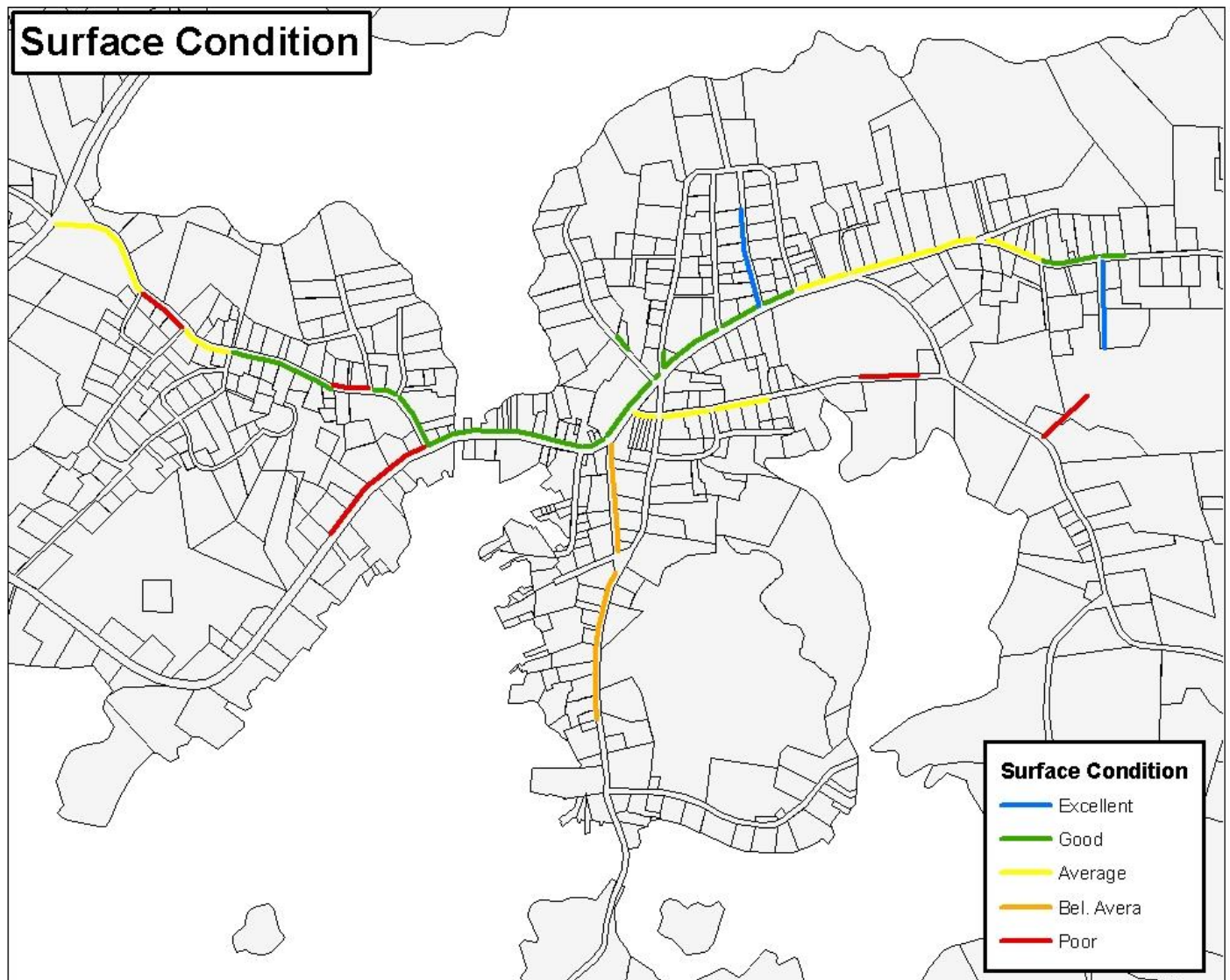
In some instances, the problem is somewhat secondary to the actual deficiency in the sidewalk. A good example of this is an area which is not appropriately curbed – a minor problem in itself, but when a sloped portion of walk is covered with sand and gravel from the road, conditions can become very slippery. This is a common situation throughout the island and hint at the need for a major curbing project along the main streets in town. Specific situations will be looked at in greater detail.

The condition of the entire network has been analyzed by each variable assessed. The following pages detail the overall condition of the sidewalk network.

Surface Condition: Surface condition was a simple measure of the smoothness of the surface of each section. This had to do not only with the actual condition of the surface material (generally asphalt), but also whether the asphalt had heaved, cracked, or otherwise been compromised. In certain cases, storm drainage basins and driveway cuts were allowed to disrupt the sidewalk, resulting in severe dips, slopes, and undulations throughout its course.

Specific areas to note are West Main street, where storm drainage and driveway cuts have impacted the sidewalk, East School Street, where the sidewalk is all but obliterated, and sections of High Street and the School walkway where cracking and heaving have taken their toll.

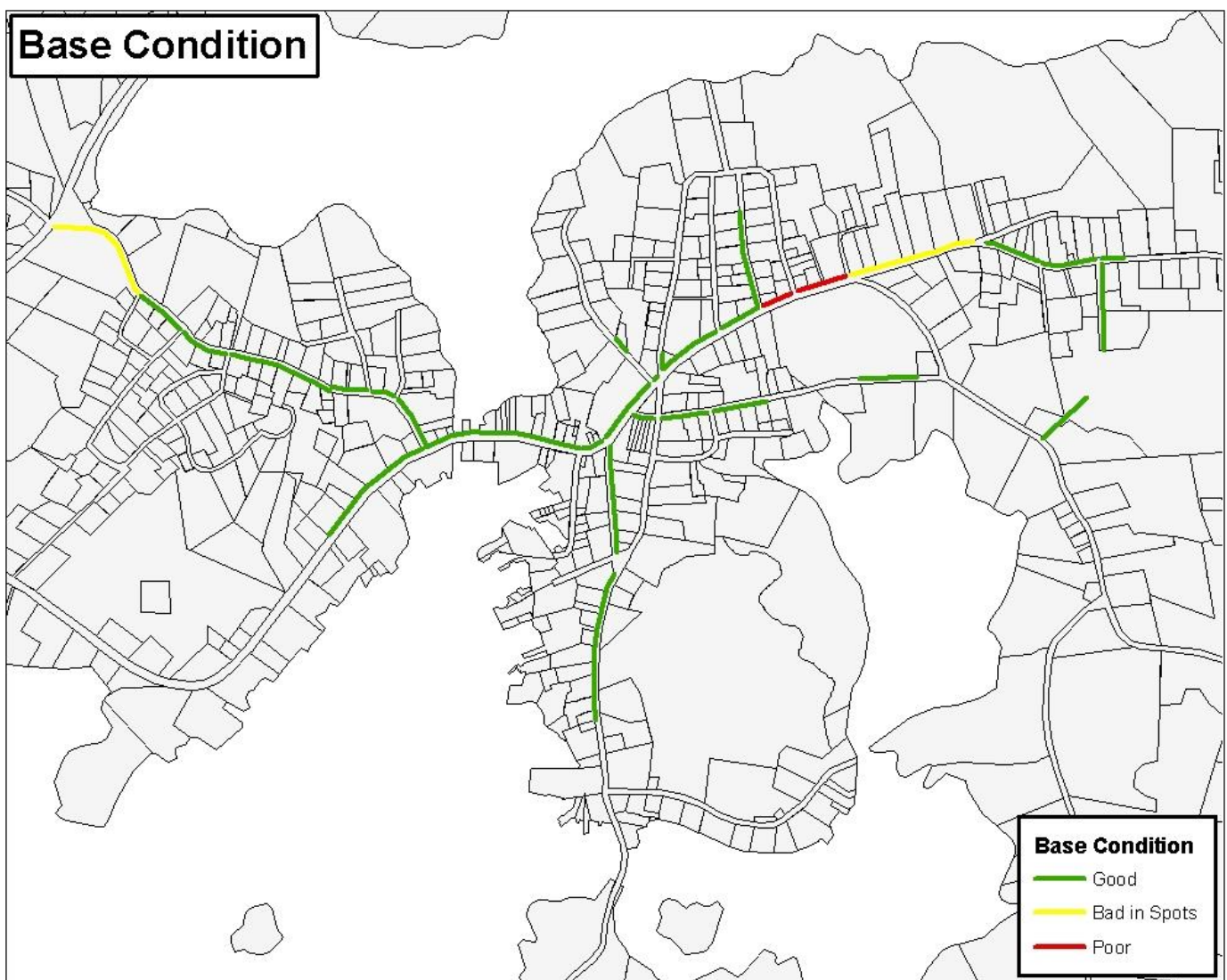
Figure 2: Surface Condition Map



Base Condition: In General the base of the sidewalk was not visible, and therefore could only be assumed to be solid. In specific places, though, the sidewalk is built upon granite cribbing, which is in various states throughout the network.

Specifically, the area between Cottage Street and Clayter Hill Road is in dire need of reconstruction. Areas along the western end of High Street also look as though they could become problematic in the coming years, though they appear sound for the time being.

Figure 3: Base Condition Map

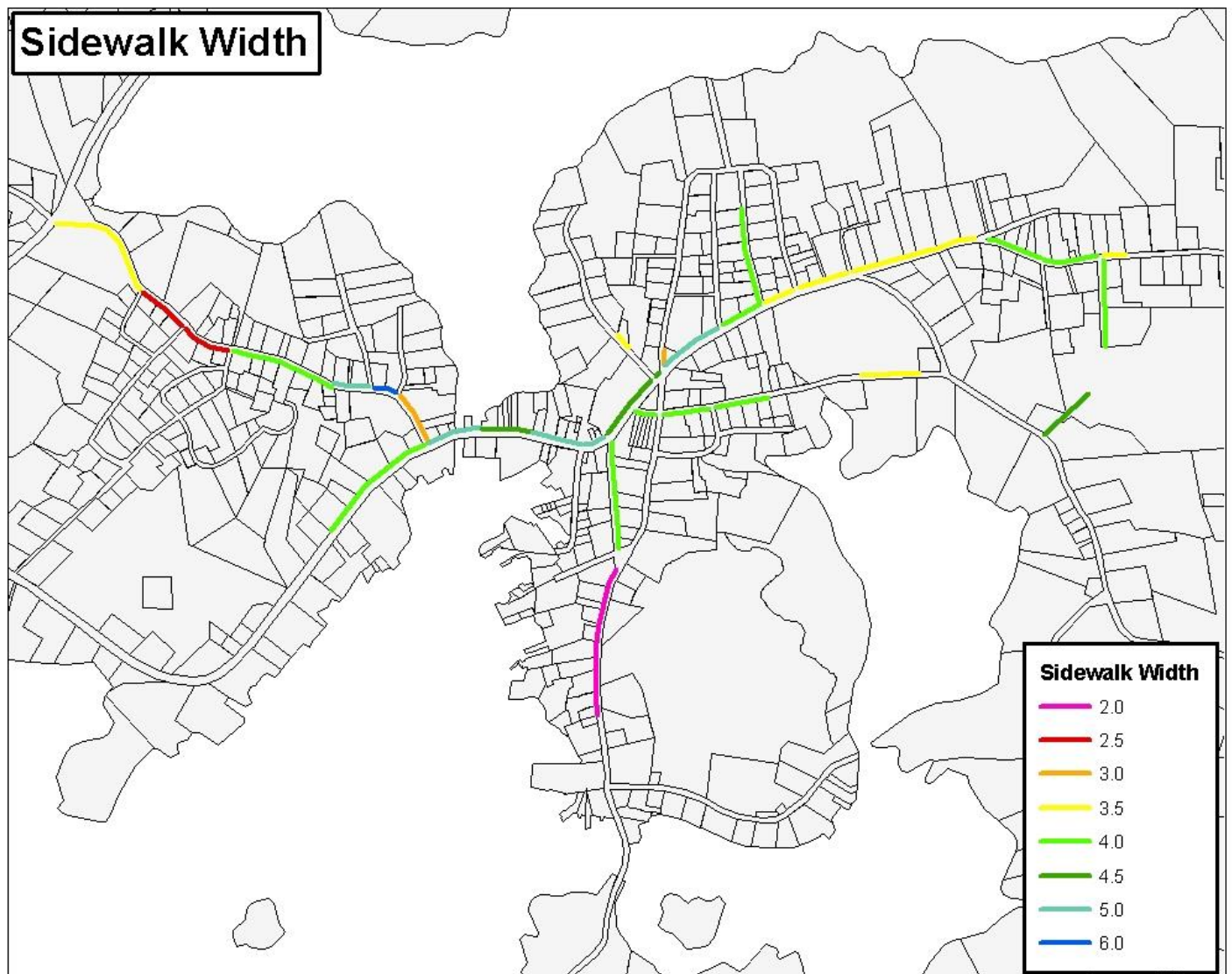


Sidewalk Width: In general, sidewalks should be 4' wide and be free of obstructions. This is wide enough to allow two people to walk comfortably side-by-side, or for two people to pass one another without one having to leave the sidewalk. In heavily traveled areas (such as Downstreet), a wider sidewalk is obviously needed. There are many spots on the island where the minimum 4' width is not met. Our sidewalks are greatly variable in regard to width. The following map shows the narrowest points along the course of each section.

Specific areas to note are along Atlantic Avenue, where the sidewalk is quite narrow because of slope encroachment, as well as near the western end of High Street where the sidewalk is nearly as narrow.



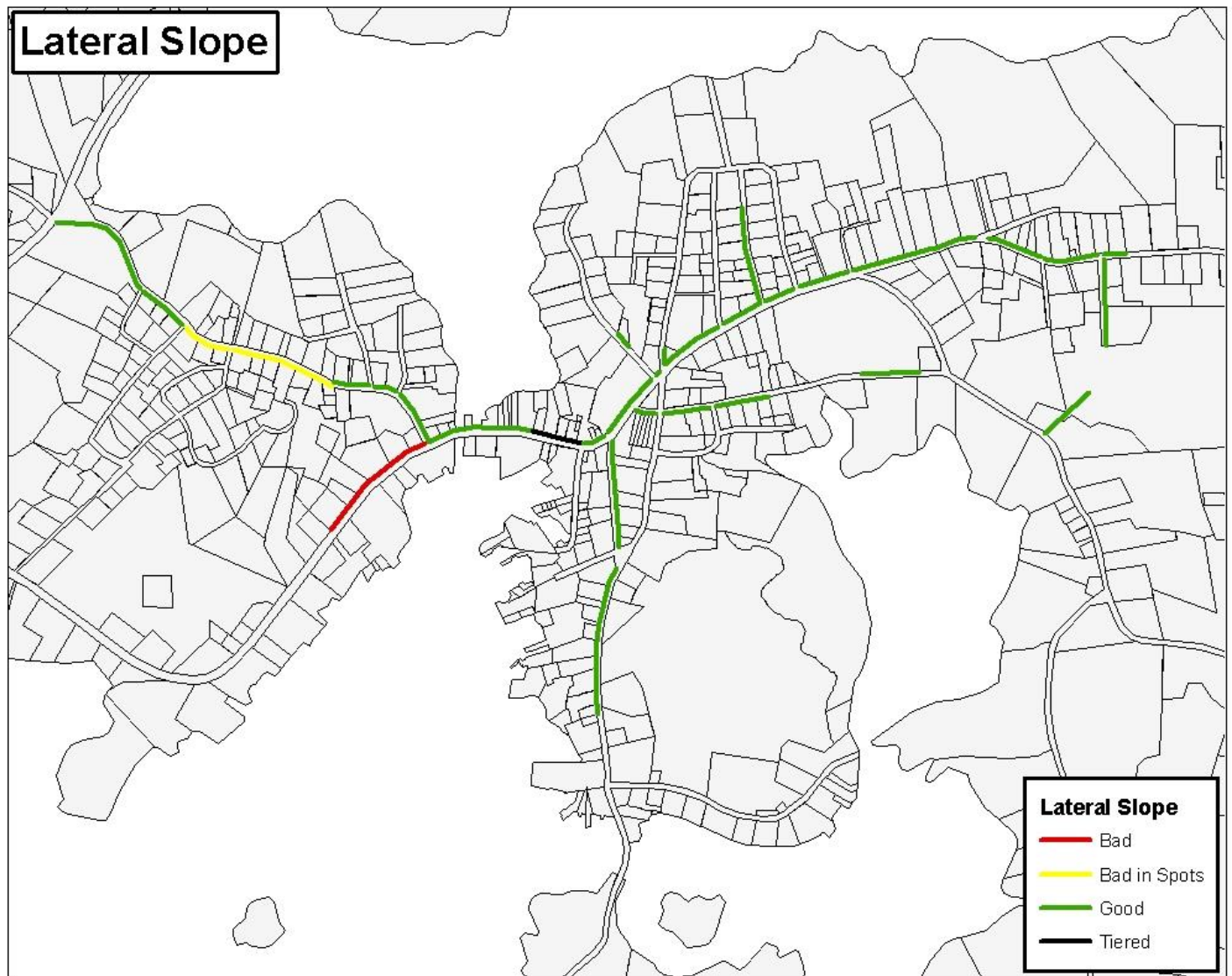
Figure 4: Sidewalk Width Map



Lateral Slope: Lateral slope can be a serious safety hazard when it is present on a sidewalk. If a sidewalk slopes toward the road, it can cause bikes, wheelchairs, strollers, etc. to roll off the sidewalk and into oncoming traffic. If there is gravel on this sloped surface, it becomes very hazardous for walkers as well.

In general, the lateral slope of sidewalks in Vinalhaven is not a problem, with exception of two areas. Along High Street the sidewalk has been intentionally sloped to create a 'curb'. This method of curbing is actually counterproductive to the proper function of the sidewalk, for the safety reasons mentioned above and also because the angle of the slope significantly reduces the sidewalk's width. In other words, if the walk drops directly off to street level, the walk can effectively be much wider and safer. The other area of concern is along West Main Street where numerous driveway cuts and one long section along a parking lot give this sidewalk an uneven lateral slope which is very steep in places. Also of note is the sidewalk in front of the post office, which has been tiered to alleviate the problem of requiring a slope. This particular situation may create problems around handicapped accessibility.

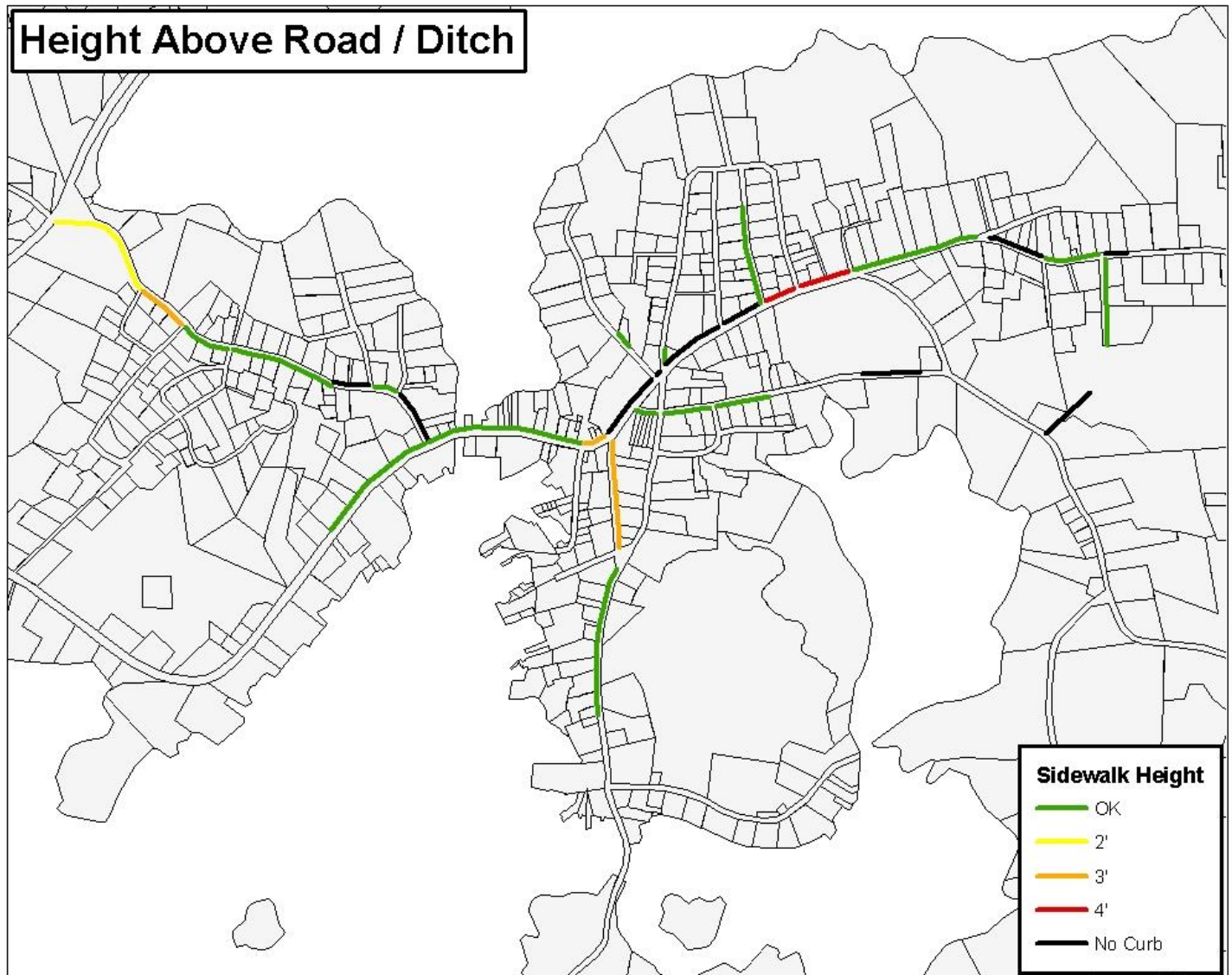
Figure 5: Lateral Slope Map



Height Above Road / Ditch: Height above the road or ditch is important from two aspects – safety is a concern in that a pedestrian can fall a significant distance off the sidewalk. Falling a few inches (typical of a curbed sidewalk) is one thing, but falling several feet into the road or a drainage ditch can be quite another. An additional consideration is of pedestrians who may cross the road mid-block – are they able to do so at all, and if so, can they get onto the sidewalk and out of traffic easily?

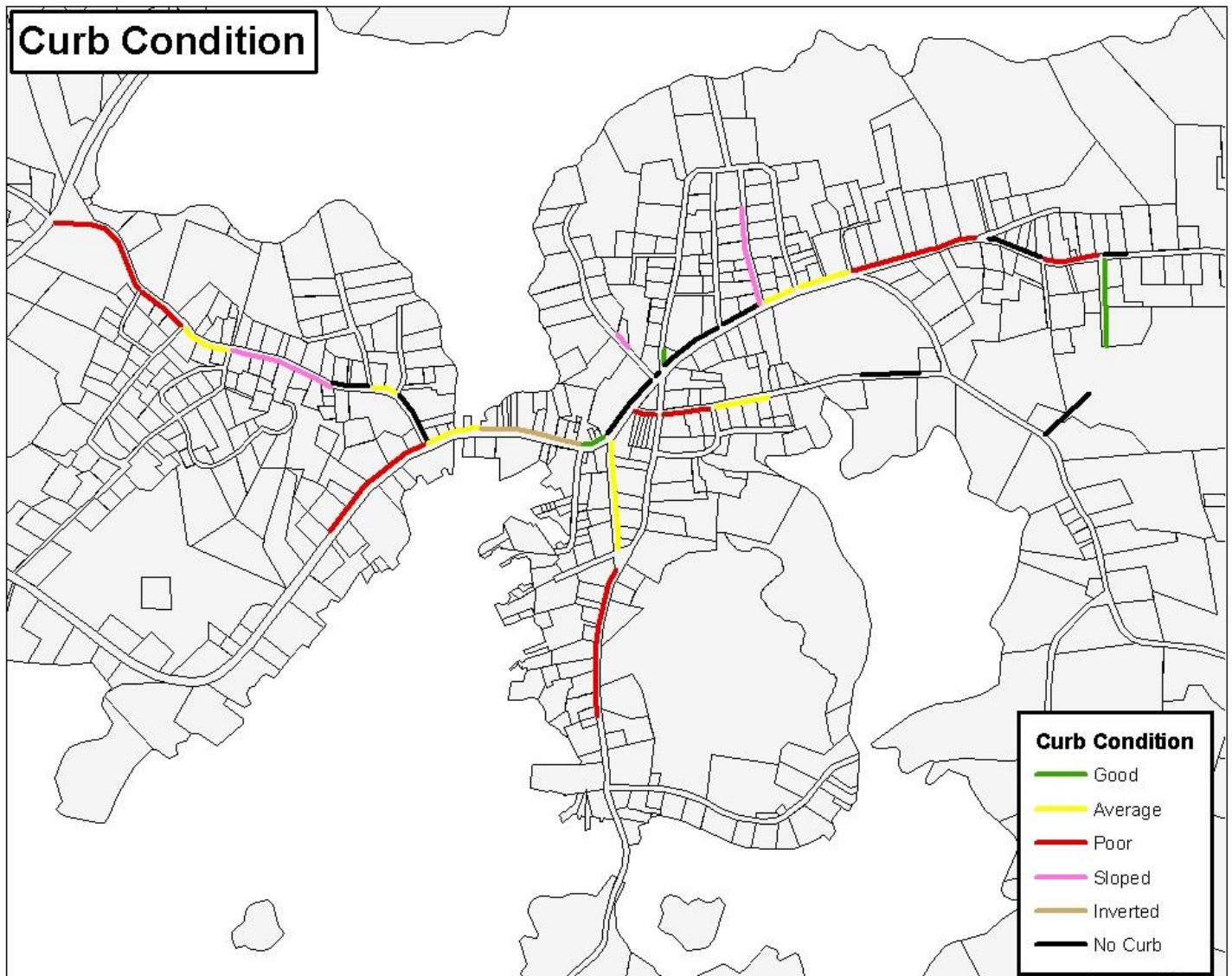
There are a few areas of concern in this regard. The foremost is the stretch of sidewalk between Cottage Street and Clayter Hill Road. This sidewalk is dangerously high above the drainage ditch below. Sidewalks in other areas, such as along Water Street and the western end of High Street, are also set dangerously high above drainage ditches. Additionally, the section of sidewalk along Main Street across from Clamshell Alley is very high above the road, and visibility in this area is quite limited. This is another area where a redesign of the sidewalk could drastically improve safety.

Figure 6: Sidewalk Height Map



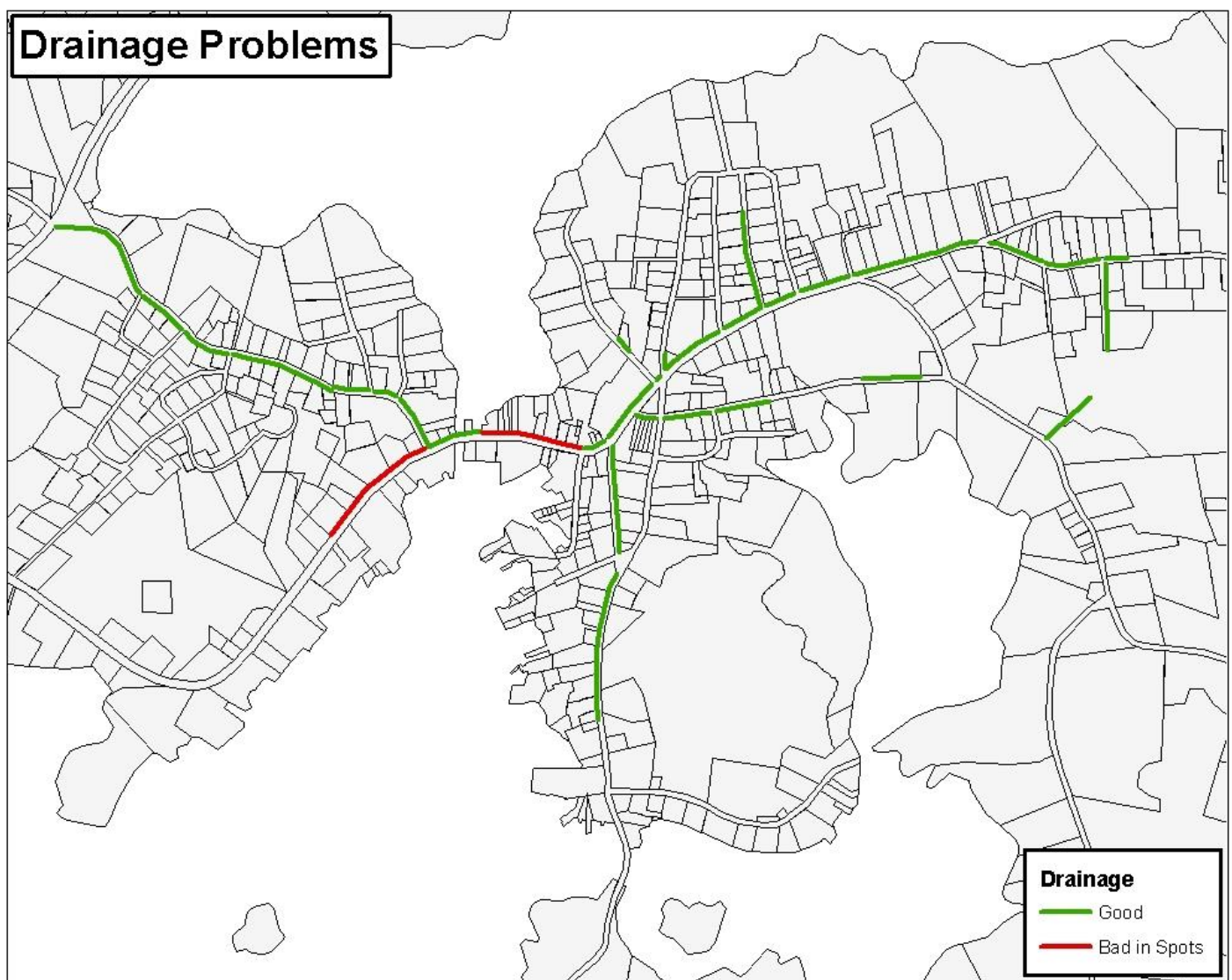
Curb Condition: Curbs are an important component of a safe and functional sidewalk. They accomplish several tasks at once: They separate the sidewalk both visually and physically from the road, help keep road debris and gravel off the sidewalk, keep vehicles from parking on the sidewalk, limit damage that can be done by plows to the sidewalks, and provide appropriate drainage for the road in a fraction of the space required for a drainage ditch and without the safety concerns and aesthetic impact. For all these reasons, appropriate curbing should be seen as a vital piece of a sidewalk in any given location. Curbs come in many shapes and sizes on Vinalhaven. As previously mentioned, there are sections of sloped curbing which may be dangerous to the sidewalk user. There are also ‘inverted’ curbs, where the sidewalk’s surface is below the top of the curb surface (seemingly done this way because of storefront doors Downstreet), which can lead to drainage issues. In many places in town, there is simply no curb, or a curb that has become significantly shorter as the roads haven been resurfaced. In general, areas with no curb are the worst in terms of being covered with gravel or being used as a defacto part of the road. While being covered in gravel may sound harmless, a thin coat of gravel atop a sloped asphalt surface can be very slippery! And merely sweeping off the sidewalk area is not an effective long-term solution. These areas would function much better with appropriate curbing.

Figure 7: Curb Condition Map



Drainage: In general, drainage is not a problem for the sidewalks on Vinalhaven. There are only two areas that are at times problematic, and these areas only have a few localized spots of concern. The two areas of concern are through the Downstreet area, where the ‘inverted’ curb tends to hold water on the sidewalk instead of shedding it into the street, and along West Main Street where the uneven surface of the sidewalk tends to hold water in pockets throughout its course. A reconstruction of the latter with proper curbing and a smoother surface would easily remedy this problem.

Figure 8: Drainage Problems Map

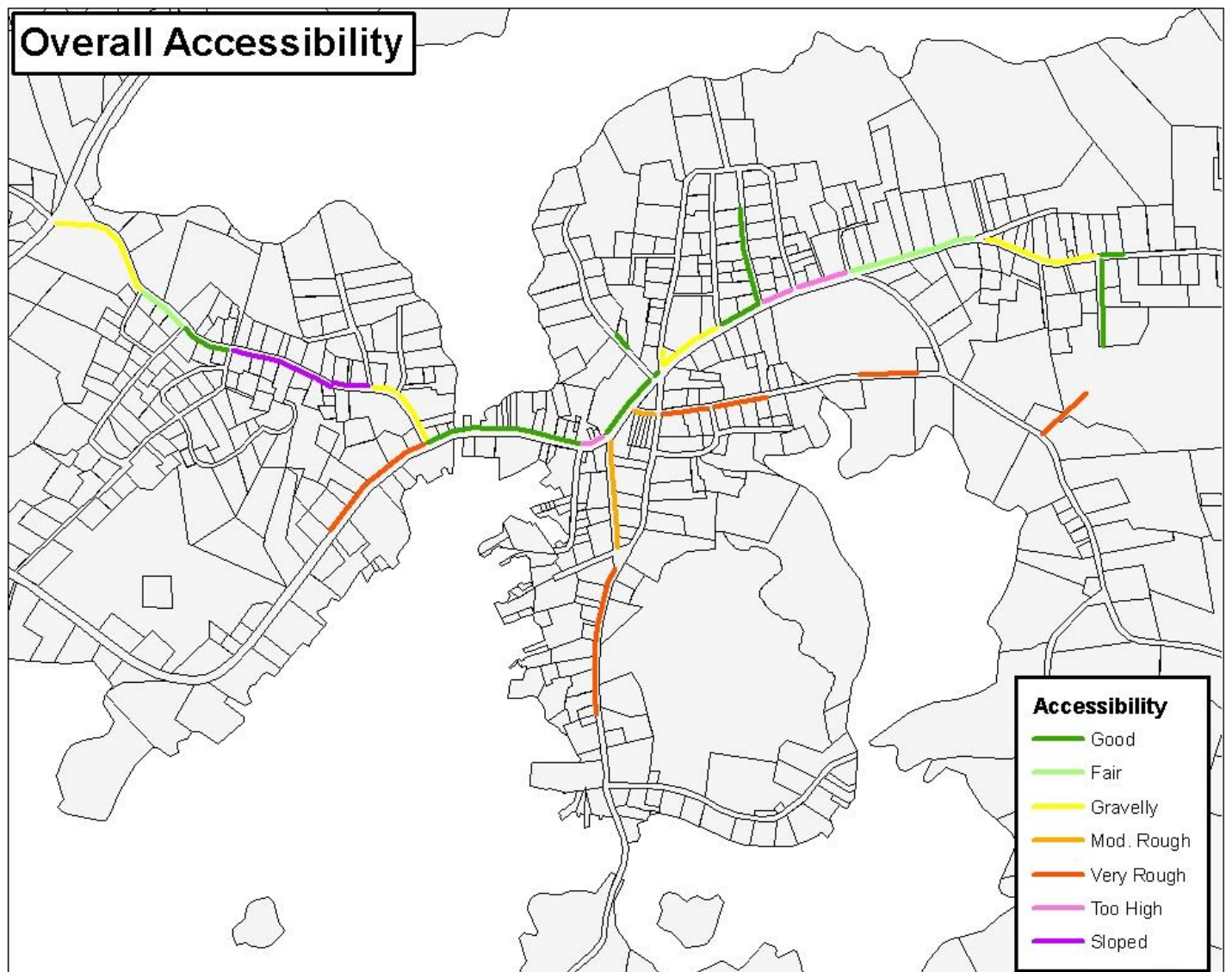


Accessibility: Accessibility can be thought of as really the composite of the entire condition assessment. This variable picks out areas based on their surface condition, height, lateral slope, and amount of road

debris. Basically anything that could make negotiating the sidewalk difficult for an elderly pedestrian or someone in a wheelchair is captured here.

The important piece to see on this map is how little of the Island's sidewalk network actually can be classified as good or fair. Many areas need a simple resurfacing, but other areas will require the addition of appropriate curbing to keep gravel and road debris off the sidewalk before they can be considered appropriately accessible.

Figure 9: Accessibility Map



ASSESSMENT BY SECTION

High Street – Triangle to Ingerson St.

This stretch of sidewalk is wide enough to accommodate its use. The surface in this area is rough in spots, but acceptable overall. The sidewalk is quite gravelly in places, particularly toward its north/west end. It is set above a sizeable drainage ditch and its base appears weak in places. This picture shows the base of this section of sidewalk literally falling out from under its surface



High Street – Ingerson St. to Starr St

This short stretch of sidewalk is set rather high above a drainage ditch. The surface is generally good, though the sidewalk is discontinuous with the walk coming from the opposite direction at the Ingerson Street Intersection. This picture shows the drainage ditch along this stretch of High Street.

High Street – Starr St. to Mountain St.

This section is in decent shape, barring one area of recent damage to the surface which could likely be repaired. Sloping curb begins in this area and can be quite steep. This picture shows the area of plow damage. Concrete curbing could prevent such damage in the future.



High Street – Mountain St.. to just before Summer St.

This is the worst area for sloping curb, and the resulting reduction in sidewalk width. Also note the telephone poles

are installed into the sidewalk, which is also a hazard. This section lies along a very steep part of the hill on High Street. The visibility in this area is low and traffic tends to be fast.

High Street – just before Summer St. to Summer St.

This small area of sidewalk is in very rough shape and should be repaired. Also notable is that the sidewalk abruptly changes sides of High Street at this location. It appears as though sidewalk could be continued along the south side of High Street down to Main Street, instead of crossing over to this point. This would bring continuity to the sidewalks and would help residents of the John Carver Apartments access Downstreet.



High Street – Summer St. to Lakeview St.

This is another short stretch of sidewalk. It is in relatively good condition, except for a small area where the curb is crumbling. This could become a problem spot in the future if it is not repaired.

High Street – Lakeview St. to Main St..

This section of sidewalk is not at all separated from the street, and as such is very gravelly and is basically used as part of the street – people drive over the sidewalk area and park atop it at times. This is a steep area and the gravel here can at times be precarious.



West Main St. – High St. to Harbor Wharf

This is one of the roughest sections of sidewalk in Vinalhaven. Ironically, it is also one of the most used, as it is along the route to the Ferry Terminal. The roughness is caused by a generally uneven surface, multiple driveway cuts, and the placing of storm drains in the sidewalk, as shown at left. Repairing this area of sidewalk should be a high priority.

Main Street – High St. to Mill Race

This sidewalk is a bit narrow, but otherwise functions well. The only issue with this sidewalk is an occasional drainage problem where the surface of the sidewalk drops below the top of the curb. This area is shown in the picture at right.



Main Street – Mill Race to Post Office

This is probably the most used section of sidewalk in town, and it is in good shape. The only problem of note is that the curb directly in front of Carver's Harbor Market is beginning to chip away. In addition, the sidewalk was damaged at Windy Way during the Market's recent expansion project.

Main Street – Post Office to Clamshell Alley

This is another well used section of sidewalk in good condition. Again, drainage problems are known to occur in



the area where the curb is inverted. Despite the drainage issues, this curbing works well to keep road debris off the sidewalk and keeps drivers from parking atop the walking area.

Main Street – Clamshell Alley to Water St.

This area is generally in good repair, but is perched high above Main Street at a point where visibility is very poor. The storefronts in this area are several feet higher than the road's surface, and the sidewalk is placed to meet these storefronts. The Town should explore its options for lowering this sidewalk to a safer height while still maintaining appropriate access to these storefronts.

Main Street – Water St. to Carver St.

This section is generally in good shape, though a little narrow for its amount of use. Most notable about this section is that its curb has literally been swallowed up by the many layers of paving on Main Street. In the picture you can see an area where the curb is crumbling. You can also see the original curb nearly completely covered by the asphalt on Main Street.



Chestnut St.

At one time a good sidewalk was located along this street. However, the sidewalk has become completely covered by turf and is currently undetectable. The town should attempt to restore this sidewalk.

Carver St.



This is another very short and dead-end piece of sidewalk, placed assumedly to sever the library. However, this sidewalk is used as a parking area for the library far more than it is actually used as a sidewalk.



Main Street – Carver St. – Brighton Ave.

This area of sidewalk is in good condition in all but one regard – it is completely covered in gravel and road debris. This is undoubtedly because of the lack of appropriate curbing along this stretch. A curb could greatly improve the function of this area, as well as its appearance.

Main Street – Brighton Ave. to Pleasant St.

Similar to the preceding section, this section lies directly along Main Street and is very gravelly. A curb emerges at the eastern end of this section which cleans up the gravel quite a bit. The actual structure of this section is good, only the lack of curb creating any hazards.



Pleasant Street

This stretch appears to be quite new and is in great condition. However, the 'curb' here is nothing more than the sidewalk sloping down into the street, which can be problematic (as previously discussed). It is doubtful this sidewalk receives much use on this quiet residential street.

Main Street – Pleasant St. to Cottage St.

The most apparent problem with this sidewalk is its elevation above the adjacent drainage ditch and the fact that the granite cribbing composing its base is slipping out from under it. This sidewalk needs to be rebuilt very soon, which will present the opportunity to reduce its elevation.



Main Street – Cottage St.. to Clayter Hill Rd.

This is a continuance of the above stretch, and probably the worst part of the base problem. The sidewalk here is alarmingly high above the drainage ditch. This section of sidewalk is also in dire need of reconstruction.

East Main St. – Clayter Hill Rd. to Beaver Dam Rd.

This section is generally in good condition, however, there is one area of the base which looks problematic. Telephone poles are installed into this sidewalk and obstruct the path of travel. This sidewalk is used by many children on their way to school each day.



East Main St. – Beaver Dam Rd. to Ava St.

The sidewalk here is generally in good shape though it is gravelly. The ditch along this section is particularly rough, which again suggests that perhaps a curb and catch basin would better serve the drainage situation here.

East Main St. – Ava St. to Arcola Ln.

This section is very similar to the section before it in all regards. This section receives a lot of use by schoolchildren each day.



East Main St. – Arcola Ln. to end

This is a very short area of sidewalk, but it is in good condition. It extends only a short distance east of the school crosswalk. It is doubtful that it receives much use.

Arcola Lane

This section is perfect – has appropriate curbing, is an even width throughout, is free of obstructions, has an even lateral slope, is not interrupted by driveway cuts, and is very smooth. This is a good



example of what sidewalks could be like throughout town. Notice how the curbing keeps the sand and gravel on the road instead of on the sidewalk.



School Walkway

This is a short segment between the school and East Boston Road. It is actually not within the Town's jurisdiction, but it is a vital piece of the sidewalk network. It is in very rough condition and receives a lot of use. Unfortunately the road it leads to does not have a sidewalk of its own. Rebuilding this section and extending a sidewalk along East Boston Rd. should

be explored.

School Street at Ballground

This section of sidewalk is in very poor shape – it is barely holding together. It also begins out of nowhere and ends abruptly in the middle of nowhere. It is doubtful that this receives any use, as people walking in the area generally walk on the road. Luckily traffic is relatively light here, but it does tend to move quickly.



School Street to Frog Hollow Rd.

This area is in fair condition, with some drainage issues in spots. Again, it seems that most people walking in this area choose to walk in the road. A better sidewalk along the length of School Street might change this.

School Street – Frog Hollow Rd. to Atlantic Ave.

This area is in fair condition – the surface is rough near Frog Hollow Road, it is gravelly near Atlantic Avenue (because there is no curb). This area receives quite a bit of use from people going to & from the school and the East Boston Neighborhood.



School Street – Atlantic Ave. to Main St.

This is a very short and rough stretch. The most problematic feature here is the ramp onto the sidewalk from Main Street – it is very steep and rough and forces most pedestrian traffic directly into School Street instead of onto the sidewalk.

Water Street – Main St. to Atlantic Ave.

This section is largely in good shape, except that at each end it becomes rough and very gravelly. Along its course it follows a deep drainage ditch. Removal of this ditch would make this walk much more safe and pleasant and would allow for a slight widening of Water Street.





Atlantic Avenue – Water St. to end

This is a long section and it is generally in rough condition.

Near Water St the turf is encroaching such that the width of the sidewalk is only 1½ - 2 feet. Toward the end, the surface becomes very rough. This area is much used by visitors to Lane's Island. Atlantic Avenue is narrow and hilly, so walking in the street can be hazardous.

10 YEAR MAINTENANCE P& DEVELOPMENT PLAN

The adoption of a long-range development and maintenance plan is critical in assuring the repair and expansion of the Vinalhaven sidewalk network. A long-range plan such as this should consist of two pieces: The maintenance of the existing system and the development of new sidewalks as the need arises. This plan will also assure that the sidewalks will not become neglected to their current state in the future and will allow for new sites to be appropriately connected as they are developed.

Existing Sidewalk Maintenance

The first piece of any maintenance and development plan should be a section detailing how to maintain the existing system. Maintenance of the Vinalhaven sidewalks can be broken down into two distinct categories, spot repair and overall system improvements.

1. Spot Repair – Priorities in this area should include the following projects:

- Repairing the base and reducing height along Main Street East of the Union Church.
- Resurfacing & leveling the existing sidewalk along West Main Street.
- Reducing the sidewalk height on Main St. across from Clamshell Alley
- Resurfacing the short sidewalk along High Street just west of Summer St.
- Widening / reclaiming the existing sidewalk along Atlantic Ave.

2. Overall System Improvements – these overall improvements should be pursued:

- Installing curbs along major streets where they currently do not exist.
- Removing areas where sidewalks abruptly crosses street (High St. & W. Main St.)
- Developing a schedule of regular resurfacing on a rotating basis.

Network Development

As mentioned in the first pages of this report, there are many critical sites which are not currently connected to the Town's sidewalk network. To create a sidewalk network which really serves the population and the island's visitors, a few key connections are necessary.

Table 1: Areas Connected by Sidewalks

Major Areas Connected by Sidewalks	Major Areas Not Connected by Sidewalks
“Downstreet” Business District	Maine State Ferry Terminal
Vinalhaven School	Vinalhaven School (Rear Entrance)
Vinalhaven Public Library	Lane’s Island Nature Preserve
Ambrust Hill TownPark	Vinalhaven Town Office
Islands Community Medical Center	East Boston Neighborhood
Union Church	Round-The-Mountain Neighborhood
Harbor Hill Neighborhood	The Sands Neighborhood
Skin Hill Neighborhood	
East Main Street Neighborhood	
Atlantic Avenue Neighborhood	
Pond Street Neighborhood	
School Street / Frog Hollow Neighborhood	

Unconnected Sites

The following areas are not currently connected to the sidewalk network. Extensions to these areas should be considered .

Ferry Terminal – Six times a day several people walk to and from the Ferry Terminal, particularly in the summer when the several can turn to scores. This is undoubtedly the most important site that is not currently connected to the village’s sidewalk network. To make matters worse, West Main Street can be busy and at times and congested with walkers, bikers, semi trucks, forklifts, and regular vehicles. Clearly a priority.

Vinalhaven School (Rear Entrance) – This entrance to the school property is used by a large number of students every day. Sidewalks along the route to this end of the school end at Frog Hollow Road, leaving children a great distance to walk in the road. Traffic along the lower portion of School Street and East Boston Road tends to move quickly. This could also be the first phase in connecting the East Boston neighborhood.

Lane's Island Nature Preserve - This park is well used, particularly during the summer months when the roads are busier. Many people walk to this park from the village, and the southerly portion of Atlantic Avenue is steep and very narrow and without a sidewalk. The bridge to Lanes Island is very narrow, so a sidewalk across the bridge is not feasible. But an extension of the sidewalk from the top of the hill on Atlantic Avenue down to the bridge would be a great improvement. Once on Lanes Island, the road widens and traffic drops.

Vinalhaven Town Office – While the Town Office is accessible via quiet streets, the most direct route is a short trip from High Street down a gravel lane alongside the Historic Society. A sidewalk placed here could improve pedestrian access to the Town Office greatly.

East Boston Neighborhood – A sidewalk here would connect this small neighborhood to the rear entrance of the school and the rest of the village. It could also provide access to the proposed skate park, if constructed.

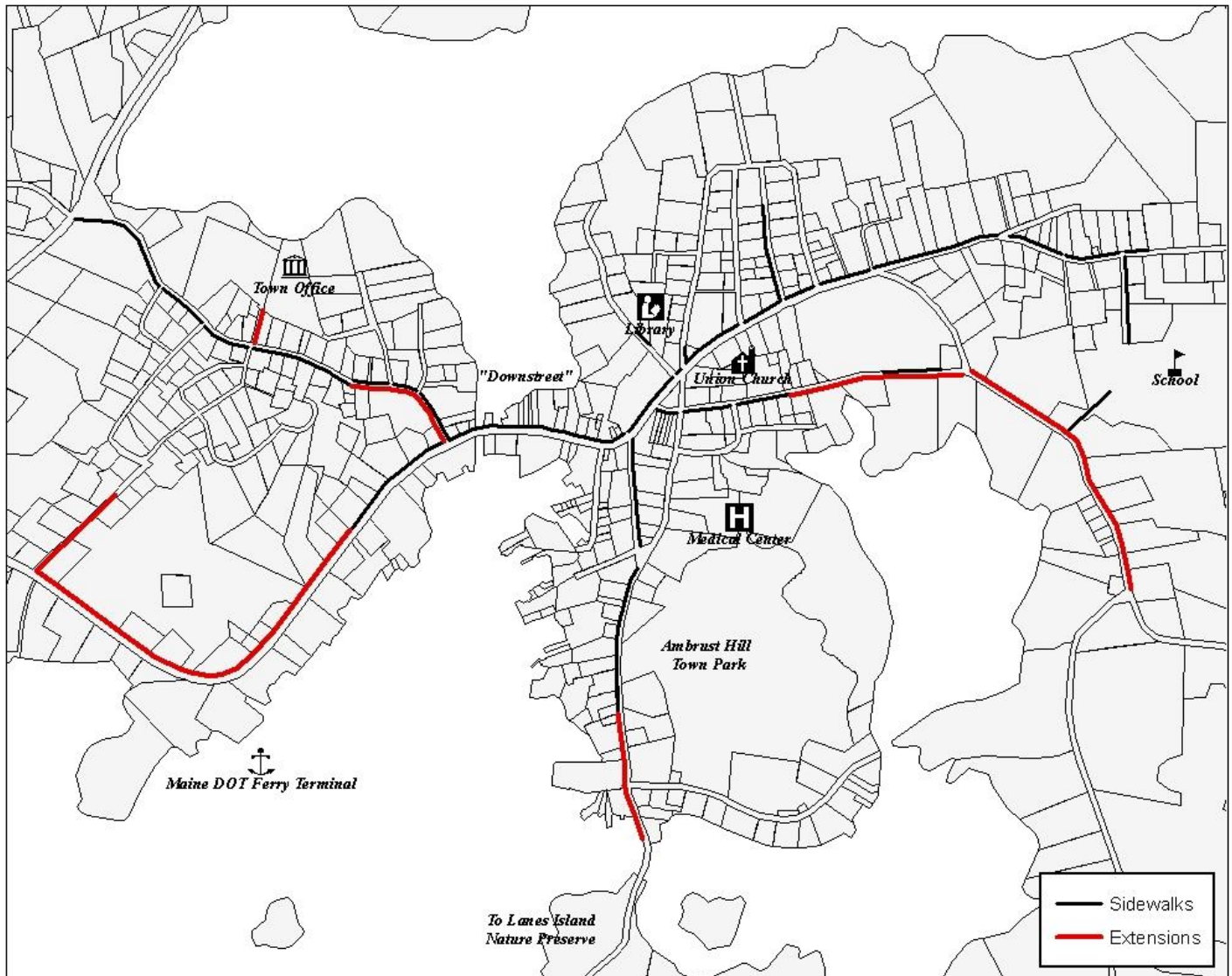
Round-the-Mountain Neighborhood – This neighborhood will be served by the sidewalk extension to the Lane's Island Bridge, if it is constructed.

The Sands Neighborhood – Not a large neighborhood, this is the entrance to the village from the west and traffic tends to speed through this area. The loop formed by High Street, Old Harbor Rd, Sands Rd, and West Main Street is a popular place for residents to walk for exercise. A connection to the Skin Hill neighborhood via Mountain Street Extension (a "paper street") would allow those residents and people at the Town Office easier access to the Ferry Terminal. A Town Park and the Land Trust Offices are also in this area.

High Street, South Side – To keep the sidewalk from crossing street abruptly in the middle of a hill and to better serve the John Carver Apartments, an extension of the sidewalk along the south side of High Street down the hill to Main Street should be considered.

Figure 10: Recommended Sidewalk Extensions

Other Recommendations



Curbing with Granite Block or Poured Concrete – As evidenced in this report, proper curbing is very important. The Town is strongly encouraged to consider curbing in any new areas of sidewalk it establishes. This will keep the sidewalk separate from the street, help it drain properly, and keep it free of gravel and debris. It could also relieve the necessity of a drainage ditch which could allow for a wider street or sidewalk, and would help standardize the sidewalk height. Granite block curbing is more

attractive and may be more plentiful here, however, concrete curbing is easier to install, drains water better, and holds up against plows better.

Surfacing Sidewalks with Concrete – The surface of concrete is more rigid than that of asphalt, so it should lump, crack, and heave less than an asphalt surface would. In general concrete lasts longer, though tree roots can heave entire blocks up on end. If concrete curbs are being placed in specific areas, it may make sense to surface the sidewalk with concrete at the same time.

Relocating Obstructions in Sidewalks – If a given utility pole is already going to be replaced, it may be able to be moved slightly so that it does not project out of the sidewalk. This option should be explored with the Electric Co-op in the places where such conditions exist.

MAINTENANCE / DEVELOPMENT PRIORITIES

Table 2: Priority Matrix

	Project Impact	Cost to Implement
Reconstruction – Main St from Pleasant Street to Clayter Hill Road	H	M
Reconstruction of existing sidewalks along West Main Street	H	M
Reducing height on Main Street across from Clamshell Alley	L	H
Resurfacing along High Street	L	L
Reclamation and resurfacing along Atlantic Avenue	M	L
System-wide Curbing project	H	H
Establish Annual Resurfacing Program	H	M
Extension to Ferry Terminal	H	M
Extension to Back of School	H	H
Extension to Lane's Island Bridge	H	M
Extension to Town Office	L	L
Extension to East Boston Neighborhood	L	L
Extension to Sands Neighborhood	M	H
Removing Sidewalk Obstructions	M	M

Tier 1 Priorities

- Establish Annual Resurfacing Plan
- Extension to Ferry Terminal
- Extension to Lane's Island Bridge
- Reconstruction along Main Street between Pleasant St & Clayter Hill Rd
 - Reconstruction along West Main Street
 - Reclamation & resurfacing along Atlantic Ave

Tier 2 Priorities

- Extension to Back of School
- System-wide curbing project
- Resurfacing along High Street
- Removing Sidewalk Obstructions
- Extension to East Boston Neighborhood
- Extension to Town Office

Tier 3 Priorities

- Reducing Height along Main Street at Clamshell Alley
- Extension to Sands Neighborhood

Potential Sources of Funding

The following are potential sources of funds to support sidewalk maintenance and development projects:

Annual Town Budget – A set amount should be contributed each year toward annual resurfacing projects as well as an additional amount to be put away each year for larger projects or major spot repairs as they arise. Approximately \$X should be set aside for resurfacing a small area each year, and \$X should be put away to contribute to larger projects. In certain cases, the annual resurfacing fund could act as a contingency budget for larger projects.

State of Maine – Grant programs through the State DOT, Planning Office, etc. will be vital for any major repair or development projects. Specifically, the Safe Routes to School and Transportation Enhancement Grant Programs may be appropriate sources of funding.

Special Town Infrastructure Project – Funds could be borrowed for large projects as with the sewer project or the roads project. This should be the last option considered, as large-sum loans eventually cost the town significant amounts in interest. It would be in the town's interest to budget funds each year to finance projects itself, rather than relying on lenders to fund significant sidewalk projects.

Appendix F: MDIFW Comments and Species Information

DRAFT

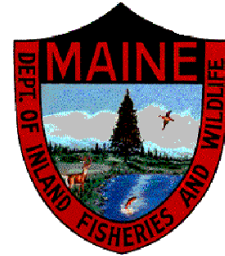


Maine Department of Inland

Fisheries and Wildlife

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Email: bethany.atkins@maine.gov



Paul LePage, Governor

Chandler Woodcock,
Commissioner

Date: October, 2013
To: Phil Carey
From: Bethany Atkins
Re: Town of Vinalhaven Comprehensive Plan Review

On behalf of the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Beginning with Habitat program (BwH), and the Maine Natural Areas Program (MNAP), we have reviewed the Town of Vinalhaven Comprehensive Plan and provide the following comments.

As you are aware, MDIFW's mission is focused on the protection and enhancement of the State's freshwater fisheries and wildlife. MNAP has a commitment to conserving lands in Maine that support rare, threatened, and endangered plants and animals, and rare or exemplary natural communities. The BwH program provides objective and comprehensive habitat information to equip local decision-makers with the necessary tools to make informed and responsible land use decisions that mesh wildlife habitat conservation with future town growth needs. The comments submitted below are based on the Dept. of Agriculture, Conservation and Forestry instructions for agency commenters.

Please feel free to contact me should you have any questions regarding this information.

- **Appropriate use of data provided by MDIFW & MNAP**

The maps provided in this plan provide a relatively complete and accurate inventory of the plant and wildlife species and habitats present in Vinalhaven. The plan, however, lacks additional background information and analyses regarding these species and habitats and could be significantly improved with this information. See below for specific suggestions.

- **Relation of plan's policies and implementation strategies to MDIFW & MNAP principal objectives and directives**

This plan identifies Shoreland Zoning and Resource Protection standards as the primary approaches to preserving the town's critical plant and wildlife habitats. These approaches are appropriate for meeting MDIFW objectives. The Beginning with Habitat Toolbox (http://beginningwithhabitat.org/toolbox/about_toolbox.html) offers examples of habitat-friendly approaches to these tools that have been implemented in other Maine towns and we encourage Vinalhaven to utilize this resource during plan revision and implementation.

We also encourage the town to request Beginning with Habitat data regularly to be sure they have the most up to date information to assist with municipal planning and with guiding development review. Additional opportunities to better direct growth to designated growth areas should also be considered.

- **Consistency of plan with MDIFW & MNAP programs and policies**

We recommend the town incorporate the suggestions below, particularly expanding the natural resource inventory information.

Specific plan comments and recommendations are provided below. Comments provided by Wes Ashe, Keel Kemper, and Bethany Atkins, MDIFW.

Plan Comments:

Water Resources

The plan states that streams are protected by a 75 foot Stream Protection Zone that limits development. Does this stream protection zone apply to all streams or to second-order and larger streams only. In many instances these ordinances do not apply to first order, headwater streams. These streams still remain critically important for maintaining water quality.

Natural Resources

p. 40, Conditions and Trends- The Vinalhaven plan does not include any Conditions and Trends information. What are the important plant, wildlife, and fish habitat known in Vinalhaven (rare species, Significant Wildlife Habitats, wetland resources, large blocks of undeveloped habitat, inland fishery resources, Focus Areas of Statewide Ecological Significance)? Why are they significant in Vinalhaven and how are they currently protected under local, state, and/or federal laws, if at all? How can these areas best be managed to sustain the species and habitats present? Also, what are existing threats to these resources (we'd like to see some discussion of wind turbines here). This information will help to bring awareness to town citizens and to better guide future planning and implementation efforts.

Documented rare wildlife species in Vinalhaven include Harlequin Ducks, Bald Eagles, Great Cormorant and Purple Sandpiper. Rare plants include American Sea-blite. Rare/exemplary natural communities include Maritime Spruce-Fir Forest, Pitch Pine Woodland, and Spruce Fir Wet Flat. Significant Wildlife Habitats include Inland Wading Bird and Waterfowl Habitat, Tidal

Wading Bird and Waterfowl Habitat, Seabird Nesting Islands, and Significant Vernal Pools. MDIFW does not have any data with regards to fish assemblages in streams, rivers, and ponds in Vinalhaven. This is not to say that fish-bearing waters are absent, however, as there are undoubtedly some small streams and ponds (both ephemeral and perennial) that host warmwater and/or coldwater fishes.

Up-to-date maps and data and additional information about important plant and wildlife features is available through Beginning with Habitat (www.beginningwithhabitat.org).

Marine Resources

p. 64, Habitat and Marine Resources Map- The plant and wildlife data depicted on this map is mostly accurate, however, new information is available for rare species (there is an additional bald eagle nest site known at Spectacle Island) and inland wading bird and waterfowl habitats. Also, the boundary of the Focus Area of Statewide Ecological Significance is incorrect; it includes a portion of the southern section of the main island as well as the smaller offshore islands.

The date on the map reflects that the data provided is from 2009. The Maine Department of Inland Fisheries and Wildlife and Maine Natural Areas Program are regularly updating available plant and wildlife information. We encourage the town of Vinalhaven to request this information (from the Beginning with Habitat program) annually to assure they have the most up to date information on hand. Recent maps of Vinalhaven are posted to our website www.beginningwithhabitat.org.

It would be helpful to also include this map in the Natural Resources section of the plan.

p. 70- The plan makes reference to the Penobscot Bay Conservation Plan (Maine Inland Fisheries and Wildlife, 1987). Although this plan includes useful information, it is very out of date at this point. Class A habitats have generally been replaced with Tidal Wading Bird and Waterfowl Habitats.

Transportation

This section of the plan should include information about how roads are affecting wildlife and fisheries. Is runoff from roads a concern for wetlands and other water features? Are culverts blocking fish passage?

Future Land Use Plan

The town of Vinalhaven plans to continue to critical natural resources primarily through existing shoreland zoning and resource protection standards. The Beginning with Habitat Toolbox (http://beginningwithhabitat.org/toolbox/about_toolbox.html) offers examples of habitat-friendly approaches to these tools that have been implemented in other Maine towns and we encourage Vinalhaven to utilize this site as a resource.

The comparison of the map of existing land use (p. 177) and recent development (p. 180) shows. the majority of growth in Vinalhaven occurred outside of the growth area. And with the plan statement that the growth area is “largely developed and perhaps near capacity” (p. 184), we’d like to see some discussion in this plan and suggested approaches for better directing growth to growth areas and designing growth areas to accommodate future growth.

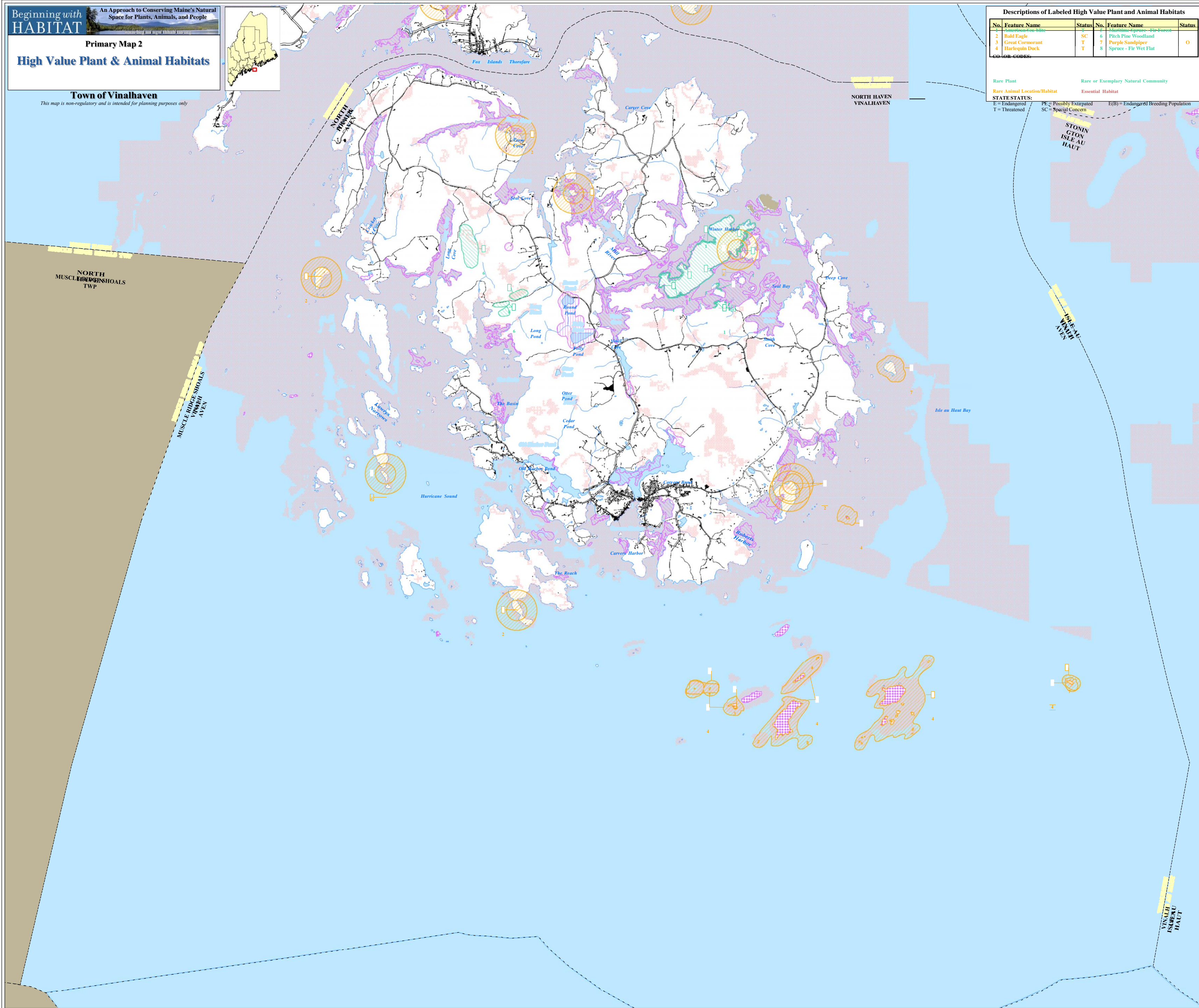
Beginning with HABITAT

An Approach to Conserving Maine's Natural Space for Plants, Animals, and People

Primary Map 2

High Value Plant & Animal Habitats

Town of Vinalhaven
This map is non-regulatory and is intended for planning purposes only



Descriptions of Labeled High Value Plant and Animal Habitats					
No.	Feature Name	Status	No.	Feature Name	Status
1	American Beech	SC	6	Mountain Spruce-Fir Forest	SC
2	Bald Eagle	SC	7	Pitch Pine Woodland	SC
3	Great Cormorant	T	8	Purple Sandpiper	T
4	Harlequin Duck	T			

Rare Plant

Rare Animal Location/Habitat

STATE STATUS:
E = Endangered
T = Threatened

Rare or Exemplary Natural Community

Essential Habitat

PE = Possibly Extirpated
SC = Special Concern
E(B) = Endangered Breeding Population

LEGEND

The data presented here represent the best available information provided through Beginning with Habitat coalition partners at the time of map drafting. Map users should consult with the Beginning with Habitat program to verify that data illustrated on this map is still current prior to utilizing it for planning decisions. Habitat features illustrated on the map are based on limited field surveys, aerial photo interpretation, and computer modeling. Many areas have not been completely surveyed, so it is possible that features may be present that are not mapped. Habitat data sets are updated continuously. Not all habitats described below may occur in the area shown in this map. Also, please note that some of these habitats are regulated by the State of Maine through the Maine

Endangered Species Act (Essential Habitats and threatened and endangered species occurrences) and Natural Resource Protection Act (Significant Wildlife Habitat). This map is intended for planning purposes only and should not be considered a comprehensive inventory of plant and animal occurrences. We recommend consultation with MDIF&W Regional Biologists or MNAF Ecologists if activities are proposed that may affect at risk species, habitats, or natural communities depicted on this map. Visit <http://www.beginningwithhabitat.org/contacts/index.html> for MDIFW or MNAF contact information.

Organized Township Boundary

Unorganized Township- Beginning with Habitat does not provide data for unorganized townships

Developed- Impervious surfaces such as buildings and roads

Streams and Brooks

Ocean, Lakes, Ponds, and Rivers

Rare, Threatened, or Endangered Wildlife

Known rare, threatened, or endangered species occurrence and/or the associated habitats based on species sightings.

Consult with an MDIFW regional biologist to determine the relative importance and conservation needs of the specific location and supporting habitat. For more information regarding individual species visit our website: http://www.maine.gov/wildlife/species/endangered_species/state_list.htm, for species specific fact sheets.

Rare or Exemplary Plants and Natural Communities

Rare Plant Locations

Known rare, threatened, or endangered plant occurrences are based on field observations. Consult with a Maine Natural Areas Program (MNAF) Ecologist to determine conservation needs of particular species. For more information regarding rare plants, the complete list of tracked species and fact sheets for those species can be found at: <http://www.maine.gov/doc/nrmcmap/features/planlist.htm>.

Rare or Exemplary Natural Community Locations

The MNAF has classified and distinguished 98 different natural community types that collectively cover the state's landscape. These include such habitats as floodplain forests, coastal bogs, alpine summits, and many others. Each type is assigned a rarity rank of 1 (rare) through 5 (common). Mapped rare natural communities or ecosystems, or exemplary examples of common natural communities or ecosystems, are based on field surveys and aerial photo interpretation. Consult with an MNAF Ecologist to determine conservation needs of particular communities or ecosystems.

Essential Wildlife Habitats

Roseate Tern Nesting Area or Piping Plover/Least Tern Nesting, Feeding, & Brood-Rearing Area

Maine's Department of Inland Fisheries & Wildlife (MDIFW, www.state.me.us/ifw) maps areas currently or historically providing habitat essential to the conservation of endangered or threatened species as directed by the Maine Endangered Species Act (12 MRSA, Chapter 925, Subchapter 3, Sections 12804 and 12806) and regulations (MDIFW Rules, Chapter 8.05). Identification of Essential Habitat areas is based on species observations and confirmed habitat use.

Once an area becomes designated as Essential Habitat, the Maine Endangered Species Act requires that no state agency or municipal government shall permit, license, fund, or carry out projects that would significantly alter the habitat or violate protection guidelines adopted for the habitat. If a project occurs partly or wholly within an Essential Habitat, it must be evaluated by MDIFW before state and/or municipal permits can be approved or project activities can take place.

The Federal Endangered Species Act requires actions authorized, funded, or carried out by federal agencies be reviewed by the U. S. Fish and Wildlife Service. If your project occurs near an occurrence of the Atlantic salmon, roseate tern, piping plover, Canada lynx, New England Cottontail, Fish's housewort, or small-whorled pagonia contact the Maine Field Office, USFWS, 1168 Main St., Old Town, ME 04468.

Significant Wildlife Habitats

Deer Wintering Area

Forested area used by deer to avoid deep snow/cold (non-forested wetlands, non-stocked clearcuts, and deciduous- or larch-dominated stands less than 10-acres in size may be included within the habitat polygon as drawn).

Inland Waterfowl/Wading Bird

Freshwater breeding, migration/staging, and wintering habitats for inland waterfowl or breeding, feeding, loafing, migration, or roosting habitats for inland wading birds.

Seabird Nesting Island

An island, ledge, or portion thereof in tidal waters with documented, nesting seabirds or suitable nesting habitat for endangered seabirds.

Shorebird Areas

Coastal staging areas that provide feeding habitat like tidal mud flats or roosting habitat like gravel bars or sand spits for migrating shorebirds

Tidal Waterfowl/Wading Bird

Breeding, migrating/staging, or wintering areas for coastal waterfowl or breeding, feeding, loafing, migrating, or roosting areas for coastal wading birds. Tidal Waterfowl/Wading Bird habitats include aquatic beds, eelgrass, emergent wetlands, mudflats, seaweed communities, and reefs.

Significant Vernal Pools

A pool depression used for breeding by amphibians and other indicator species and that portion of the critical terrestrial habitat within 250 ft of the spring or fall high water mark. A vernal pool must have the following characteristics: natural origin, non-permanent hydroperiod, lack permanently flowing inlet or outlet, and lack predatory fish.

Maine's Natural Resources Protection Act (NRPA, 1988) administered by the Maine Department of Environmental Protection (MEP; <http://www.maine.gov/dep/bw/locstand/nrpage.htm>) is intended to prevent further degradation and loss of natural resources in the state including the above Significant Wildlife Habitats that have been mapped by MDIFW. DEP has regulated activities in, on, or over these habitats to the extent these habitats were located within another protected natural resource, such as a freshwater or coastal wetland since September 17, 2005. DEP has regulated activities in, on, or over these habitats, located on other protected natural resources, to the extent they meet criteria adopted in rule since June 1, 2006 (38 MRSA, 460-B:101).

Atlantic Salmon Spawning/Rearing Habitat

Atlantic Salmon Rearing Habitat

Atlantic Salmon Spawning Habitat

Atlantic Salmon Limited Spawning Habitat

Mapped by Atlantic Salmon Commission (ASC) and US Fish & Wildlife Service (USFWS) from field surveys on selected Penobscot and Kennebec River tributaries and the Dennys, Ducktrap, East Machias, Machias, Pleasant, Narraguagus, and Sheepscot Rivers.

High Value Habitat for Priority Trust Species

These feature categories depict the highest value habitat as predicted by the U.S. Fish and Wildlife Service (USFWS) Gulf of Maine Program's Habitat Suitability Model.

This data layer portrays the highest value habitat from the Gulf of Maine Watershed Habitat Analysis, a habitat suitability model developed by the (USFWS) Gulf of Maine Coastal Program. The analysis evaluated existing field data and scientific literature for 91 species of fish, wildlife, and plants important to USFWS in the Gulf of Maine watershed and ranked the landscape based on potential habitat for each species. This theme shows only the most important habitat (top 20%) for all species combined and excludes areas less than 5 acres.

For more information please see Map 8 "Valuable Habitats for USFWS Priority Trust Species." For more information about the Gulf of Maine Watershed Habitat Analysis please visit: <http://www.fws.gov/northeast/gulfofmaine>.

Data Sources

DATA SOURCE INFORMATION

(Note: Indicated file names can be downloaded from Maine Office of GIS)

TOWNSHIP BOUNDARIES

Maine Office of GIS (2006): mshp24

ROADS

Maine Office of GIS, Maine Department of Transportation (2005): medotpub

HYDROLOGY

Maine Office of GIS, U.S. Geological Survey (2004): hys24

DEVELOPED

Maine Office of GIS, Maine Department of Environmental Protection (contact agency for this multiple agency collaboration) (2000): imperv

ESSENTIAL & SIGNIFICANT WILDLIFE HABITATS

Maine Office of GIS, Maine Department of Inland Fisheries & Wildlife: etp/vtrn, et/vtrn, sn

RARE NATURAL COMMUNITIES & PLANTS

Maine Natural Areas Program

ATLANTIC SALMON HABITAT

Maine Office of GIS, Maine Atlantic Salmon Commission, U.S. Fish & Wildlife Service (2006): ashab3

HIGH VALUE HABITAT FOR PRIORITY TRUST SPECIES

Maine Office of GIS, U.S. Fish & Wildlife Service: forest91, fresh91, grass91, salmon91

DATA SOURCE CONTACT INFORMATION

Maine Office of GIS: <http://gis.maine.gov>

Maine Natural Areas Program: <http://www.maine.gov/doc/nrmcmap/>

Maine Department of Inland Fisheries & Wildlife: <http://www.maine.gov/ifw/>

U.S. Fish & Wildlife Service- Gulf of Maine Program: <http://gulfofmaine.fws.gov>

Maine Atlantic Salmon Commission: <http://www.maine.gov/asc/>

Maine Department of Transportation: <http://www.maine.gov/dep/>

5,000 Feet

2,500 Meters

0 Miles

0.5 Kilometers

1 Kilometers

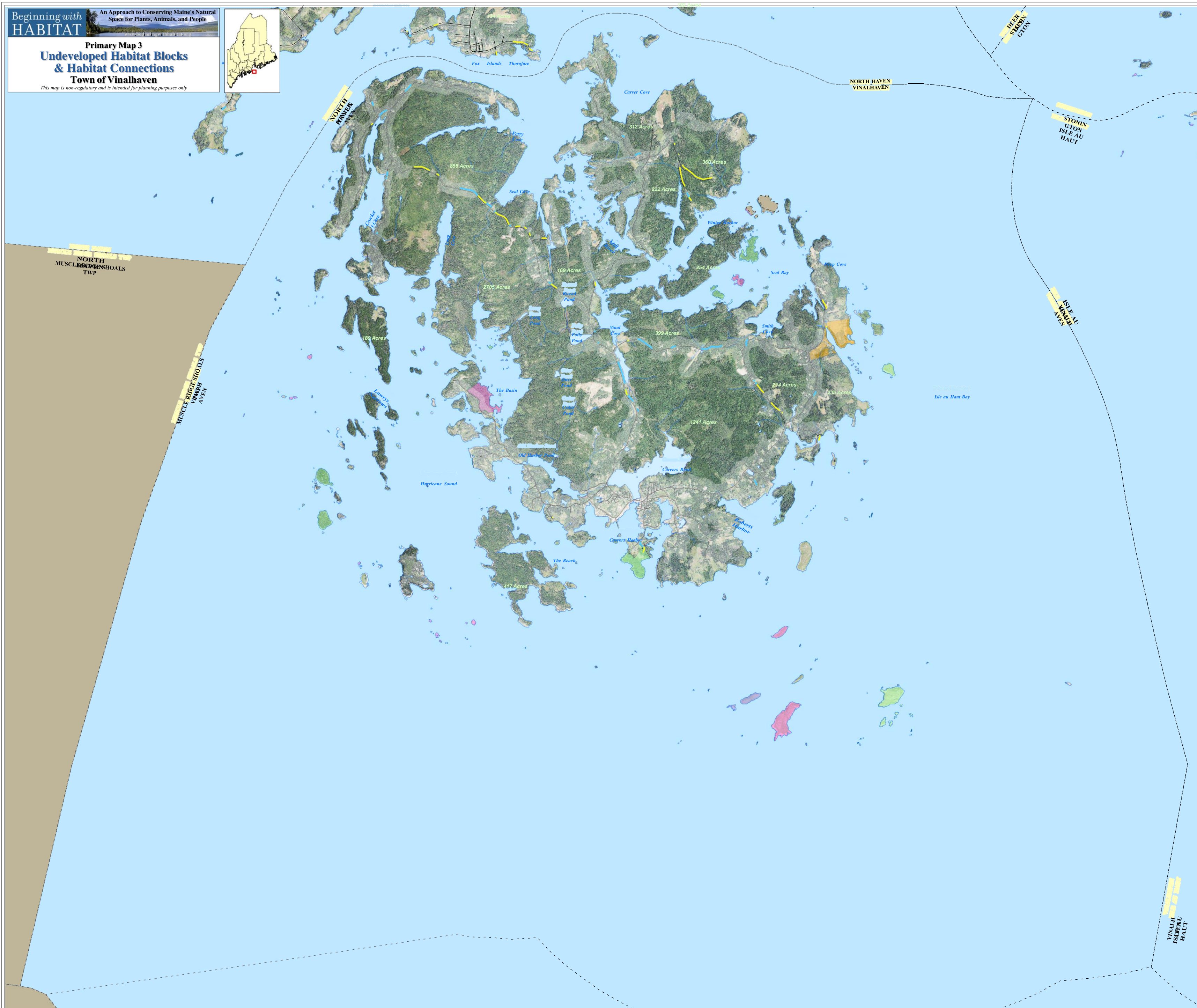
1:24,000 Scale

Universal Transverse Mercator (UTM) Projection






North American Datum (NAD) 1983

MAINE

THANX



This map highlights undeveloped natural areas likely to provide core habitat blocks and habitat connections that facilitate species movements between blocks. Undeveloped habitat blocks provide relatively undisturbed habitat conditions required by many of Maine's species. Habitat connections provide necessary opportunities for wildlife to travel between preferred habitat types in search for food, water, and mates. Roads and development fragment habitat blocks and can be barriers to moving wildlife. By maintaining a network of interconnected blocks towns and land trusts can protect a wide variety of Maine's species—both rare and common—to help ensure rich species diversity long into the future. Maintaining a network of these large rural open spaces also protects future opportunities for forestry, agriculture, and outdoor recreation.



-  **Organized Township Boundary**
 **Unorganized Township** (*Beginning with Habitat does not provide data for unorganized townships*)
 **Roads**
 **Streams and Brooks**
 **Ocean, Lakes, Ponds, and Rivers**

Habitat Blocks

- Development Buffer (*pale transparency*)**
250-500 foot buffer around improved roads and developed areas (based on development intensity).
- Undeveloped Habitat Block**
Remaining land outside of Development Buffers.
Blocks greater than 100 acres are labeled with their estimated acreage

Approximate Habitat Connections

The habitat connections represented on this map were identified by predictive computer modeling that highlighted locations where quality habitat is likely to occur on both sides of a given road between undeveloped habitat blocks greater than 100-acres and between higher value wetlands. The habitat connectors represented on this map are approximate and have not been field verified.

- | | |
|---|---|
|  | <p>Undeveloped Block Connectors</p> <p>Likely habitat areas linking undeveloped habitat blocks greater than 100 acres.</p> |
|  | <p>Riparian Connectors</p> <p>Likely crossing locations for wetland dependent species moving between waterways and wetlands divided by roads</p> |

Note: The width of both habitat connection types indicates traffic volume, and corresponding level of threat of habitat fragmentation and animal mortality. Wide lines indicate average daily traffic volumes greater than 2000 vehicles. Narrow lines indicate less than 2000 vehicles per day.

- Highway Bridge Connectors**
Maine Dept. of Transportation bridges along I-95 and I-295 that span riparian habitat connecting adjacent habitat blocks that are separated by the highway. These are locations where species are likely to take advantage of infrastructure to move between habitat blocks.

Conserved Lands

The State of Maine's conserved lands database includes lands in federal, state, and non-profit ownership. It does not include many privately owned conservation lands, especially those protected by local land trusts, or town owned conservation lands. For the most accurate and current information about land ownership, consult with the local assessor and/or other local land management agencies. If public access potential to any of the properties displayed here is uncertain, landowners should be contacted to determine if permission is necessary.

- Ownership Type (transparent layers)**
- Federal**
 - National** parks, forests, and wildlife refuges.
 - State**
 - Wildlife Management Areas and other properties managed by the Department of Inland Fisheries and Wildlife, state parks, and parcels managed by the Bureau of Parks & Lands
 - Municipal**
 - Town** parks, athletic fields, community forests, etc.
 - Private Conservation**
 - Properties owned and managed by private (usually non-profit) organizations such as The Nature Conservancy, Maine Coast Heritage Trust, Trust for Public Land, and local land trusts.
 - Easement**

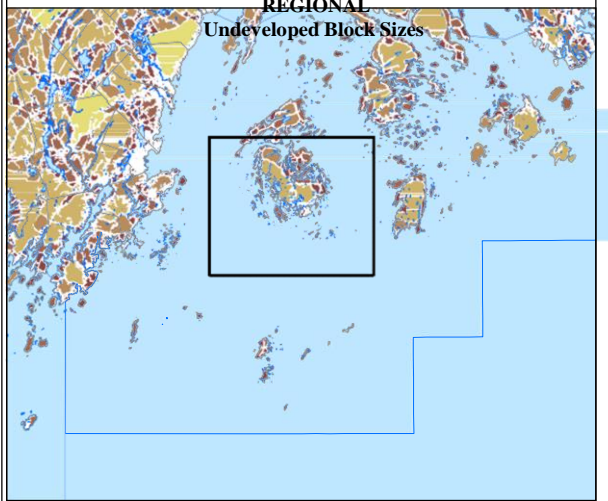
Voluntary legal agreement

voluntary legal agreements that allow landowners to realize economic benefit by permanently restricting the amount and type of future development and other uses on all or part of their property as they continue to own and use it.

Aerial Imagery

Aerial imagery is often the best tool available to visualize existing patterns of development and resulting changes in the natural landscape. By depicting undeveloped habitat blocks, habitat connectors and conserved lands with aerial photos, the map user can more easily identify opportunities to expand the size and ecological effectiveness of local conservation efforts.

REGIONAL Undeveloped Block Sizes



-
- Legend:
- Development Area Buffer
 - 0 - 250 acres
 - 250-500 acres
 - 500-1,000 acres
 - 1,000-5,000 acres
 - > 5,000 acres

Inset Scale - 1:500,000 0 5 10 15 20 25 Miles

Data Sources

DATA SOURCE INFORMATION

(note: italicized file names can be downloaded from Maine Office of GIS)

TOWNSHIP BOUNDARIES
 Maine Office of GIS (2006); *modified*

ROADS
Maine Office of GIS, Maine Department of Transportation (2005): *medotpub*

HYDROLOGY

UNDEVELOPED HABITAT BLOCKS, DEVELOPMENT BUFFER, CONNECTORS

Beginning with Habitat CONSERVATION LANDS

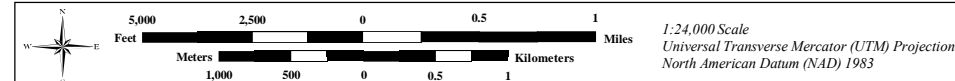
CONSERVATION LANDS
Maine State Planning Office (2009); *conserved_lands*

AERIAL IMAGERY
U.S. Department of the Interior

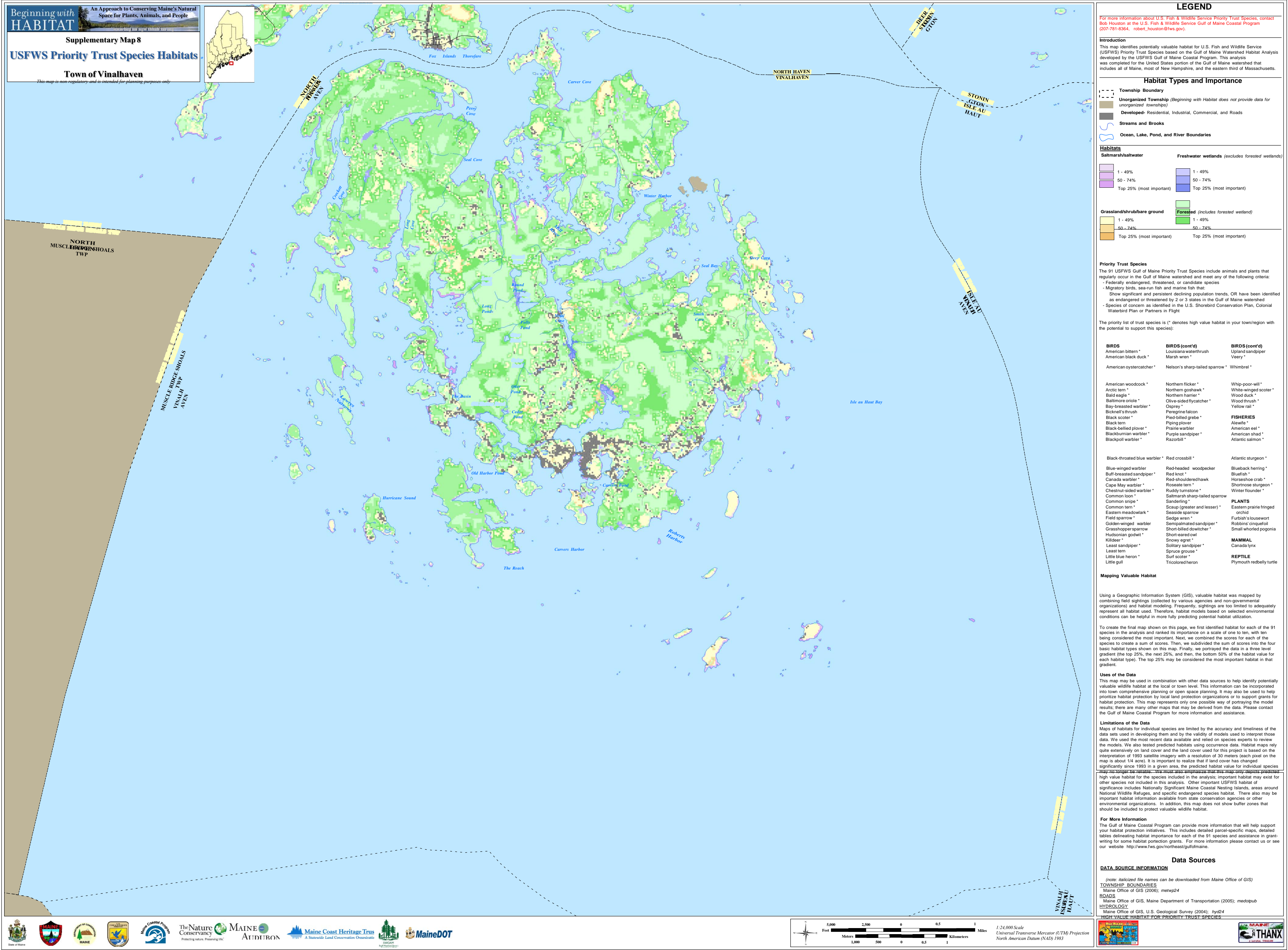
U.S. Department of Agriculture; NAIP 2009 - state-wide 1-meter color orthoimagery (collected between 06/17/2009 and 09/17/2009)

[illegible]

Maine Office of GIS - <http://apollo.ogis.state.me.us/catalog>
Maine Natural Areas Program - <http://www.maine.gov/dcs/enr/nap/>



DIGITAL DATA REQUEST
To request digital data for a town or organization, visit our website.
http://www.beginningwithhabitat.org/the_maps/gis_data_request.html



U.S. Fish & Wildlife Service-Gulf of Maine Coastal Program: forest91, fresh91, grass91, saline91, gomic7

DATA SOURCE CONTACT INFORMATION

Maine Office of GIS- <http://apollo.ogis.state.me.us/catalog>
U.S. Fish & Wildlife Service- Gulf of Maine Coastal Program-
<http://www.fws.gov/northeast/gulf/maine>
Maine Department of Transportation- <http://www.maine.gov/mdot/>
Maine Geological Survey- <http://www.maine.gov/doc/nrimc/mgs/mgs.htm>

DIGITAL DATA REQUEST

To request digital data for a town or organization, or to request a CD containing GIS data of the Gulf of Maine Watershed Habitat Analysis, visit our website.
http://www.beginningwithhabitat.org/the_maps/gis_data_request.html

State Rank S4

Community Description

Red spruce, white spruce, balsam fir, and/or larch are dominant in this Downeast coastal type. Composition is variable from the mid-coast to the Downeast coast. Red and white spruce are the most typical dominants; northern white cedar or hemlock are rarely co-dominant. The canopy may contain

gaps with regenerating red maple, paper birch, mountain-ash, heart-leaved paper birch, and fir. Herbs and dwarf shrubs are typically <10% cover each, though in the canopy openings species such as raspberries, rough-stemmed goldenrod, whorled aster, and hay-scented fern may be locally abundant. The bryoid layer is >15% cover, dominated by mosses and liverworts rather than lichens.

Soil and Site Characteristics

Sites are along the immediate coast, often foggy and cool, on flats or lower to mid slopes (0-15%, may be steeper). Soils are shallow (<40 cm) over bedrock or till, with a well developed organic layer, acidic (pH 4.8-5.2) and mesic. Texture is sandy to loamy.

Diagnostics

White spruce, bayberry, hay-

scented fern, and mountain cranberry are indicators, though not always present. Sites contain relatively little or no bluebead lily,

wood-ferns, or painted trillium. Broom-mosses do not dominate the bryoid layer, though they are often present.

Similar Types

Spruce - Fir - Broom-moss Forests are the most similar. They occur in more inland settings and, like this type, often have only sparse herbs, but unlike this type they are dominated by red spruce rather than white spruce and balsam fir, and their bryoid

layer is dominated by broom-mosses. In poorly drained areas, Maritime Spruce - Fir Forests may grade into the Spruce - Fir - Cinnamon Fern Forest, which is distinguished by seasonally flooded or saturated soils and a more prominent cover of herbs and bryoids; along the coast, it usually occurs in small bedrock basins.

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Canopy

Balsam fir*
Eastern hemlock
Mountain ash*
Northern white cedar
Paper birch*
Red spruce*
White spruce*

Sapling/shrub

Balsam fir*

Mountain ash*
Red spruce
White spruce*

Herb

Balsam fir
Bayberry*
Hay-scented fern
Mountain cranberry*
Raspberries
Red spruce
Rough-stemmed goldenrod

Bryoid

Dicranum moss
Pincushion moss
Three-lobed bazzania

Associated Rare Plants

Swarthy sedge
White adder's-mouth

Examples on Conservation Lands You Can Visit

- Black Point Brook, Cutler Public Lands - Washington Co.
- Great Wass Island Preserve - Washington Co.
- North Cutler Coast, Cutler Public Lands - Washington Co.
- West Quoddy Head State Park - Washington Co.

Conservation, Wildlife, and

Management Considerations

After centuries of intensive use, almost no original coastal forest remains. Many now mature forests are on old pastureland. Many good (albeit secondary-growth) sites are in conservation ownership. Acadia National Park contains a variety of successional stages of this type, including stands that burned in 1947 and stands that did not. Maritime forests are subject to higher wind and weather stress than inland sites, and as a result the disturbances tend to be higher intensity and more frequent, and the trees do not grow as old.

This community type may be utilized as nesting habitat by a number of coniferous forest specialist bird species such as the sharp-shinned hawk, yellow-bellied flycatcher, Cape May warbler, blackpoll warbler, bay-breasted warbler, northern parula, boreal chickadee, Swainson's thrush, red crossbill, and white-winged

crossbill.

Distribution

Coastal, primarily from mid-coast Maine eastward into the Canadian Maritimes (Laurentian Mixed Forest Province).

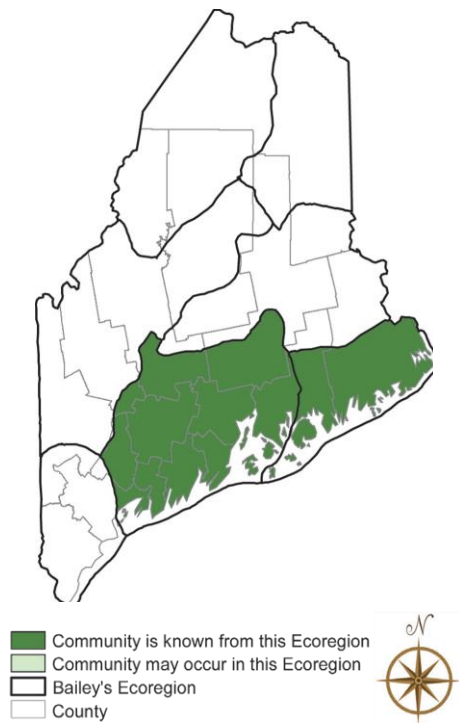
Landscape Pattern: Large Patch



84



Maine Natural Areas Program



State Rank S3

Community Description

These very open to semi open woodlands (25-65% canopy, occasionally to 75%) are dominated by pitch pine, often with a much smaller component of red oak, red or white pine, or black or red spruce. The well spaced pines allow a substantial amount of light to reach the understory. The sapling/shrub layer is usually <40% cover, with smaller pitch pines, mountain holly, or black huckleberry. The herb layer is well developed (>30% cover) and strongly dominated by dwarf, mostly heath, shrubs. At some sites, broom-crowberry is a prominent species. Herbs contribute <10% cover, and the composition varies. The bryoid layer may be 0-50% cover (rarely more) and is typically dominated by reindeer lichens.

Soil and Site Characteristics

Typical sites are ledges or rock outcrops in coastal areas. They may be flat to gently sloping, at elevations up to 1500'. Soils are usually very thin, consisting of a coarse mineral fraction or a layer of poorly decomposed duff over bedrock, with pH 4.6-5.4. Many sites have evidence of past fire.

Diagnostics

These pitch pine dominated woodlands (25-65% canopy cover) grow on bedrock with very little soil.

Similar Types

Pitch Pine - Scrub Oak Barrens, Pitch Pine - Heath Barrens, and Pitch Pine Dune Woodlands differ in that they develop on sandy outwash or dunes, rather than on thin soil over bedrock. Pitch Pine Bogs are wetlands, with wetland plants, including peat mosses.

Conservation, Wildlife, and Management Considerations

This community appears to be relatively stable in Maine, with little habitat conversion. Fire has apparently played

a role in maintaining this woodland type by preventing the invasion of fire sensitive hardwood trees and shrubs. The suppression of fire may result in the conversion of these woodlands to a different type. Many sites receive recreational use. In a few locations use is heavy enough to have degraded the community, but most foot traffic recreational use is compatible. Communications towers could impact some sites on mid-elevation summits.

Birds such as the pine warbler and prairie warbler may prefer this open habitat. This community type may include rare moths that utilize pitch pines as a larval host plant such as the oblique zale, southern pine sphinx, and pine-devil moth, a historical species for Maine.

Distribution

Coastal Maine, east to Mount Desert Island; extending southward along the Atlantic coastal plain and Appalachian foothills.

Landscape Pattern: Small Patch; size range variable from a few acres to nearly 100 acres.

Pitch Pine Woodland

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Canopy

Red spruce
Pitch pine*
Red oak*
Red pine*
White pine*

Sapling/shrub

Black huckleberry*
Gray birch*
Mountain holly*
Pitch pine*
Red spruce

Dwarf Shrub

Black huckleberry*
Broom-crowberry*
Lowbush blueberry*
Rhodora*
Sheep laurel*

Herb

Bracken fern

Bryoid

Reindeer lichen

Associated Rare Plants

Mountain sandwort
Smooth sandwort

Associated Rare Animals

Pine-devil moth
Southern pine sphinx

Examples on Conservation Lands You Can Visit

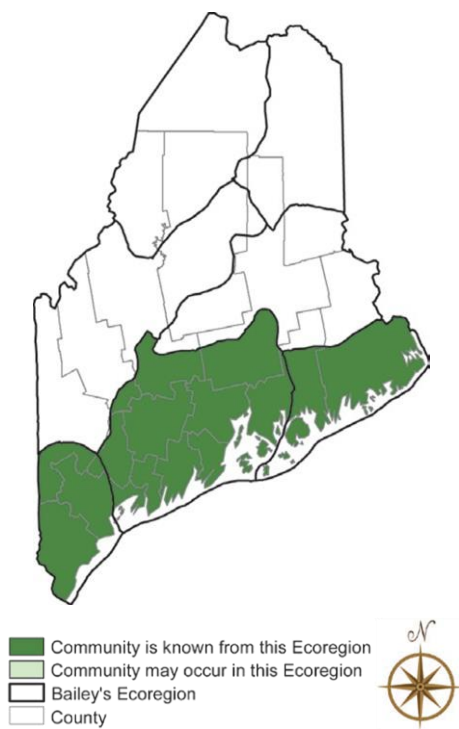
- Bald Head Preserve – Sagadahoc Co.
- Champlain Mountain, Acadia National Park – Hancock Co.
- Dorr Mountain, Acadia National Park – Hancock Co.
- Reid State Park – Sagadahoc Co.



Pitch Pine Cones



Maine Natural Areas Program



State Rank S4

Community Description

This natural community is a fairly homogeneous forest type in which red spruce, black spruce, or red-black spruce hybrids grow on poorly drained, level to gently sloping sites. Balsam fir may be present in regenerating patches or stands but tends to give way to the longer-lived spruces over time. Stands often form even-aged blocks hundreds to thousands of acres in size. The even-aged structure likely results from the past influences of spruce-budworm, fire, harvesting, blowdowns, or a combination of multiple factors.

Cinnamon fern and three-seeded sedge are typical in these types statewide. In northern Maine, understory herbs and shrubs are sparse, and the forest floor is dominated by a dense carpet of mosses ~ typically Sphagnum species, three-lobed bazzania, and red-stemmed moss. Dwarf heath shrubs may be abundant at St. John Valley sites, which approach boreal 'muskeg'. In southern Maine, red maple may be sub-dominant. At sites near the coast, skunk cabbage may be a prominent understory species.

Soil and Site Characteristics

Sites usually occur along drainages or low flats where soil remains moist throughout the growing season and may be saturated or temporarily flooded in the springtime. The substrate is acidic mineral soil and may be very stony, with or without an

organic layer (<30 cm) on top. More information is needed statewide to determine if this type should be split into two separate types, reflecting northern and southern Maine variants.

Diagnostics

Sites occur on moist to saturated mineral

soils, usually with a dense carpet of mosses

and liverworts. Closed canopies are dominated by spruce (>40% cover), or are rarely more open where red maple or northern white cedar mixes with spruce. Wetland plants occur in the herb layer, usually including cinnamon fern and three-seeded sedge.

Similar Types

Other spruce - fir types occur on better-drained upland soils and gentle to steeper slopes. Red Maple - Sensitive Fern Swamps can be similar but will have more red maple and less spruce and fir. Spruce - Larch Wooded Bogs can have similar species composition (especially where black spruce is dominant) but occur on peat deposits (>30 cm) rather than on mineral soils.

Conservation, Wildlife, and Management Considerations

Nearly all known occurrences of this community type in Maine have been harvested in the past, and many have a history of natural disturbance such as fire or spruce-budworm. Large (>1000 acres) examples free from human disturbance are scarce. Forest management with natural regeneration generally does not with result in conversion of this type. Studies on some examples on public and private conservation lands may provide further information on the natural dynamics in these systems.

These stands may serve as deer wintering areas and may also provide habitat for pine marten and Canada lynx, depending on the age and successional stage. This community type may be used as nesting habitat by a number of coniferous forest specialist bird species, including the yellow-bellied flycatcher, sharp-shinned hawk, black-backed woodpecker, pine grosbeak, green heron, black-throated green warbler, Blackburnian warbler, common yellowthroat, Wilson's warbler, spruce grouse, blackpoll warbler, and the rare rusty blackbird.

Distribution

Statewide, more common and extensive northward. Characteristic of the Laurentian Mixed Forest Province and New England -Adirondack Province.

Landscape Pattern: Large Patch

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Canopy

Black spruce*
Larch
Northern white cedar
Red maple
Red spruce*
White pine

Sapling/shrub

Alder*
Balsam fir
Black huckleberry*
Mountain holly*
Red maple
Wild-raisin

Dwarf Shrub

Leatherleaf*
Lowbush blueberry*
Rhodora*
Sheep laurel*

Herb

Bunchberry
Cinnamon fern*
Dwarf raspberry*
Goldthread
Skunk cabbage
Three-seeded sedge*

Bryoid

Red-stemmed moss*
Sphagnum mosses*
Three-lobed bazzania

Associated Rare Animals

Rusty blackbird

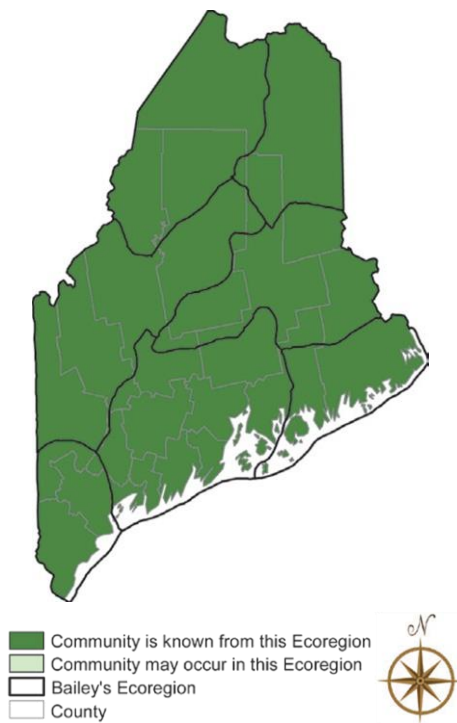
Examples on Conservation Lands You Can Visit

- Chamberlain Lake Public Lands – Piscataquis Co.
- Round Pond Public Lands – Aroostook Co.

Spruce - Fir - Cinnamon Fern Forest



Maine Natural Areas Program





Maine Department of Conservation
Natural Areas Program

Rare Plant Fact Sheet
PDCHE0P0H0

Suaeda calceoliformis (Hook.) Moq.

American Sea-blite

- Habitat: Rocky or gravelly saltmarshes and sea-strands. [Tidal wetland (non-forested, wetland)]
- Range: Cote Nord, Quebec, south to southern Maine. Also listed as rare in Massachusetts; does not occur elsewhere in New England. This species may still occur at some historic locations, but may not have been carefully searched for. It can be difficult to distinguish from the common species, and thus can be easily overlooked.
- Phenology: Flowers August - October.
- Family: Amaranthaceae

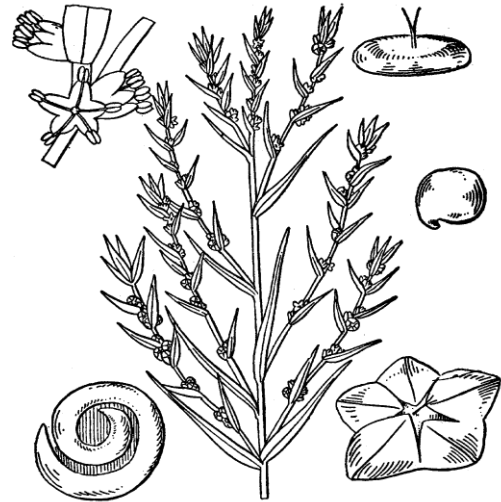


Illustration from Britton & Brown's Illustrated Flora of the Northern United States and Canada, 2nd ed.

Aids to Identification: Sea-blites are succulent halophytes with

flowers borne consistently in clusters of 3 in the axils of the leaves. The flowers lack petals and have 5 green sepals. This species resembles the common sea-blite (*S. maritima*). It differs from common sea-blite in that the sepals, at maturity, are not all the same size: one or two of the flowers are much larger or bear an appendage on the outside surface. The fruits are 1-1.5 mm long (vs. 1.5-2 mm long in *S. maritima*).

Ecological characteristics: Little information is available on habitat characteristics for this species in Maine. It appears to most often occur near the upper intertidal limit and has been found both in saltmarshes and along sandy or gravelly shores.

Synonyms: Formerly known as *Suaeda americana* (Pers.) Fern.

Rarity of *Suaeda calceoliformis*

State Rank:	S2	Imperiled in Maine because of rarity or vulnerability to further decline.
New England Rank:	INDT	Indeterminate. Under review for inclusion in appropriate division. Taxonomy, nomenclature, or status not clearly understood.
Global Rank:	G5	Demonstrably widespread, abundant, and secure globally.

Status of *Suaeda calceoliformis*

Federal Status:	None	No Federal Status.
State Status:	Threatened	Rare and, with further decline, could become endangered; or federally listed as Threatened. Listing criteria met: At edge of range



.6. Historical (before 1982)
 ● Recent (1982 - present)

Known Distribution in Maine:

This rare plant has been documented from a total of 10 town(s) in the following county(ies): Cumberland, Hancock, Knox, Lincoln, Sagadahoc, York.

Dates of documented observations are: 1892, 1899, 1900, 1901, 1905, 1932, 1959, 1997, 1998 (2), 2001

Reason(s) for rarity:

Near northern limit of its range.

Conservation considerations:

Unknown. Has not been documented recently from several historic locations, but may have been overlooked due to resemblance to common species.

The information in this fact sheet was downloaded from the Natural Areas Program's Biological and Conservation Database on 17 MAY 2004. We are grateful to our Botanical Advisory Group for additional information on particular species, and in particular, to Arthur Haines for his assistance with identifying characteristics and taxonomic questions. Nomenclature follows Haines and Vining's Flora of Maine (V.F. Thomas Press, 1998); where older works refer to a plant by another name, it is given under "Synonyms". The Natural Areas Program, within the Department of Conservation, maintains the most comprehensive source of information on Maine's rare or endangered plants and rare or exemplary natural communities, and is a member of the Association for Biodiversity Information.

If you know of locations for this plant or would like more information on this species,
 please contact the Natural Areas Program
 State House Station 93, Augusta, Maine 04333; telephone (207) 287-8044.



Great cormorant

Phalacrocorax carbo

Family - Phalacrocoracidae

◆ Image 1 of 1 ◆



Great Cormorant

State Status:

Threatened

Federal Status:

State Rank:

S3B,S3N

New England Rank:

Global Rank:

G5

Reason for Rarity:

The breeding population of the great cormorant is listed as Threatened in Maine because of limited nesting distribution (less than 10 islands) and a small and declining population size. Population decline believed to be linked with excessive predation by bald eagles.

Threats:

Predation of young by bald eagles is causing a steep decline in nesting numbers. Nesting habitat does not appear to be limited because they generally nest in association with double-crested cormorants on sometimes unvegetated islands and ledges.

Habitat

This species selects offshore coastal islands with suitable habitat conditions for nesting. Generally nests in association with double-crested cormorants.

Range:

The great cormorant breeds along the Atlantic coast from the northern shore of the Gulf of St. Lawrence and southwestern Newfoundland, south to Prince Edward Island, Nova Scotia and Maine. It winters throughout the breeding range and south to North Carolina.

State Distribution:

Less than 100 pairs of great cormorants nested in Maine in 2009. The great cormorant nests on fewer than 10 coastal islands in Outer Penobscot and Jericho Bays.

Global Distribution:

G5

General Description:

A white chin patch and white flank patch in breeding season separate this species from double crested cormorant.



U.S. Fish & Wildlife Service

Bald Eagle

Haliaeetus leucocephalus



Dave Menke, USFWS

A North American species with a historic range from Alaska and Canada to northern Mexico, the bald eagle is an Endangered Species Act success story.

Forty years ago, our national symbol was in danger of extinction throughout most of its range. Habitat destruction and degradation, illegal shooting, and the contamination of its food source, largely as a consequence of DDT, decimated the eagle population. Habitat protection afforded by the Endangered Species Act, the federal government's banning of DDT, and conservation actions taken by the American public have helped bald eagles make a remarkable recovery.

Bald Eagle Biology

Distinguished by a white head and white tail feathers, bald eagles are powerful, brown birds that may weigh 14 pounds and have a wingspan of 8 feet. Male eagles are smaller, weighing as much as 10 pounds and have a

wingspan of 6 feet. Sometimes confused with golden eagles, bald eagles are mostly dark brown until they are four to five years old and acquire their characteristic coloring. There is a distinction between the two species, though, even during the early years. Only the tops of the bald eagle's legs have feathers. The legs of golden eagles are feathered all the way down.

Bald eagles live near rivers, lakes, and marshes where they can find fish, their staple food. Bald eagles will also feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion.

Bald eagles require a good food base, perching areas, and nesting sites. Their habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts. In winter, the birds congregate near open water in tall trees for spotting prey and night roosts for sheltering.

Eagles mate for life, choosing the tops of large trees to build nests, which they typically use and enlarge each year. Nests may reach 10 feet across and weigh a half ton. They may also have one or more alternate nests within their breeding territory. In treeless regions, they may also nest in cliffs or on the ground. The birds travel great distances but usually return to breeding grounds within 100 miles of the place where they were raised. Bald eagles may live 15 to 25 years in the wild, longer in captivity.

Breeding bald eagles typically lay one to three eggs once a year, and they hatch after about 35 days. The young eagles are flying within three months and are on their own about a month later. However, disease, lack of food, bad weather, or human interference can kill many eaglets. Recent studies show that approximately 70 percent survive their first year of life.

The Plight of the Bald Eagle

When America adopted the bald eagle

as the national symbol in 1782, the country may have had as many as 100,000 nesting eagles. The first major decline of the species probably began in the mid to late 1800's, coinciding with the decline of waterfowl, shorebirds, and other prey.

Although they primarily eat fish and carrion, bald eagles used to be considered marauders that preyed on chickens, lambs, and domestic livestock. Consequently, the large raptors were shot in an effort to eliminate a perceived threat. Coupled with the loss of nesting habitat, bald eagle populations declined.

In 1940, noting that the species was "threatened with extinction," Congress passed the Bald Eagle Protection Act, which prohibited killing, selling, or possessing the species. A 1962 amendment added the golden eagle, and the law became the Bald and Golden Eagle Protection Act.

Shortly after World War II, DDT was hailed as a new pesticide to control mosquitoes and other insects. However, DDT and its residues washed into nearby waterways, where aquatic plants and fish absorbed it. Bald eagles, in turn, were poisoned with DDT when they ate the contaminated fish. The chemical interfered with the ability of the birds to produce strong eggshells. As a result, their eggs had shells so thin that they often broke during incubation or otherwise failed to hatch. DDT also affected other species such as peregrine falcons and brown pelicans.

In addition to the adverse effects of DDT, some bald eagles have died from lead poisoning after feeding on waterfowl containing lead shot, either as a result of hunting or from inadvertent ingestion.

By 1963, with only 417 nesting pairs of bald eagles remaining, the species was in danger of extinction. Loss of

habitat, shooting, and DDT poisoning contributed to the near demise of our national symbol.

The Road Back

As the dangers of DDT became known, in large part due to the 1962 publication of Rachel Carson's book *Silent Spring*, the Environmental Protection Agency took the historic and, at the time, controversial step of banning the use of DDT in the United States. That was in 1972, and it was the first step on the road to recovery for the bald eagle.

In 1967, the Secretary of Interior listed bald eagles south of the 40th parallel under the Endangered Species Preservation Act of 1966. Following enactment of the Endangered Species Act of 1973, the Service listed the species in 1978 as endangered throughout the lower 48 states, except in Michigan, Minnesota, Oregon, Washington, and Wisconsin where it was designated as threatened.

"Endangered" means a species is considered in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is considered likely to become endangered within the foreseeable future, but is not currently in danger of extinction.

The species was not listed as threatened or endangered in Hawaii because it does not occur there, or in Alaska because populations there have remained robust.

Listing the species as endangered provided the springboard for the Service and its partners to accelerate the pace of recovery through captive breeding programs, reintroduction efforts, law enforcement, and nest site protection during the breeding season.

In July 1995, the Service announced that bald eagles in the lower 48 states had recovered to the point where those populations previously considered endangered were now considered threatened.

In July 1999, the Service proposed to remove the bald eagle from the list of threatened and endangered species. Since then, the Service has reviewed comments received on that proposal along with new data and information to determine the best ways to manage the species once it is removed from the protections of the Endangered Species Act. In 2006, the Service re-opened the public comment period due to new information on the proposal to delist. Data gathered during this comment period was factored into a final decision



Shutterstock photo

on the status of the species.

Based on the most recent population figures, the Service estimates that there are at least 9,789 nesting pairs of bald eagles in the contiguous United States. Bald eagles have staged a remarkable population rebound and have recovered to the point that they no longer need the protection of the Endangered Species Act.

Thus, on June 28, 2007, the Service announced the recovery of our nation's symbol and removal from the list of threatened and endangered species.

What Lies Ahead

Although the Service removed the bald eagle from the list of threatened and endangered species under the Endangered Species Act, the bird will still be protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Both laws prohibit killing, selling or otherwise harming eagles, their nests, or eggs.

The Service has developed guidelines that describe circumstances under which provisions of the Bald and Golden Eagle Protection Act may

apply. Accessible on our Web site, the guidelines are designed to help landowners avoid disturbing eagles and also encourage beneficial conservation practices.

The Service will continue to work with state wildlife agencies to monitor the status of bald eagles for a minimum of five years, as required by the Endangered Species Act. If the species should need the protection of the Act, the Service can relist it as endangered or threatened. In the meantime, individual states may also pass or implement laws to protect bald eagles.

For more information on the recovery of bald eagles, please visit <http://www.fws.gov/migratorybirds/BaldEagle.htm>

**U. S. Fish and Wildlife Service
Endangered Species Program
4401 N. Fairfax Drive, Room 420
Arlington, VA 22203
703-358-2390
<http://www.fws.gov/endangered/>**

June 2007

Purple Sandpiper

Calidris maritima

Justification

Shorebird scientists in North America are concerned about purples because of their relatively small population size and potential long term declines.

According to the US Shorebird Plan (2001) Priority scores for both subspecies of Purple Sandpiper in North America were “Species of High Concern”.

Purple Sandpiper were rated “high concern” in the USFWS Birds of Conservation Concern – BCR 14 (2002).

They are also one of ten shorebird species identified as a focal species in the Atlantic Flyway Shorebird Business Strategy (2013).

We know so very little about this species, despite recent intensive breeding shorebird PRISM surveys in the Arctic, very few Purple Sandpiper were observed, apparently they are difficult to find, more so than the other Arctic breeders. Andres (*et al.*) in Wader Study Group Bulletin Vol 119 (3) 2012, estimate North American breeding population of both subspecies is about 25,000. The CBC indicates a reliable long-term decline of 1.8% per year (Butcher & Niven 2007) although a substantial portion of the population winters on nearshore islands outside of CBC count circles. We need more data to determine Purple Sandpiper trends.

Maine – We have systematically surveyed the entire Maine coast to provide baseline data on Purple Sandpiper wintering population status. We tallied 13,318 purples and after accounting for birds present but not detected we estimate that 14,000 – 17,000 Purple Sandpiper winter in Maine between 2002 – 2007. We have a large percentage of the NA population wintering in Maine, and yet do not have a reliable trend estimate.

The short answer - We identified it as a species of greatest conservation need because of our high responsibility for this species; lack of information on population status, and relatively small population size, if NA estimates are accurate (and I am not sure they are) there are fewer purples than red knots (a candidate species for federally listing as endangered).

Ecology

Behavior This species is fully migratory (del Hoyo et al. 1996, Snow and Perrins 1998). It arrives on the breeding grounds from mid-May to mid-June where it nests in solitary pairs (del Hoyo et al. 1996) and forages in small loose groups (Snow and Perrins 1998). From July to August the adults undergo a flightless moulting period on the coast close to the nesting areas before travelling to the wintering grounds in September and November (Hayman et al. 1986). During the non-breeding season the species is gregarious and usually forms small flocks of up to 250 individuals (del Hoyo et al. 1996). Habitat

Breeding The species breeds on Arctic coasts (Hayman et al. 1986) and in upland areas (Johnsgard 1981, Flint et al. 1984, Hayman et al. 1986), nesting close to the fringes of snow and ice (del Hoyo et al. 1996) on wet moss or barren rocky tundra with patches of lichen and *Dryas* spp., on rocky islands and islets or on shingle beaches (del Hoyo et al. 1996). It forages on dry tundra or along the moist margins of ponds, at the edges of melting snow-drifts and in areas of thick moss (Hayman et al. 1986). **Non-breeding** During the winter and on passage the species shows a preference for tidal rocky shores with strong wave action (Hayman et al. 1986) and suitable high-tide roosting areas (del Hoyo et al. 1996), often utilising artificial structures such as concrete sea defences and breakwaters (Hayman et al. 1986). In some northern areas (e.g. Svalbard) the species frequents mudflats, shingle beaches and coastal lagoons before and after breeding but before migrating south (del Hoyo et al. 1996). **Diet** Breeding during the breeding season its diet consists largely of insects (e.g. adult, larval and pupal Diptera, Ichneumon wasps and aphids) and Collembola (springtails), as well as spiders, gastropods, annelid worms and some plant material (e.g. leaves, buds, berries and seeds) (del Hoyo et al. 1996). **Non-breeding** On the coast the species feeds predominantly upon molluscs (especially gastropods *Littorina* spp. and mussels *Mytilus* spp.) as well as insects (e.g. beetles and Diptera), small crustaceans (e.g. amphipods), annelid worms (del Hoyo et al. 1996), small fish (Johnsgard 1981) and algae (*Enteromorpha* spp.) (del Hoyo et al. 1996). **Breeding site** The nest is a small scrape positioned in the open on tundra moss (del Hoyo et al. 1996), in hummocky tundra (Flint et al. 1984) close to tufts of *Dryas* spp. or *Arctostaphylos* spp. (Johnsgard 1981), or in rocky or pebbly areas between cliffs.

**STATE
THREATENED**

Arctic Tern

(*Sternaparadisaea*)



Stephen Kress

Description

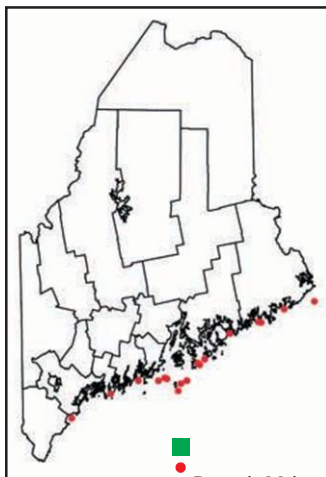
The arctic tern is the champion “globe trotter,” annually migrating over 15-20,000 miles round-trip from its nesting areas in North America to wintering areas in the Antarctic. The arctic tern is a graceful, medium-sized seabird (length 15 inches, wingspan 31 inches) with long, pointed wings and a long, forked tail. In the breeding season it has a light gray body and belly and a white rump and tail. Its black cap and nape are separated from its gray throat by a white facial stripe. The arctic tern is distinguished from other tern species by its deep red beak. Common terns have red beaks tipped in black, and roseate terns generally have all-black or salmon-colored beaks.

Range and Habitat

Arctic terns have the longest annual bird migration known. After leaving North America, they fly across the North Atlantic, travel south along the coasts of Europe and Africa, and winter in the

Antarctic – a distance of over 10,000 miles! Their return route may be along the coast of South America.

Maine’s arctic tern population is at the southern edge of the species’ range in eastern North America. Here the terns nest primarily on a few outer coastal islands, always in close associa-



Range in Maine
Known locations

and other seabirds. Nesting islands are usually treeless and covered by short herbaceous vegetation. Arctic terns prefer to nest on bare rocks and beaches, presumably because their short legs preclude movement through tall, dense vegetation. Of the 3,000 islands off the coast of Maine, at least 150 have been used by nesting terns in the last century. Arctic terns currently nest on only 10 islands in Maine.

Life History and Ecology

Arctic terns return to their breeding grounds when sexually mature at 3-5 years of age. However, some birds may breed as early as two years old. After they breed for the first time, they exhibit high fidelity to a nesting island, and often return to the same breeding colony yearly. They arrive at breeding islands in Maine in mid-May.

After elaborate courtship flights, ground displays, and ritual feeding, terns establish pair bonds and select a nest site. Two eggs are laid between May 20 and June 10 in a simple scrape that is often lined with pebbles, shells, or vegetation. The incubation period lasts 20-24 days, and both parents share responsibility for incubation. Chicks leave the nest within days, but continue to be fed and brooded by the parents. Fledging occurs in 21-28 days. Within 2-3 days after fledging, they begin to accompany parents on short flights to nearby feeding areas, and generally depart the colony within two weeks. Fall migration begins in mid to late August.

Arctic terns feed on small fish and crustaceans, which they capture by plunging into the water and catching with their bills. Primary foods eaten in Maine include white hake, Atlantic herring, and

tion with other terns

sand lance. The terns may forage up to 10 miles

away from their nesting island, in deep water, rocky shores, upwelling areas, and over schools of predatory fish. Some individuals specialize in taking shrimp and small amphipods (shrimp-like animals).

Terns can be long-lived. The longevity record for an arctic tern is 34 years!

Threats

The primary causes of declining tern numbers in the Gulf of Maine are gull predation, human disturbance, and food shortages. Gulls arrive on nesting islands earlier than terns, occupy the best nesting areas, and drive terns away. Gulls also eat tern eggs, chicks, and sometimes adults. Habitat on a few islands has been lost because of the construction of permanent or seasonal dwellings. Human disturbance on islands can cause nest and chick abandonment and increase gull predation. Terns feed on the immature forms of many commercially valuable fish. Fisherman may compete with terns for species like herring and hake. Nesting productivity is low in years of poor food availability or adverse weather conditions (rain, fog) that prevent terns from finding food. The recent collapse of some commercially valuable fish stocks may have adverse effects on tern populations.

Conservation and Management

Prior to passage of laws protecting migratory birds, arctic terns were harvested to supply feathers for the millinery trade (to make women's hats) and their eggs were collected for food. Passage of the Migratory Bird Treaty Act of 1918 provided protection for migratory birds, and by 1931 an estimated 8,000 pairs of arctic terns nested on the coast of Maine. However, since the 1940s, arctic tern numbers have declined because of predation and competition with gulls. Most of the population is now concentrated on a few islands managed by conservation groups. The arctic tern was listed as threatened in Maine in 1997 because of past declines and because the population is nesting on only a few islands.

Recovery of Maine's island nesting tern populations (arctic, common, and roseate) requires intensive management. Since the 1970s, terns have disappeared from most of their former nesting islands. Intensive management is occurring on 10 tern nesting islands. Management includes removal or control of competing gull populations, use of decoys and sound recordings to attract terns, and maintaining the presence of tern managers to protect the birds from human disturbance during the nesting season. Management has halted popula-

tion declines, and arctic tern numbers have stabilized at about 2,500 pairs. This is still far below historic levels. More than 90 percent of Maine's breeding population nests at only three sites – Machias Seal Island, Matinicus Rock, and Petit Manan Island. Because of food limitations and gull predation, arctic terns have not recolonized many of their former nesting areas. Arctic tern nesting islands are designated as Significant Wildlife Habitats under Maine's Natural Resource Protection Act or as Protection Fish and Wildlife areas under the Land Use Regulation Commission.

Recommendations:

- ✓ Protect seabird nesting islands and adjacent waters from further development, especially human dwellings, fishing piers, docks, and aquaculture facilities. Review Essential Habitat maps and guidelines prior to development near roseate tern islands. Consult with a biologist from MDIFW and the U.S. Fish and Wildlife Service to assist with planning.
- ✓ Municipalities should strive to prevent development of seabird nesting islands and adjacent waters and identify these areas in comprehensive plans. Consider protecting a ¼ mile buffer around seabird nesting islands.
- ✓ Use voluntary agreements, conservation easements, conservation tax abatements and incentives, and acquisition to protect important habitat for threatened and endangered species.
- ✓ Stay off seabird nesting islands during the nesting season (April 1 to August 15). If visitation is approved (e.g., commercial tours to a seabird island), remain on designated paths and in blinds to minimize disturbance.
- ✓ Keep boat activity more than 660 feet from seabird nesting islands. If birds flush from the island, you're too close.
- ✓ Keep all pets off islands. Do not introduce mammalian predators.
- ✓ Locate aquaculture facilities farther than ¼ mile from seabird nesting islands.
- ✓ Avoid overfishing and polluting nursery areas for herring, hake, and other fish stocks important as food for seabirds.
- ✓ Do not use gill nets near seabird islands or known feeding areas.
- ✓ Do not dump oil, litter, or waste overboard. Even small amounts of oil can kill birds. Seabirds are often injured by eating plastic particles from trash that are mistaken for food.
- ✓ Avoid overboard discharge of fish waste or bait. Predatory gull populations have increased because of this readily available supply of food. 🐦

**STATE
THREATENED**

Atlantic Puffin

(*Fratercula arctica*)

Description

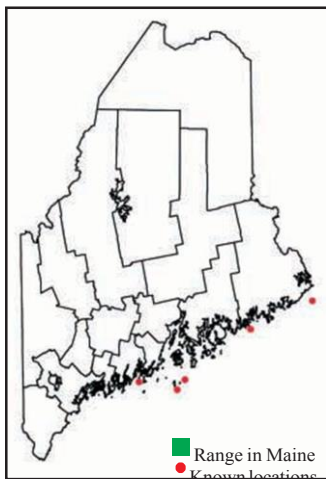
Although few people have seen a puffin, this comical-looking seabird is familiar to most Maine citizens and is one of the state's most popular wildlife species. It is a short (12 inches long), chunky seabird with short, stubby wings. During the summer breeding period, the adult has black wings, back, and tail, a white belly, gray and white cheek patches, and a colorful beak. The bill is triangular in shape with alternating stripes of bright red-orange, blue-gray, and yellow. The forehead, crown, and nape are black, extending in a collar across the throat. The legs and feet are bright orange. After breeding season, puffins lose their colorful summer dress. They shed the outer sheaths of the bill and horny ornaments around the eye, leaving the bill small and gray. The white face patch is lost, the belly becomes gray, and the legs turn to a dull yellow.

Range and Habitat

The Atlantic puffin breeds in arctic and subarctic marine waters from Maine, eastern Canada, Greenland, and Iceland to northern Europe and Russia. It is one of the most abundant seabirds in the North Atlantic (16 million birds), and over half of the population nests in Iceland.

Nesting populations in the Gulf of Maine comprise less than 1 percent of the total population and are at the extreme southern edge of the species' range.

Puffins nest on rocky, isolated islands, although they occasionally nest on mainland headlands if mammalian predators are absent. Islands must have suitable nesting surfaces, either rocks or boulders with suitable crevices, or a



Mark McCollough

peat-like sod of adequate depth to enable nesting birds to dig burrows. In Maine, puffins have been recorded nesting on seven islands, with the largest colonies on Matinicus Rock, Eastern Egg Rock, and Seal Island. There is also a large colony on Machias Seal Island on the Maine-New Brunswick border. Outside of the breeding season, puffins are pelagic, spending most of the winter at sea along pack ice areas of the North Atlantic.

Life History and Ecology

Puffins have an entirely pelagic existence until they mature at 4-6 years of age. Adult birds return to a breeding colony in mid-April. Young birds spend their first 2-3 years at sea, and subadults begin to return to colonies in early summer to look for prospective mates and nest sites. Puffins usually return to the same breeding colony where they were born and retain the same burrow and mate year after year.

Nest burrows end in an enlarged nesting chamber. Between April and July, a single egg is laid in the chamber on bare rock or bare soil. Seaweed, grass, feathers, and other material may be used to support the egg to keep it dry and protect it from being damaged. Incubation ranges from 40-45 days and both parents share responsibility. If the egg is destroyed, the female may lay a replacement egg. Peak hatching occurs the last week of June to the first week of July. The newly hatched chick is brooded continuously for the first 6-7 days until it can maintain its own body

temperature. The chick is then left alone while both parents search for food.

The adult diet is primarily fish, although crustaceans are also taken. Small fishes that are taken include Atlantic herring, sand lance, capelin, smelt, and various species of cod. Adults return to the colony typically with 5-12 small fish in their beaks, but they can carry over 20, depending on size! Chicks grow slowly, and fledging occurs at 38-41 days. When abandoning the colony, chicks leave at night to avoid gull predation, and travel far from the colony site before morning. After fledging, chicks are independent of their parents.

In Maine, most puffins leave breeding colonies by mid-August. Puffins are long-lived and may attain 20-30 years of age. One banded puffin lived to be 34 years old.

Threats

Puffins were never abundant in Maine at the southern edge of their nesting range. Historically, they declined from overharvest for food, feathers, and eggs. These ground-nesting birds were particularly vulnerable to introduced predators (rats and other mammals). In the last 50 years, expanding populations of great black-backed and herring gulls became serious predators of puffins, their chicks, and eggs. The presence of gulls prevents puffins from recolonizing former nesting areas. Unmanaged human disturbance on nesting islands diminishes feeding rates of young. Fluctuations in food supply also affect breeding success. Accidental capture of puffins in gill nets as they chase prey underwater is a serious problem in some areas. Oil pollution and spills can kill large numbers of birds.


Conservation and Management

Several hundred pairs of puffins nested on eight Maine islands prior to 1860. Hunting, egg collecting, and introduction of sheep to nesting islands nearly extirpated the species from the state by 1900. Puffins persisted in the Gulf of Maine on Matinicus Rock and Machias Seal Island where they were protected by lighthouse keepers. In 1977, there were 125 pairs breeding on Matinicus Rock. In the 1980s, the National Audubon Society established a puffin restoration program in Maine and pioneered seabird restoration techniques. Scientists spent years transferring hundreds of chicks from Newfoundland and attracting birds using decoys and sound recordings. Approximately 250 pairs of puffins now nest on four islands in Maine. An additional 1000 pairs nest on Machias Seal Island. Puffins were listed as threatened in Maine in 1997 because of their small population size and limited distribution.

All nesting islands (Petit Manan Island, Matinicus Rock, Seal Island, and Eastern Egg Rock) are intensively managed for seabird restoration. Herring and great black-backed gulls have been removed or populations reduced. Terns, laughing gulls, guillemots, eiders, and petrels share these managed nesting islands and benefit from the lack of gull predation. Biologists protect and observe puffin colonies during the nesting season. Puffins draw thousands of bird watchers each summer on puffin cruises. On-shore visits are prohibited on most islands and are highly regu-

lated on Machias Seal Island. All puffin islands in Maine are in conservation ownership and protected by Significant Wildlife Habitat provisions of the Natural Resource Protection Act or as Protection Fish and Wildlife areas under provisions of the Land Use Regulation Commission.

Recommendations:

- ✓ Protect seabird nesting islands and adjacent waters from further development, especially human dwellings, fishing piers, docks, and aquaculture facilities. Review Essential Habitat maps and guidelines prior to development near roseate tern islands. Consult with a biologist from MDIFW and the U.S. Fish and Wildlife Service to assist with planning.
- ✓ Municipalities should strive to prevent development of seabird nesting islands and adjacent waters and identify these areas in comprehensive plans. Consider protecting a ¼ mile buffer around seabird nesting islands.
- ✓ Use voluntary agreements, conservation easements, conservation tax abatements and incentives, and acquisition to protect important habitat for threatened and endangered species.
- ✓ Stay off seabird nesting islands during the nesting season (April 1 to August 15). If visitation is approved (e.g., commercial tours to a seabird island), remain on designated paths and in blinds to minimize disturbance.
- ✓ Keep boat activity more than 660 feet from seabird nesting islands. If birds flush from the island, you're too close.
- ✓ Keep all pets off islands. Do not introduce mammalian predators.
- ✓ Locate aquaculture facilities farther than ¼ mile from seabird nesting islands.
- ✓ Avoid overfishing and polluting nursery areas for herring, hake, and other fish stocks important as food for seabirds.
- ✓ Do not use gill nets near seabird islands or known feeding areas.
- ✓ Do not dump oil, litter, or waste overboard. Even small amounts of oil can kill birds. Seabirds are often injured by eating plastic particles from trash that are mistaken for food.
- ✓ Avoid overboard discharge of fish waste or bait. Predatory gull populations have increased because of this readily available supply of food. 

• For more information: MDIFW Endangered Species Program • 207-941-4466 • www.mefishwildlife.com •

**STATE
THREATENED**

Harlequin Duck

(*Histrionicus histrionicus*)



Mark McCollough

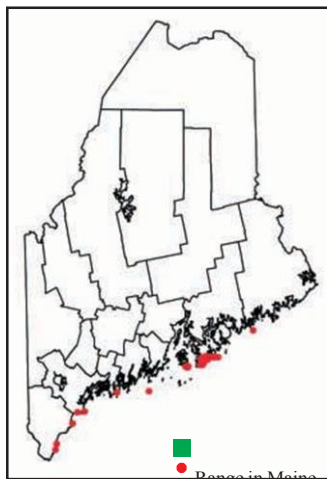
Description

The harlequin is a small diving sea duck and is among the most beautiful waterfowl of North America. As such, it is much sought after by bird watchers and naturalists. The striking blue, white, black, and chestnut plumage of the males gives the duck its name, in honor of the Italian clown. Adult males have slate-blue bodies, chestnut flanks, and white streaks and spots on the head, neck, and back. A white crescent between the eye and the bill extends alongside the black crown stripe. Adult and juvenile females are uniformly sooty-brown with three white dots on the head. Young males achieve their adult plumage after the molt during their second summer.

Range and Habitat

Harlequins are found in the northern hemisphere and winter on both the Atlantic and Pacific Oceans. The larger Pacific population (300,000 birds) breeds in Asia and western North America. Fewer than

15,000 harlequins are thought to exist in the Atlantic population, and they breed in eastern Canada, Greenland, and Iceland. Harlequins that winter along the coast of eastern North America, including Maine, seem to come primarily from a breeding population of about 1,800 individuals



in southeastern Canada

(Quebec, Newfoundland, and Labrador). The closest nesting population occurs on the Gaspé Peninsula. The eastern Canadian population winters from Newfoundland south to Virginia, although the majority winter in the Gulf of Maine. About 1000 birds winter in Maine, primarily at a few traditional sites in outer Jericho and Penobscot Bays.

Eastern North American harlequins nest in the subarctic. They winter in small flocks on rough coastal waters and exposed rocky shores, especially on the outermost, remote islands in Maine.

Life History and Ecology

Beginning in late March, harlequin ducks leave their wintering grounds and migrate to eastern Canada where they breed and nest inland along turbulent mountain streams and rivers. After mating, the females lay 3-8 creamy to buff-colored eggs that are incubated for about 28 days. The nest is frequently on the ground in a rock crevice or dense cover, although nests in tree cavities have sometimes been observed. After breeding, the males depart for molting areas along the coast. Some wintering birds from Maine were documented molting in Greenland. Despite being separated for a period of time each summer, harlequins establish long-term pair bonds that are reformed each year on wintering areas. Fall migration begins in September, and birds arrive on wintering areas in October and November. They winter in the same locations each winter, and the same pairs can often be seen feeding and resting at the same ledge year after year. They forage by diving in the foaming surf along remote, exposed rocky shorelines where they glean amphipods (small shrimp-like animals), small snails, and other marine

invertebrates from the seaweed and bottom. They

spend much of the short winter days feeding, but during warm fall and spring days they haul out on the rocks to rest and preen.

Threats


Compared to other waterfowl, harlequin ducks have an extremely low reproductive potential. They do not breed until they are three years old and have small clutch sizes. In some years, only half of the breeding-age females may breed, perhaps because of limited food resources or other disturbances in the breeding areas. As a result, the eastern North American population is particularly susceptible to sources of adult mortality. Harlequin populations declined from unrestricted subsistence hunting and liberal limits for sport hunting. Hunting was discontinued in eastern Canada and Maine in the early 1990s. A potential threat is oil spills. A catastrophic spill in outer Penobscot Bay in winter could affect most of the eastern North American population.

Conservation and Management

The harlequin was listed as endangered in eastern Canada in 1990, but was removed from the Canadian list in 2001. It was listed as threatened in Maine in 1997. It was a candidate for federal listing in the early 1990s, and in 1998 was petitioned for federal listing. The proposed listing was determined to be unwarranted because of lack of information about movements between the three Atlantic breeding populations.

Because of concern about its status and future, considerable effort has been directed at conserving harlequin ducks in Maine. A University of Maine graduate student completed landmark life history studies in the 1990s and continues to capture and mark birds to document movements, survival, and site fidelity. Considerable research continues in eastern Canada to better document nesting areas and breeding success. MDIFW and others have conducted numerous comprehensive surveys of wintering habitat by shore, boat, and aerial counts. Satellite telemetry and genetic studies are underway to determine the relationship between Canadian and Greenland nesting populations and the origin of birds wintering off the coast of Maine. Population augmentation techniques have not been developed. It is believed that the population will slowly increase on its own in response to protection from hunting and other sources of human-caused mortality. As a state-threatened species, the harlequin is strictly protected in Maine.

Recommendations:

- ✓ Avoid activities that routinely disrupt the feeding of harlequins on wintering areas (e.g., dragging for fish and shellfish, excessive disturbance by bird watchers and waterfowl hunters).
- ✓ Route oil-bearing ships away from known harlequin wintering areas and develop oil spill contingency plans for these habitats.
- ✓ Protect birds from poaching and other sources of human-caused mortality. 

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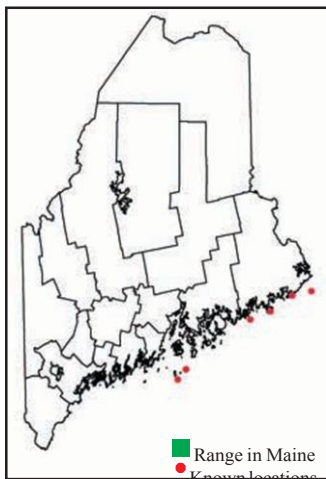
Razorbill

(*Alca torda*)

Description

In the northern hemisphere, Maine's puffins, guillemots, and razorbills are the ecological equivalent of penguins. Appropriately dressed in "formal attire," these tuxedoed birds fly underwater, capture fish, and live in large colonies. Another relative, the extinct great auk, used to winter off the coast of Maine.

Razorbills are short (17 inches long), chunky seabirds with short, stubby wings. They are members of the auk family and are closely related to puffins, guillemots, and murre. The breeding adult razorbill is distinguished by a black back and head, white belly, thick bill, and uptilted tail (when swimming). The black bill is flat with a vertical white mark midway along its length. A white line extends from the eye to the bill. Winter plumage is similar; the bill covering is shed, and the throat, cheeks, and ear coverts are white. Legs and feet are black. On breeding grounds, razorbills make a low guttural or croaking *urrr* sound.



Range and Habitat

The razorbill is found in arctic and subarctic marine waters from Maine to northern Russia. There are about 700,000 razorbills in the North Atlantic, and over 70 percent of the population nests in Iceland. About 330 pairs nest in the Gulf of Maine, which is the extreme



Linda Welch

southern edge of their range. Razorbills nest on rocky, isolated islands, although they occasionally nest on mainland cliff faces or headlands if mammalian predators are absent. Islands must have suitable nesting sites, which include ledges with crevices and boulder fields, and deep rock fissures. Razorbills only nest on three islands in Maine: Matinicus Rock, Freeman Rock, and Old Man Island. The largest colony in the Gulf of Maine is on Machias Seal Island on the Maine/New Brunswick border. After breeding, razorbills stay out to sea along pack ice areas of the North Atlantic. In the western Atlantic, razorbills winter at sea off Atlantic Canada south to Massachusetts.

Life History and Ecology

Razorbills breed for the first time when they are 4-6 years of age. Immatures return annually to breeding colonies, with the youngest birds arriving later in the breeding period and staying the shortest amount of time. As birds get older, each year they arrive at the breeding colonies progressively earlier and spend more time at the colony prospecting for mates and nesting sites. Most return to breed at the colony where they were born, and keep the same mate for several years. Razorbills return to breeding

colonies in Maine in February and early March, about three months before egg laying begins. During this period, they alternate time at the colony displaying and defending nest sites with time at sea feeding. Nest sites are typically under rocks and in crevices. Egg laying occurs during May and June, and is closely related to sea surface temperature. A single egg is laid on bare rock, and is incubated by both adults for about 35 days.

After hatching, the chick is closely brooded by the parents until it can regulate its own body temperature at about 9-10 days of age. When about 18 days old, the partially grown and flightless chick leaves the colony in the middle of the night to avoid gull predation. Primary and secondary wing feathers develop after the young bird has left the colony. The adult male accompanies its chick to sea, where it feeds the chick for several weeks. Adults feed primarily on fish, including sand lance, Atlantic herring, Atlantic cod, and capelin. Fall migration begins in mid-September in Maine. Longevity may exceed 30 years.

Threats

Historically, razorbills were more numerous, but not abundant, at the southern edge of their range. They declined from overharvest for food, feathers, and eggs. In the last 50 years, expanding populations of black-backed and herring gulls became serious predators of razorbills, their chicks and eggs. The presence of gulls inhibits razorbills from recolonizing some former nesting areas. The availability of food can affect breeding success. Incidental take in gill nets can be a serious problem in some areas. Oil pollution and spills have the potential to kill large numbers of birds. Maine razorbill nesting islands are remote and rarely visited by humans, so human disturbance is not typically a concern.

Conservation and Management

Historic data on razorbills in Maine are nonexistent. Hunting and egg collecting eliminated the species from Maine islands by 1890. At some time in the 1900s, they began to return to some former nesting islands, and by the 1970s there were about 25 pairs on two islands. About 180 pairs currently nest on three islands, and the population is believed to be slowly increasing. About 150 pairs nest on Machias Seal Island. Unlike most other endangered seabirds, razorbills still exist on unmanaged islands (Old Man Island and Freeman Rock). These rocky enclaves are unsuitable for nesting gulls, thus providing predator-free habitat for razorbills.

Ongoing gull control and management pro-

grams on Matinicus Rock and Machias Seal Island benefit razorbills. Active programs are underway to establish new colonies at Eastern Egg and Petit Manan Islands. Razorbills were listed as threatened in Maine in 1997 because of their small population size and limited distribution. All razorbill islands in Maine are in conservation ownership and protected by Significant Wildlife Habitat provisions of the Natural Resource Protection Act.

Recommendations:

- ✓ Protect seabird nesting islands and adjacent waters from further development, especially human dwellings, fishing piers, docks, and aquaculture facilities. Review Essential Habitat maps and guidelines prior to development near roseate tern islands. Consult with a biologist from MDIFW and the U.S. Fish and Wildlife Service to assist with planning.
- ✓ Municipalities should strive to prevent development of seabird nesting islands and adjacent waters and identify these areas in comprehensive plans. Consider protecting a ¼ mile buffer around seabird nesting islands.
- ✓ Use voluntary agreements, conservation easements, conservation tax abatements and incentives, and acquisition to protect important habitat for threatened and endangered species.
- ✓ Stay off seabird nesting islands during the nesting season (April 1 to August 15). If visitation is approved (e.g., commercial tours to a seabird island), remain on designated paths and in blinds to minimize disturbance.
- ✓ Keep boat activity more than 660 feet from seabird nesting islands. If birds flush from the island, you're too close.
- ✓ Keep all pets off islands. Do not introduce mammalian predators.
- ✓ Locate aquaculture facilities farther than ¼ mile from seabird nesting islands.
- ✓ Avoid overfishing and polluting nursery areas for herring, hake, and other fish stocks important as food for seabirds.
- ✓ Do not use gill nets near seabird islands or known feeding areas.
- ✓ Do not dump oil, litter, or waste overboard. Even small amounts of oil can kill birds. Seabirds are often injured by eating plastic particles from trash that are mistaken for food.
- ✓ Avoid overboard discharge of fish waste or bait. Predatory gull populations have increased because of this readily available supply of food. 🐦

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