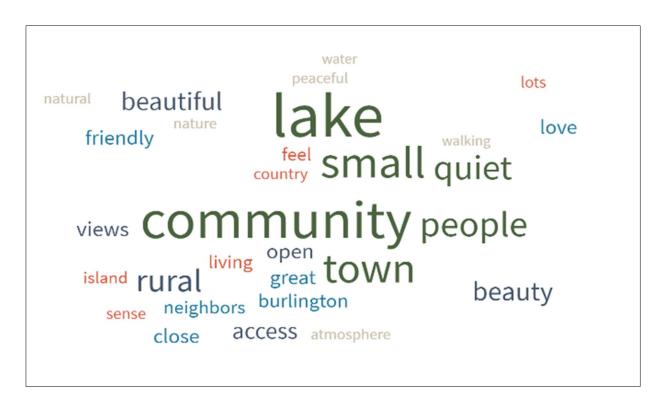
# TOWN OF SOUTH HERO TOWN PLAN 2023-2031





South Hero Town Plan Survey- Word Cloud Based on Responses to the Question "What Do you love about South Hero?"

Written by the South Hero Planning Commission with assistance from Northwest Regional Planning Commission.

### DRAFT FOR AUSTRALIAN BALLOT VOTE BY SOUTH HERO VOTERS

This project was funded through the Municipal Planning Grant Program which is administered by the Department of Housing and Community Development.

Cover Photo Credits: Snow Farm Vineyard, Mary Harwood, South Hero Land Trust

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### 1 Introduction

### Goals & Objectives

- 1. Strive for public participation in the planning process at all levels.
- 2. Understand what the Town's residents want for the future "look and feel" of the Town balanced against the potential impact on taxes.
- 3. Build upon and continue to improve our relationships with neighboring towns.

### **Implementation**

- 1. Encourage citizen participation at all levels of the planning process.
- 2. Continue working with Town residents to find ways to turn their vision for the future of South Hero into reality.
- 3. Collaborate with other municipalities and regional organizations to address important regional issues, such as improving water quality in Lake Champlain.
- 4. Consider the impact of land use decisions on adjacent municipalities.

### Vision Statement

South Hero, Vermont is a friendly, vibrant, and beautiful small Lake Champlain Island town where folks live, work, play and visit. The abundant recreational, agricultural and cultural amenities support healthy lifestyles, a sense of community, and a thriving local island economy.

### **Themes**

As part of the development of the 2023 South Hero Town Plan, the Planning Commission identified five key themes to prioritize. Given that these themes cut across traditional areas of planning, the following icons are used to indicate where these themes are found throughout the plan.



Vibrant Villages



**Housing and Transportation** 



Recreation and Recreation Economy



**Equity & Inclusion** 



Climate Change and Resilience



Figure 1.1: South Hero Town Plan Survey-Word Cloud Based on Responses to the Question "What Do you love about South Hero?"



Figure 1.2: The Narrows. Credit: Mary Harwood

### Equity and Inclusion

The South Hero Town Plan seeks to incorporate the principles of equity & inclusion in its process, vision, goals, and policies. Removing barriers to equitable opportunities for all residents allows the whole community to thrive.

Much like the other key themes, equity is not an independent goal but rather a consideration that helps to inform all other goals. In each chapter of the plan, readers will find a section explaining how the Town's goals & policies will work towards a more equitable and inclusive community.

Each person has a valuable perspective on how the Town can best support its residents, and an equitable and inclusive South Hero recognizes this and strives to engage the whole community in its planning efforts. Engagement opportunities included a survey, community events and dedicated workshops, all with the goal of reaching residents who may not typically be involved in municipal planning efforts.

The Town recognizes that the work of creating an equitable and inclusive community is an ongoing process and is committed to continuing to reevaluate how to ensure its planning best supports its goals for equity and inclusion.

The Town of South Hero adopted a declaration of inclusion on June 14, 2021, the full text of which is included below.

### **Defining Equity and Inclusion**

Equity: Equity is ensuring fair treatment, access, opportunity, and advancement for all people, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some communities.

Inclusion: Inclusive environments are places in which any individual or group is and feels welcomed, respected, supported, valued, and able to fully participate as their authentic selves. An inclusive and welcoming culture embraces differences, offers respect in words and actions for all people, fosters a diversity of thought, ideas, perspectives, and values, strives to create balance in the face of power differences.

Source: Vermont League of Cities and Towns



### Town of South Hero Declaration of Inclusion

The Town of South Hero condemns racism and discrimination in all forms, and welcomes all persons, regardless of race, color, religion, national origin, sex, gender identity or expression, age, disability or sexual orientation. The Town of South Hero commits to fair and equal treatment of everyone in our community and to be a place where individuals can live freely and express their opinions.

Adopted by the Town of South Hero, June 14, 2021

### Community Engagement

A key goal of the 2023 update process was to reach a broad range of residents to develop a community supported vision for the future of the Town. To achieve these goals, the Town Planning Commission held several public events, met with local organizations, and conducted a survey.

### Community Organization Meetings

To inform initial focus areas for the plan outreach efforts, the Town met with local & regional organizations including the Grand Isle County Alliance for Racial Equity, Take Action, Grand Isle Natural Resource Conservation District, Friends of Northern Lake Champlain, CIDER, Transportation Advisory Committee, Champlain Valley Office of Economic Opportunity, the South Hero Recreation Commission, South Hero Land Trust, and Local Motion.

### Town Plan Survey

The Town Plan Survey included 23 questions covering demographics and the following themes: housing & transportation, climate change & resilience, equity & inclusion, recreation & recreation economy, and vibrant villages. The survey was distributed online & in paper form at the Town Office and Worthen Library. Residents were sent a postcard with a link to the survey, and the survey was available at the June Community Cheers and Cheese event. The survey received 207 responses; 11.7% of year-round adult residents responded to the survey and 32 responses were received from seasonal residents. An analysis of the survey response demographics found that the survey underrepresented renters and residents aged 18-34. Therefore, it is important to consider that the survey may be biased as it relates to issues that primarily affect these groups. A full account of survey results can be found in the appendix.

### **Community Events**

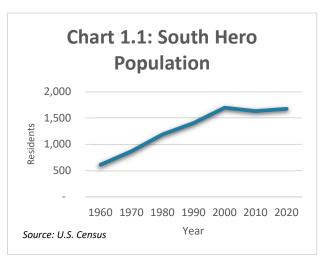
The Town Planning Commission participated in two "Community Cheers & Cheese" events. During the June events, residents were encouraged to leave comments about what they would like to evolve, maintain, and transform about South Hero

During the August event, the Planning Commission asked for feedback on a draft vision statement. The Planning Commission was also available to discuss the plan with residents at the Farmer's Market several times throughout the summer.

The Town held a Village Vision Workshop in September 2022. Attendees discussed the current character of the two village zoning areas, and the desired future build-out via a map exercise.

The results of all these public outreach efforts have directed the vision, organization and goals & policies throughout this plan. Survey results and community input are noted throughout the plan, and have driven the vision, goals and policies found throughout the plan.

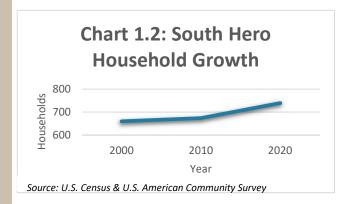
### Town Data Profile



As of 2020, South Hero has 1,674 year-round residents. South Hero's population grew rapidly from 1960 to 2000 and has stayed relatively stable over the last 20 years.

There is no specific data on percentage of seasonal residents, but it is understood that they are a significant group in South Hero.

South Hero's population continues to age, with a 12% increase on the population over age 65 in the last 12 years. Despite this, South Hero continues to attract younger families, and the population under 18 has stayed relatively stable over the past 10 years.



While population growth has slowed in the last 20 years, the number of households has continued to grow. This is likely due to a reduction in average household size in the region over the same period. Growth in the number of households will mean that the same population requires additional housing units over time.

## Compatibility with Neighboring Municipalities

From transportation to land use to water quality, a community's planning effort cannot happen without involving adjacent communities within the region. The Town of South Hero is adjacent to the Towns of Grand Isle in Grand Isle County and Milton and Colchester in Chittenden County. The following is a review of the relationship between the South Hero Town Plan and the plans of adjacent communities:

### Grand Isle

The Town of Grand Isle's town plan was adopted in February 2007. The Rural Residential/Agricultural Zoning District, Commercial Recreation Shoreline, and Residential Shoreline Districts are immediately adjacent to South Hero's Residential District. These districts have comparable permitted and conditional uses. The South Hero Plan does not conflict with the Grand Isle Town Plan.

### Colchester

The Town of Colchester's town plan was adopted on April 19, 2017. Colchester is not accessible to South Hero via road, but is connected via the Island Line bike path and ferry during the summer. Residential One District and Flood Plain District are the most adjacent to South Hero. Land uses are compatible with proposed land uses in the adjacent areas of

South Hero. Lake Champlain serves as a buffer between the lower densities of South Hero and areas of Colchester with higher densities. The nearest growth center to the Town of South Hero is the Local Growth Center in the Town of Colchester at Exit 17 on Interstate 89.

### Milton

The Town of Milton's town plan was adopted on February 5, 2018, and last amended in 2023. Milton's zoning districts on the border of South Hero are Agricultural/Rural Residential (R5) and Shoreland Residential (R6), as well as a Flood Hazard Overlay District. These Milton zoning districts include uses that are comparable to uses permitted in the Shoreline and Flood Hazard District in South Hero, the zoning districts located on the South Hero side of U.S. Route 2.

### Relationship to Regional Plans

South Hero is a member municipality of the Northwest Regional Planning Commission (NRPC), which provides a forum for municipalities in Franklin and Grand Isle County to act on behalf of the region. All communities, including South Hero, are entitled to equal voting representation by two locally appointed members of the governing Board of Commissioners. Each member municipality has the opportunity to participate in the NRPC Policy/Project Review Committee, Transportation Advisory Committee (TAC), Brownfield Redevelopment Program, and other subcommittees. NRPC is required to adopt a Regional Plan per Title 24, Chapter 117 of the Vermont Statutes Annotated. The Regional Plan is intended for use as a legal document, as a guide for decision makers and as an action plan to address issues of regional importance. The Regional Plan for the NRPC was adopted on July 29, 2015. South Hero is primarily in the agricultural Resource Planning area, which is compatible with South Hero's zoning. The Regional acknowledges village centers as an appropriate location to maintain historic character of denser residential and commercial uses. The South Hero Town Plan conforms to the Northwest Regional Plan. The Chittenden County Regional Plan calls for the areas of Milton immediately adjacent & the closest portions of Colchester to South Hero to remain rural.

### 2 Natural Resources and Land Use

### Goals & Objectives

- 1. Allow South Hero to grow in a responsible way, with respect for its unique characteristics, natural beauty and rural environment in a manner which encourages and nurtures South Hero's sense of community and civic pride.
- 2. Support agriculture that follows best environmental management practices.
- 3. Ensure the compatible coexistence of development with major ecologically sensitive areas, such as wetlands, natural areas, Lake Champlain, scenic views and historic sites.
- 4. Enable mixed use of residential, agricultural, light-industrial and/or commercial developments to flourish in the Town.
- 5. Encourage commercial and small, light-industrial development within or adjacent to the designated Village Centers and along Route 2 and Route 314 in a way that maintains the beauty of the entrances to the Town from the east and west and prevents strip development.
- 6. Take advantage of existing or historical hamlets where appropriate.
- 7. Increase public awareness of the unique characteristics of South Hero in an effort to help preserve those characteristics for future generations.
- 8. Enhance public access to the lake in an environmentally responsible manner.
- 9. Support efforts to reduce pollution and cleanup Lake Champlain, groundwater and air quality.
- 10. Re-evaluate and prioritize the "scenic views" list with consideration of how it can support protecting scenic views in the Town's Development Regulations.

### **Implementation**

- 1. Restructure the Town's Development Regulations to define and include the Proposed Land Use Areas of Village Core and Village Neighborhood.
- 2. Define "village core" area and "village neighborhood" area in the zoning regulations, encourage development in those areas and take steps to improve pedestrian and bicycle safety, and enforce appropriate speed limits.
- 3. Evaluate making provision for a Town Center with adequate capacity to host the Town Offices, recreation fields and other functions and facilities as the need develops. Commercial enterprises, in a public/private partnership or just private, should also be included in the evaluation.
- 4. Support purchase and/or donation of development rights to maintain agriculture and important natural areas outside of the village areas.
- 5. Encourage agricultural easements in subdivisions and promote Planned Unit Developments (PUDs) where soils are suitable.
- 6. Require that "building envelopes" be defined for house sites in subdivisions to ensure coexistence with wetlands, natural areas, and farmland.
- 7. Support, encourage and inform the public about innovative solutions for safe sewage disposal.
- 8. Support the development of retail, hospitality and service-based businesses best suited to serve the needs of residents, seasonal residents and the tourist population.

- 10. Administer town regulations in a fair, consistent and efficient way and monitor them for their effectiveness and enforcement.
- 11. Support and participate in Federal, State and local efforts to improve water quality in Lake Champlain. Ensure Town Development Regulations support that effort.
- 12. The Town Planning Commission and Conservation Commission should stay up to date on State and Federal regulations concerning wildlife, wetlands, natural areas, and water quality. Furthermore, the Commissions should determine how best to regulate these areas and monitor the effectiveness and enforcement of Town regulations.
- 13. The Town shall support, seek out and apply for State, Federal and private grants for the protection of natural areas, wetlands, scenic areas, recreation areas, and wildlife habitat.
- 14. The Town shall support donations, leases, and other private, voluntary ways to protect natural areas, wetlands, scenic areas, recreation areas, and wildlife habitat.
- 15. Town zoning and subdivision regulations shall be strictly and consistently enforced. All Town officials should be well-informed about these regulations.
- 16. In the Town Development Regulations, provisions shall ensure that development compatibly coexists with the following special environmental areas:
  - a. Natural areas, especially significant fossil sites
  - b. Critical habitat
  - c. Public access areas on the lake shore
  - d. Lake Champlain shoreline i.e., wetlands, including the "Crick" and the area of Round Pond
  - e. Scenic views
  - f. Flood plain areas
- 17. Ensure that the conversion of seasonal homes to year-round use meets local zoning standards and results in safe and adequate sewage disposal, water supply, and road access.
- 18. To protect the Lake Champlain shoreline and recognize its diverse and unique character, the Town Planning Commission and Conservation Commission shall keep apprised of lakeshore land use and identify shoreland areas that may be treated differently in the Town regulations.
- 19. Support State of Vermont efforts to minimize pollution to the Lake and groundwater.
- 20. Work cooperatively with the newly created Conservation Commission where appropriate.



Figure 2.1: Birdhouses in South Hero. Credit: Jared Katz.



### Natural Resources

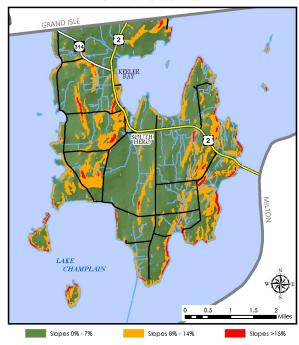
The character and capacity of development in South Hero is physically influenced by topography, geology, soils, groundwater and surface water. This chapter provides a basis to understand the physical character of the Town and its limitations and suitability for development. The Vermont Geological Survey, the **USDA Natural Resource Conservation Service (NRCS)** Web Soil Survey, Vermont Significant Wetland Inventory and other resources provide valuable information on the Town's natural resources. This information be can viewed at https://anrmaps.vermont.gov/websites/anra5/.

### Topography and Geology

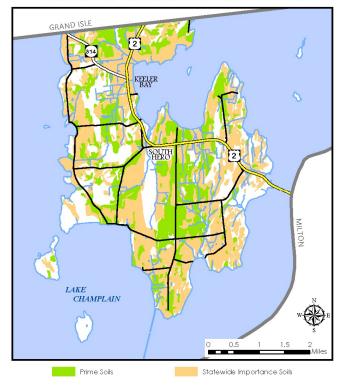
South Hero is comprised of the southern portion of South Hero Island and the 7 outer islands of Providence, Stave, Fish Bladder, Cedar, Kellog, Sawyer and Carlton's Prize. South Hero is primarily low and flat with a few ridges and hills. The highest point in South Hero is a rounded hill reaching 279 feet above sea level about 1.8 miles southwest of South Hero Village. There is a small amount of land on hills and on the shorelands that have steep slopes over 15%. Development in these areas could result in destabilization and environmental damage, and therefore should be avoided.

The Town is within the Champlain Lowlands physiogeographic region and has been shaped by historic ice ages and seas. As a result, there are many geologic sites of interest in South Hero. Fossil evidence may be found in many rock outcroppings throughout the Town as much of the rock is in layers of sediments put down over millions of years. Lessor Quarry, located south of Sunset View Road approximately 0.25 miles from Route 2, is made up of Ordovician limestone about 450 million years old. It consists of thick layers of dark blue-gray limestones with fossils and occasional thin layers of shale. The site is used for research and field trips by UVM and other area students, however, it is on private land and permission must be granted before visiting the site.

### STEEP SLOPES



### PRIMARY AGRICULTURAL SOILS



### Soil and Earth Resources

Agricultural Soils. Soils that have the highest potential for agriculture based on soil physical and chemical conditions are mapped by NRCS and known as primary agricultural soils. The NRCS soil survey places soils in value groups that determine whether they meet various types of primary agricultural soils. The primary agricultural soils map shows highest value Prime soils and second highest value statewide Importance soils for agriculture. Not surprisingly, South Hero is made up almost entirely of soils that have good potential for agriculture. The Town's efforts to concentrate growth in villages and to carefully site limited development in the rural areas will help to preserve agricultural soils.

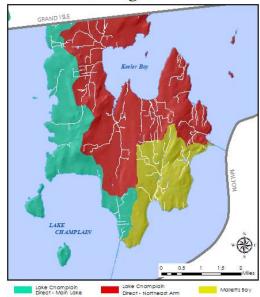
Earth Resources. Earth resources, including sand, gravel and stone, are important resources particularly for use in construction and road maintenance. Mapped soil data from the NRCS shows limited potential for sand and gravel extraction in the Town.

There is one mapped quarry in the area where there is sand and gravel potential. The Town of South Hero acquires sand and gravel from Highgate, gravel from North Hero, and salt is sourced from Barrett's Inc. Given the limited potential in Town, the likelihood of finding suitable property for a municipal sand/gravel quarry is not favorable unless the Town looks outside its borders. Despite this limited potential, it is important to ensure that any quarry, public or private, is properly designed, engineered and managed. Zoning standards shall include performance standards for extraction, noise, dust, hauling, reclamation and bonding to minimize impacts to neighbors. Proper end of life reclamation shall also be required.

### Water Resources

Streams and Drainage. South Hero falls into the "Northern Lake Champlain Direct" watershed. Water from a series of unnamed streams and wetlands generally flow directly into Lake Champlain and needs to be monitored for excess phosphorus and other lake pollutants.

### WATER RESOURCES: Northern Lake Champlain Drainage Basin



TOPOGRAPHY



Factors such as, larger rivers flowing into Lake Champlain, including the Lamoille (Colchester) and the Winooski River (Winooski), and overflows from the Burlington area can negatively affect the quality of water on the south end of South Hero Island. Flow from St. Albans Bay can negatively affect the Inland Sea area of South Hero from the Sandbar Causeway north around Kibbe Point into Keeler Bay and north to the Grand Isle Town border. Many homes get their drinking water directly from the Lake along the entire South Hero shoreline.

Groundwater. Some South Hero residents rely on groundwater wells for drinking water. The Town's limited aquifer sources should be protected to ensure good water quality. Some wells in South Hero are impacted by hydrogen sulfide gas and residents may choose to treat their wells to address this.

Wetlands. Wetlands are mostly semi-aquatic lands that are flooded or saturated by water for varying periods of time during the growing season. In all wetlands, the presence of water creates conditions that favor the growth of certain plants, such as cattails, water lilies, alders, dogwood, red maple, and swamp oak. Wetlands are important to the Town because they provide flood and storm water storage, surface and ground water protection, shoreline anchoring and erosion control, wildlife and migratory bird habitat, threatened and endangered species habitat, educational and recreation opportunities, and open space and scenic beauty.

The Vermont Significant Wetland Inventory shows the location of wetlands mapped, however, this map is not completely accurate or comprehensive and currently being updated. The State is working to improve the map by revising inaccurate wetland locations and adding new wetlands to the inventory, specifically those that are over a halfacre in size, that are connected to water, that are a vernal pool or headwater, and that contain significant natural communities, or rare species habitat.

The two most significant wetlands in South Hero are the South Hero Marsh Wildlife Area (the "Crick") and the Round Pond State Park. The South Hero Marsh Wildlife Area outlets on the north side of U.S. Route 2, just west of South Hero Village, and extends southerly nearly to West Shore Road. The "Crick", roughly 250 acres in size, is mostly emergent (nonwoody vegetation) wetlands with a mix of open water, scrub/shrub wetlands, and forested wetlands. Round Pond is situated near the shoreline, southeasterly of the intersection of Landon Road and East Shore Road.

The pond is mostly open water; the wetland is more extensive and includes some marshes northerly along the shoreline. The area is an important protected nesting area for loons.

Lake Champlain. South Hero not only depends on Lake Champlain for drinking water, fishing, swimming, boating and other recreational pursuits, but for its identity and sense of place. Summer tourism and property values are tied to its health and beauty. The Lake attracts businesses with a work force that appreciates the Lake's natural beauty and Vermont's working landscape.

Unfortunately, too much pollution is reaching Lake Champlain. Stormwater runoff travels into rivers, streams or directly into Lake Champlain from agricultural land, roads, parking lots, lawns, athletic fields, buildings, industrial facilities, forest harvesting operations, and streambank erosion.

Wetlands in Vermont are classified as Class I, II, or III based on the functions and values which they provide. Development on a Class I and II wetlands requires a VT Wetlands permit from the Department of Environmental Conservation.



Figure 2.3: View of Round Pond State Park. Credit: South Hero Land Trust

During periods when Lake Champlain is in flood stage, septic systems near the Lake are in danger of flooding and contributing to the pollution problem. Wastewater treatment plants off Island, in particular Burlington, Winooski, and St. Albans are an additional source of water pollution to Lake Champlain's waters. South Hero recognizes the importance of clean water, a clean Lake Champlain and the negative impact a polluted Lake Champlain has on the State's economy. South Hero supports all efforts to eliminate all polluting of Lake Champlain.

Phosphorus is one of the nutrient pollutants found in stormwater and arguably the greatest threat to clean water in Lake Champlain. Too much phosphorus pollution stimulates excessive growth of algae and nuisance aquatic plant growth. Of particular concern is the toxic cyanobacteria, also called blue-green algae, that can turn the water green, release a horrid odor and make people and pets' sick. For waters not meeting Vermont State Water Quality Standards, needed pollutant reductions are identified through Total Maximum Daily Loads (TMDLs). Tactical basin plans describe how these pollutant reductions will be achieved by outlining priority projects or actions, based on monitoring and assessment data, to protect or restore specific waterbodies. South Hero is within the Northern Lake Champlain Direct Basin (Basin 5), which completed a Tactical Basin Plan in 2020. The Plan recommends that South Hero complete a stormwater management plan to identify ways to limit nutrient loading from stormwater.

Town Plan Survey Results

Respondents to the 2022 South Hero Town Plan survey strongly supported efforts to improve the water quality of Lake Champlain. Over 70% supported developing a stormwater master plan for the village area and more than two-thirds supported exploring municipal wastewater management in the village areas.

Stormwater Management. In South Hero, stormwater infrastructure consists of a series of catch basins, culverts, lines, and swales that transport stormwater to outfall points in Lake Champlain. Stormwater is a major cause of the impaired water quality in Lake Champlain. As noted above, the Tactical Basin Plan recommends that

South Hero prepare a stormwater management plan to identify ways to further manage and treat stormwater before it makes its way to Lake Champlain.

Modeling has identified Keeler Bay for high phosphorous loading and as a result it is a priority for remediation and restoration.

Stemming from this data and planning, the South Hero Land Trust and Grand Isle County Natural Resource Conservation District are leading a Keeler Bay Action Plan, with funding from the Lake Champlain Basin Program.

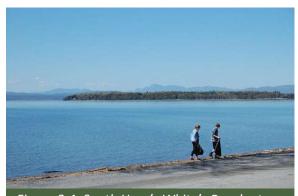


Figure 2.4: South Hero's White's Beach at Green Up Day. The town beach is named after a family who lived nearby.



Figure 2.5: This new stone lined ditch on Kibbe Point Road was funded by Grants In Aid in 2022 and will reduce erosion and improve stormwater infiltration.

The State issues a Municipal Roads General Permit every 5 years. A permit was issued in 2023. Receiving the permit required commitment to reduce stormwater-related erosion from both paved and unpaved municipal roads. It covers discharges of regulated stormwater for Town highways (Class 1-4) and municipal stormwater infrastructure associated with Town highways. Municipalities are required to implement a customized, multiyear plan to stabilize their road drainage system. Funding through the Grants In Aid program is available for implementation projects.

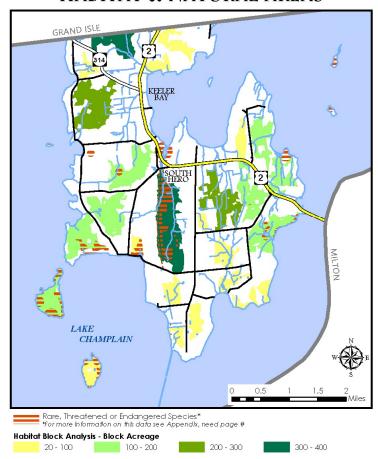
Another way that South Hero can work on limiting the amount of stormwater that makes its way to Lake Champlain is to require that developments incorporate Low-Impact Development (LID). LID controls stormwater runoff at the lot level aiming to keep rainwater on-site before slowly releasing it. Examples include limiting impervious surface; adding green infrastructure techniques, such as rain gardens, rain barrels, and site designs that allow maximized on-site infiltration of stormwater.

## Habitat Blocks, Wildlife Corridors and Forest Land

Wildlife is an important natural resource and an indication of a healthy, sustainable environment. The most important wildlife habitat blocks in South Hero consist of wetlands. The highest ranked habitat block is the area around the Round Pond Natural Area, while the largest habitat block is the Roy Marsh Wildlife Management Area that runs behind South Street from Route 2 to West Shore Road. The majority of both these areas are already protected as conserved land. Continuing to preserve these and the smaller habitat blocks is a priority for the Town. Over time, even low-density rural development and roads can fragment these areas, threatening the health, function and value of these forest areas. Any forestry use should follow accepted management practices.

South Hero has scattered areas of forested land, including mature forest, wetland forests, and young

### HABITAT & NATURAL AREAS



forests that are growing up from old farm fields and pastures. The Champlain Islands support growth characteristics of Central Woodlands, such as shagbark hickory, basswood, several maple varieties, beech and red and white cedar.

The predominant woodland variety is ash, exceeding 50% coverage in some parts of town. The invasive Emerald Ash Borer beetle (EAB) first infested South Hero in 2018. While EAB has spread into most of Vermont's counties, its population is low and it has infested only a very small percentage of the State's total ash trees. Managing the movement of infested ash material will slow the spread of EAB and allow time for planning, monitoring, and research. The Town should continue to plan for removal of dead and diseased trees on Town property including Town-road ROW's under "slow-the-spread protocol". Private land owners should be made aware of the impact on their property.

### Air Quality

Air quality is generally high throughout Vermont, especially in rural communities such as South Hero. Motor vehicles are the largest source of air pollution in Vermont, which can create localized areas of poor air quality where traffic is congested. Air quality can also be impacted by weather patterns which carry pollutants from other areas. All efforts should be taken to maintain good air quality in South Hero.

### Scenic Areas

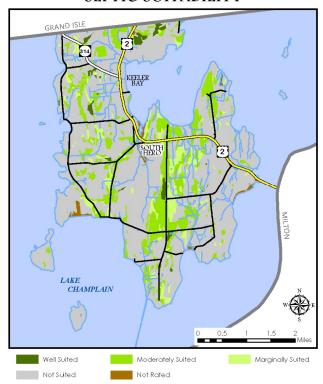
Designated Scenic Views. A scenic view is a publicly accessible area where an important and characteristic open vista may be viewed by the public. Scenic views may be from public roads, public recreation areas and from the lake. Many years ago, the Special Island Environment Committee found 14 scenic views and ranked them from 1 to 4, with 1 being the best. The Town will need to develop review standards in the South Hero Development Regulations to ensure that development is planned and sited with limited impact to these identified scenic views. A full list of scenic views can be found in Appendix A. The South Hero Conservation Commission is in the process of updating the inventory.

### Historic & Archeological Resources

Historic Resources. A historic building inventory identified 99 historic sites in South Hero. The list includes houses, farms, camps, log cabins, school houses, churches, stores, inns, cemeteries, an old boat launch and steam boat landing (from the days before the bridge) and barns. Groupings of historic buildings are in the following areas: 1) Sand Bar Historic District; 2) West Kibbe Point Historic District and 3) South Hero Village Center Historic District. There are no regulations for historic buildings in the Town of South Hero. For more information visit the South Hero Bicentennial Museum.

Archeological Resources. The State maintains an inventory of archeological sites across the State, including in South Hero. These areas are not listed publicly to protect these sensitive areas. Any archeological sites discovered in South Hero should be reported to the Vermont Division for Historic Preservation (VDHP).

### SEPTIC SUITABILITY



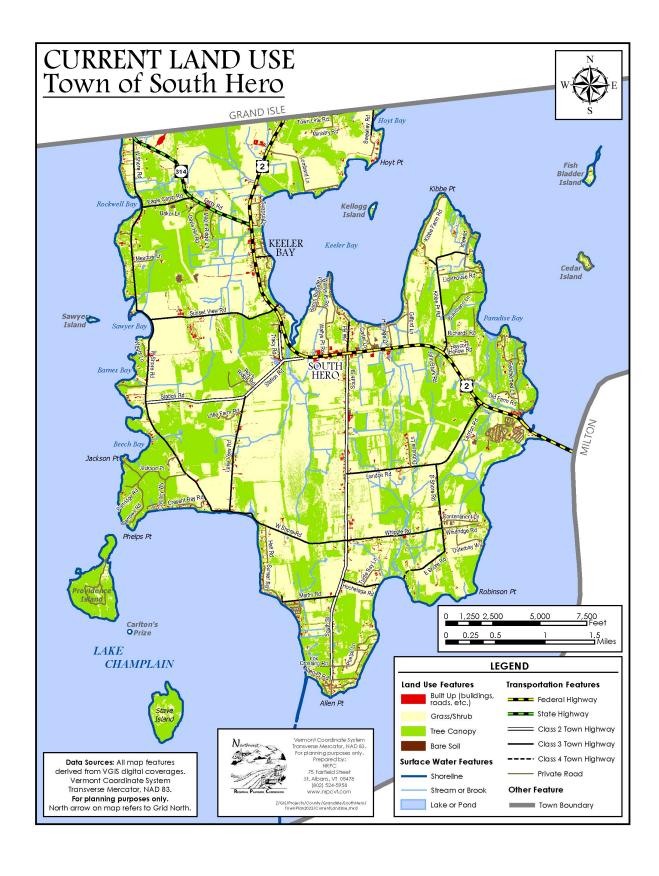
### Land Use

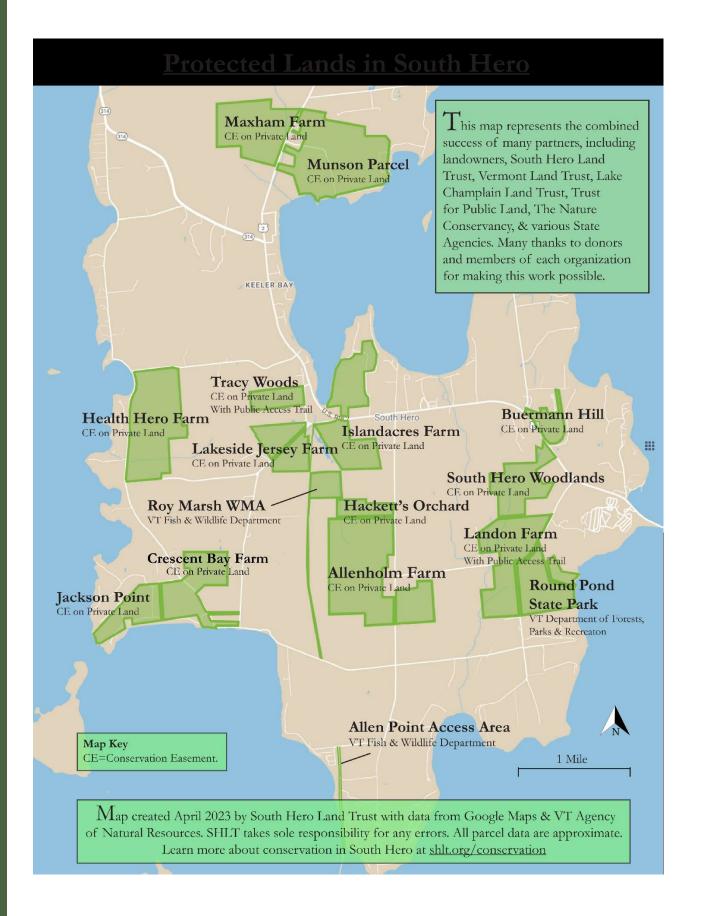
### Current Land Use

Land use in South Hero consists of two village areas along Route 2 and rural areas with dispersed residences, working farms, home based and agricultural businesses, wetlands and open land. These uses are bounded by Lake Champlain with its small beaches, marshes, rocky shoreline, lakeshore residences and seasonal homes.

The Town's history is rooted in agriculture, and over a quarter of the Town's acreage is used for this purpose. The South Hero Land Trust works to protect forest & farmland in South Hero. Over 19% of land in South Hero is protected through one of the land trusts in the State. The amount of farmland in the Town has remained relatively consistent since 2013.

There are no existing FAA authorized airstrips or helipads in South Hero. New airstrips and helipads, although not compatible with most areas of South Hero, shall be considered on a case-by-case basis. Emergency Services shall have access to all areas of South Hero





South Hero has a significant seasonal tourism industry with a large number of summer homes and camps located along Lake Champlain, in addition to a few marinas, public boat launches and a town beach. Roughly 13% of all land is used for seasonal dwellings, with 91% of those parcels being located on the lakefront. The number of seasonal residences listed with the Town has remained relatively consistent from 2013 to 2020.

South Hero's two village areas, South Hero Village and Keeler Bay Village, are located at two junctions along Route 2. The villages

consist of a mix of residential, commercial and public land uses at a higher density than the rest of Town.

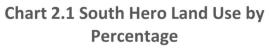
Outside of the village areas, residential development is located on larger rural lots integrated with agriculture, open land and wetland areas. Nearly half of all land in South Hero is in residential use, with an average parcel size of 5.5 acres. However, this number may be skewed by a few very large lots; of the 75% of residential properties on less than 6 acres, the average acreage is 1.7 acres. 33% of all residences are located on the lakefront.

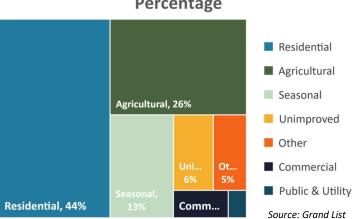
### Considerations for Future Land Use

### Planning for Villages.



South Hero's village areas are important community centers with a mix of housing types and a variety of municipal services and businesses. The Town of South Hero has made a concerted effort to plan for responsible growth in the community that will enable the Town's rural, island character to continue into the future. The Town recognizes that the Town's rural island countryside and its vibrant villages go hand in hand. By planning for and regulating development to be concentrated in the Town's villages, the Town is concurrently setting policy to limit the intensity of development outside the villages. The Town first adopted village zoning districts and associated regulations in 2020. The Town is currently studying whether municipal wastewater management is a possibility, which is critical to allow for concentrated residential





development, infill and

commercial development. The Town is also engaged in a scoping study to make the village more walkable, safe for bicyclists and pedestrians and the streetscape more inviting. The 2023 South Hero Town plan makes further recommendations on how to continue shaping and implementing the vision for South Hero's Villages.

Vermont has established a framework of "designations" to offer incentives that encourage communities to maintain vibrant concentrated settlements separated by rural countryside. These programs provide a variety of incentives for development in the designated areas,. Each program has a set of unique goals for making vibrant places. South Hero Village and Keeler Bay both have Village Center Designation (VCD). The village designation boundary is similar to but different from the village core planning boundaries.

Village Center Designation supports small town revitalization with a variety of tax credits to support improvements to historic properties and priority consideration for several State grants. The VCD program has helped the Town of South Hero receive several State Grants including a Municipal Planning Grant to help create this Town Plan. Village Center Designation is an important tool to further the Town's goals for a vibrant historic village center in South Hero Village and Keeler Bay Village.

Village Center Designation makes the Town eligible for a designated Neighborhood Development Area, another State designation program that provides incentives for residential neighborhoods within or adjacent to village centers. Community scale or municipal wastewater treatment is a requirement: "If community wastewater sites are identified and developed to serve the Villages the Town should consider applying for Neighborhood Development Area(s).

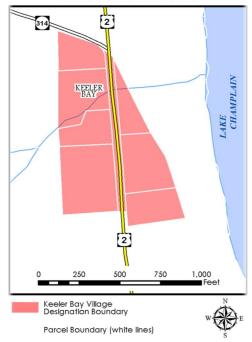
### Commercial and Light-industrial Development.

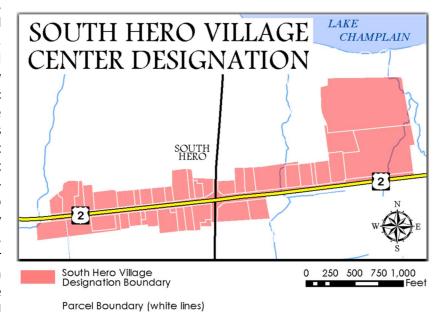
Commercial and light-industrial development in South Hero should be of a scale and impact appropriate for the Town's rural character. There are no areas in Town designated exclusively for commercial or industrial uses. As a result, heavy industry is not appropriate in the Town. Most commercial and light-industrial uses are encouraged

in or adjacent to the villages, however the particular use will determine the appropriate location. All commercial and light-industrial uses will have appropriate review standards that protect the scenic beauty of the Town, protect the quality of life for nearby residences and businesses through robust compatibility with the resources that the Town is trying to protect. Lightindustries in particular will adhere to standards that ensure manufacturing, fabrication, processing, assembly, storage or warehousing does not interfere with the character of the area. Home occupations will be encouraged throughout the Town provided they

fit in with the surrounding neighborhood. All uses must demonstrate that they have adequate road access. The Town is working on developing a comprehensive definition of light-industry to include in the development regulations to further the Town's vision for development.

## KEELER BAY VILLAGE CENTER DESIGNATION





Agricultural Development. Farms of all types are encouraged to remain on primary agricultural soils in the Town of South Hero. The best locations for farms are designated as primary agricultural land in the agricultural soils map. The Town encourages compatible home occupations and accessory onfarm businesses on farms, such as farm stands, value added agriculture enterprises, storage operations in barns, and bed and breakfasts. When a farm designated as prime agricultural land is proposed for subdivision, the Town will work with the owner/developer to locate house sites in a way that protects as much of the prime agricultural land as possible.

Important forest soils and forest resource areas should also be protected for the purposes of preservation and forestry activities.

Seasonal Development. The seasonal home community is important to the character of the Town of South Hero; however, there is a trend of seasonal to year-round conversion. Places that once were only occupied in the warmer months are now occupied year-round. Conversions in places where there is a dense pattern of seasonal homes along the shoreline and where soils for septic systems are poor and road access is limited can be problematic for a variety of reasons. To protect the water quality of the lake, to enable safe and efficient access to properties, and to protect the scenic beauty and fragile character of the shoreline, the Town will take measures within its authority to ensure properly functioning septic systems, year-round road access for emergency vehicles, and adequate lake shore and yard setbacks.

Chart 2.2 Seasonal to Year-Round
Conversions

198

2013
2020
Year

Beyond local authority, Act 172, the Shorelands Protection Act passed by the Vermont Legislature in 2014, imposes State standards and permit requirements that limits new development and tree cutting within 250 feet of the lake (Link to Shoreland Handbook:

https://dec.vermont.gov/sites/dec/files/wsm/lakes/docs/Shoreland/lp\_ShorelandHandbook.pdf").

### Land Use Planning Areas

Land use planning areas lay out a framework for implementing zoning districts and associated standards for land use and development in the Town. The following proposed land use maps illustrate the boundaries of five planning areas, in addition to a conservation and flood hazard overlay, while the following purpose statements prescribe in general terms, the amount, intensity and character of land use and development intended for the area. Zoning, other municipal regulations and ordinances will further the intent of the proposed land use planning areas by establishing zoning districts and appropriate zoning and subdivision standards of review. The permitting of new development shall take into consideration the appropriate timing or sequence of land development activities in relation to the provision of necessary community facilities and as wastewater and services. such water infrastructure.

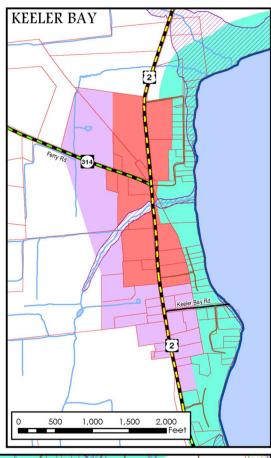
## PROPOSED LAND USE Village Insets

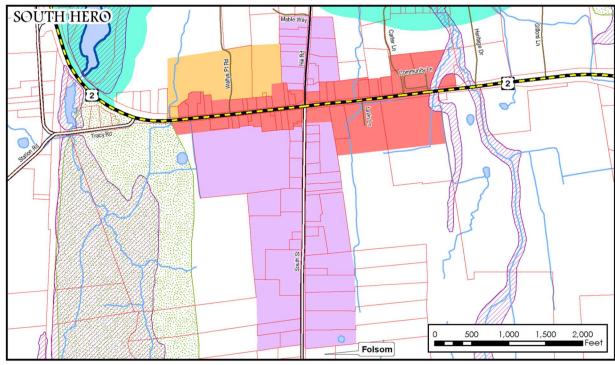


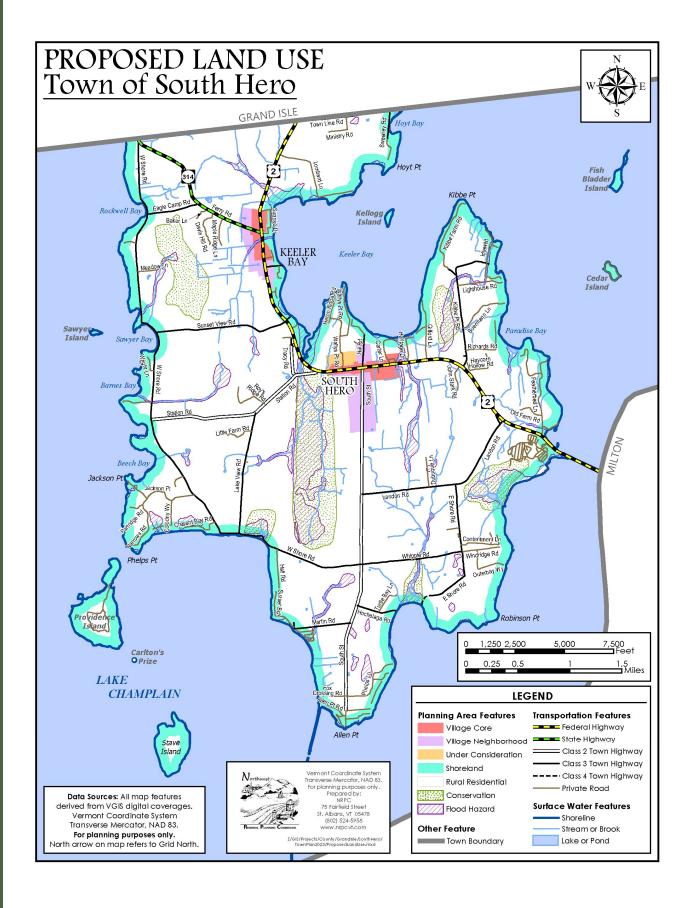




Data Sources: All map features derived from VGIS digital coverages. Vermont Coordinate System Transverse Mercator, NAD 83. For planning purposes only. North arrow on map refers to Grid North.







Village Core Land Use Planning Area Purpose Statement. The purpose of the Village Core Land Use Planning Area is to provide a mixed use, concentrated core of South Hero's traditional village centers. The planning area encompasses the historic village settlement area in addition to adjacent undeveloped land allowing for growth. Historic buildings are an important significant contributor to village character and should be preserved when possible. New development shall be consistent in siting and scale with the surrounding historic structures in the villages.

A mix of residential, commercial and public uses are intended to be located in the village core and should be designed and sited to further traditional village center characteristics such as walkable, pedestrian-friendly streets, sidewalks and walkways; human-scale buildings with architectural details, landscaping and lighting; an integrated street network; shops and services intermixed with homes; a variety of commercial establishments from retail shops to home businesses, professional offices, and tourist services; places for the community to gather for social and cultural events; and government services. Some small, low-impact industries may be appropriate.

To accommodate the planned density and intensity of use in the village core, community wastewater system(s) that allows for collective rather than individual onsite treatment is necessary. The Town is currently engaged in assessing the feasibility of a community wastewater system.

Village Neighborhood Land Use Planning Area Purpose Statement. The purpose of a Village Neighborhood Land Use Planning area is to accommodate walkable neighborhood adjacent to the village core areas. Village neighborhood planning areas are primarily residential in nature at a higher density that the rural residential area, but with less density than the village core. Home occupations and some limited commercial establishments may be integrated but with less intensity than in the village core. The planning area consists of historic residences along main roads in addition to land available for new development. New roads shall be constructed to create an

interconnected, walkable network and residences will be oriented to the street. It is intended that if a municipal wastewater system is developed it would be made available to the village neighborhood in addition to the village core.

Rural Residential Land Use Planning Area Purpose Statement. The purpose of the Rural Residential Land Use Planning Area is to provide for rural residential and limited business land uses at lower densities than the village neighborhood to preserve the traditional working landscape and to maintain South Hero's rural character. Rural residential, small-scale commercial and light-industrial land uses shall be balanced with the natural landscape meadowlands, agricultural fields, wetlands and Lake Champlain views. Home-based occupations and agricultural related enterprises are common throughout the Rural Residential Land Use Planning Area.

Development shall be carefully sited and designed to limit impacts on important natural resources, including; primary agricultural soils, habitat blocks, wildlife corridors, wetlands and other natural areas. Locating development along field and forest edges, limiting the length of roads and driveways and clustering development are all good strategies to minimize impacts. Planned Unit Developments (PUDs) are a regulatory tool that can provide incentives for development that is designed to meet these goals, such as clustering development on smaller lot sizes and conserving the undeveloped portion of the subdivision. Conservation easements, use value appraisal/taxation and other methods that protect important natural resources, particularly primary agricultural soils are supported.



Shoreland Land Use Planning Area Purpose Statement. The Shoreland Land Use Planning Area includes land within 500 horizontal feet measured from the mean water level (95.5 feet above sea level) on the shoreline of Lake Champlain within the Town of South Hero. The purpose of this Land Use Planning Area is to carefully evaluate development in order to protect water quality, scenic beauty and to control development along public waters in the best interest of the community. Some parcels or portions of parcels within this district may be limited in their suitability for development.

Conservation Overlay Land Use Planning Area Purpose Statement. The purpose of Conservation Overlay Land Use Planning Area is to limit development in sensitive natural areas. Included are areas of State identified wetlands, floodplain and other sensitive resources as identified in the South Hero Town Plan with limited suitability for development.

On May 2 & 9, 2023 the Conservation Commission and South Hero Land Trust held a "What Is Important To You – Mapping Exercise" at the Worthen Library. A report will be available on the Town website summer 2023. he Town shall support the efforts of the Conservation Commission to update and provide a comprehensive survey and inventory of the resources and values of the Town of South Hero.









### 3 Transportation and Complete Streets

### Goals & Objectives

- 1. Maintain Town roads and sidewalks in good condition as municipal budgeting and natural contingencies allow, with emphasis on the safety of all users and in compliance with State regulations.
- 2. Provide safe pedestrian access to village resources and businesses with sidewalks and other streetscape amenities.
- 3. Provide a variety of well-maintained scenic trails and paths throughout the Town.
- 4. Continue efforts so that the Town's road network can safely accommodate bicycle and pedestrian traffic.

### **Implementation**

- 1. Implement necessary improvements for compliance with the Municipal Roads General Permit.
- 2. Identify and upgrade undersized culverts to prevent washouts. Use best management practices for managing runoff during road construction or reconstruction.
- 3. Complete a Streetscape Scoping Study to improve pedestrian accessibility, including sidewalks, traffic calming elements and other streetscape amenities. Coordinate with LCIEDC's S.H.O.R.E. project.
- 4. Support and participate with the LCIEDC's S.H.O.R.E project to improve bicycle safety, share the road etiquette and other opportunities to create optimal experiences for cyclists from the Island Line Bike Ferry and local residents.
- 5. Communicate and coordinate with local residents on planned road improvements.
- 6. Support regional cooperation on trail development, interconnectivity of trails and connectivity of trails with destinations in order to provide non-motorized means of travel.
- 7. When conversions of seasonal homes to year-round occupancy are proposed, ensure that adequate all season access is provided for the occupants as well as for emergency vehicles as part of the zoning approval process for conversions.
- 8. Support Safe Routes to School and other walking projects.
- 9. Coordinate with VTrans on pedestrian accessibility and the need for reduced speeds and a crosswalk near the former Sandbar Inn & Restaurant.
- 10. Support public and private policies, programs or other efforts that promote alternatives to single-occupancy vehicle travel such as public transit improvements, car-sharing, telecommuting, flexible work schedules and school bus usage.
- 11. Support the construction of an additional park and ride lot near Exit 17.
- 12. Support CIDER's efforts to provide transportation for elderly, disabled or other non-drivers.

### Transportation

The purpose of the South Hero transportation plan is to provide for safe, convenient, economic, and energy efficient transportation systems that respect the integrity of the natural environment, the vibrant Village areas, and the rural character of South Hero. The plan shall include the maintenance and necessary development of roads, public transit options and facilities for pedestrians, bicyclists, and motorists of all ages and abilities. It is more efficient

to accommodate all modes at the planning and design stage rather than try to retrofit.

### Complete Streets

Complete Streets is an approach to planning, design, construction and maintenance of our roadway network to consider all users, including pedestrians, bicyclists and transit riders. Context and current or potential travel patterns need to be considered in determining the appropriate way to meet the needs

of all modes of transportation. Not every street or road will be used by a wide variety of modes, but a complete streets approach considers all users, and seeks desirable, practical and affordable improvements that will be accepted by the community.

### Roads & Vehicle Traffic

The Town maintains 22.09 miles of Town roads with the use of town owned equipment, a full-time road foreman and 2 other full-time employees. The Selectboard appoints a Road Commissioner who directs the work done by the road crew. The budget is set by the Selectboard, approved by voters, and supported by taxes and additional State aid. Approximately 14 Town roads are paved and 2 are gravel. The decision to pave a gravel road is currently balanced between maintaining a rural aesthetic, slower speeds, the convenience of blacktop and the availability of funds.

U.S. 2, a Federal Highway, traverses for about five and a half (5.783 miles) along the northern side of the Town. There is also State highway, VT 314, connecting US 2 to the ferry in New York State (1.592 miles in South Hero). Vermont Agency of Transportation completes actual and estimated traffic counts. The count shows an increase in traffic on Route 2 from 2019 to 2021 based on an actual count, from 8,837 to 9,156. It estimated a decrease in 2020, likely reflecting less travel during the pandemic. The northern mile of Route 2 and 314 are showing a decrease from 2019 to 2021, but it is based on estimated counts.

There are a large number of privately owned and maintained roads in the Town. The Town provides services on Town highways only. New private roads and upgrades to support new development are required to comply with the Town's Road Standards. The Town is not in the practice of accepting new town roads and is not obligated to, regardless of whether the private road is in compliance with Town road standards.

In response to the Municipal Roads General Permit implemented as a result of the Vermont Clean Water Act (Act 64, 2015) to reduce stormwater runoff and erosion on local roads, South Hero has accessed and will continue to seek funding through the Agency of Transportation Grants In Aid Program to complete stone lined ditches and other important road improvement projects that improve stormwater management and the resiliency of local roads.

### Travel to Work and Commuting

The majority of workers living in South Hero (over 60%) travel to work in Chittenden County, with only 9% remaining in South Hero for employment. As a result, over 60% of commuters have over a 20-minute drive.

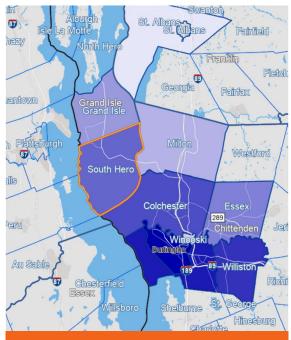


Figure 3.1 Work Destinations, 2019 https://onthemap.ces.census.gov

Table 3.1 Average Annual Daily Traffic Counts (VTRANS)								
Route	Start Location	End Location	2019		2020		2021	
US2	Grand Isle Town Line	MM 1.158	6,111	Est.	5,176	Est.	5,172	Actual
US 2	MM 1.158	Milton Town Line 5.573	8,837	Actual	7,485	Est.	9,156	Actual
VT314	Route 2 intersection	Grand Isle Town Line 1.592	3,242	Est.	2,746	Est.	3,111	Est.

### Bicycle and Pedestrian Facilities

South Hero is committed to ensuring a complete streets approach with roadway projects in the Town. In the village specifically, this will mean the design and construction of improvements for bicycle and pedestrian facilities. In the rural areas of Town, appropriate context sensitive solutions that factor in all users of the road will be employed.

South Hero's roads attract a significant number of pedestrians and bicyclists. There are 4,398 linear feet of existing sidewalk along the north and south sides of Route 2 in the center of South Hero Village. There are no other dedicated Town-owned bicycle and pedestrian facilities (other than off road trail networks). 1,604 linear feet of sidewalk were added since 2017. The Town is committed to expanding the network of pedestrian and bicycle amenities.

South Hero's appeal as a destination for visitors who want to spend a day exploring by bike has been amplified by the Local Motion Bike Ferry, which brings 250+ cyclists into South Hero on weekend days in the summer (200+ during the week).

In 2021, the Lake Champlain Islands Economic Development Corporation received a Vermont Outdoor Recreation Collaborate grant to:

- Better manage and grow cycling and pedestrian activity in the Town of South Hero,
- Reduce friction between cyclists, motorists, residents, and local businesses in South Hero, and
- Maximize the economic impact of cycling and pedestrian traffic on the South Hero economy.

This project will result in a plan for townwide improvements for bicycle and pedestrian accessibility, connection and etiquette.

Specific to South Hero Village and Keeler Bay Village, the Town has received a grant from the VT Bicycle & Pedestrian Program

to develop a scoping study for streetscape improvements in the villages that will calm traffic, improve pedestrian safety and the overall design of the streetscape for pedestrian and bicycle users. This scoping study will start in 2023.

### Why Complete Streets?

- Streets that accommodate all users are safer for everyone, including automobile drivers and passengers.
- © Complete Streets can provide greater mobility and accessibility to those without a car.
- Complete streets can offer a choice for less costly modes of transportation, which has economic benefit to individuals or families.
- Active travel (walking and bicycling) can improve health and provide needed daily exercise.
- It is more efficient to accommodate all modes at the planning and design stage and correct safety issues for non-automobile road users, rather than retrofit after the fact.

Adapted from Complete Streets: A VT Guide for Municipalities, VT Dept. of Health, 2012

Additionally, South Hero Land Trust (SHLT) and the SH Recreation Commission have developed several public access trails, and are now working on a linked network of pedestrian and cycling trails that will connect local parks and beaches to the downtown.

### Town Plan Survey Results

Pedestrian access in the villages was an important priority to residents responding to the South Hero Town Plan Survey. 90% of respondents supported the vision of safe pedestrian crossings and 83% supported the vision of a walkable village with connected and well-maintained safe sidewalks. In an openended guestion about what residents would like to see changed in South Hero, 14% referenced bicycle and pedestrian infrastructure. Throughout the community engagement process for the plan update, residents referenced walkability within the villages as well as bicycle and pedestrian connectivity between the villages as an important goal.

### **Community Transportation**

Commuter Parking. There is one park and ride lot in South Hero on the east side of Route 2 north of Keeler Bay. Park and ride lots allow commuters to access car and vanpool options to save vehicle miles traveled and reduce carbon emissions.

Senior and Special Needs Transportation. Champlain Islanders Developing Essential Resources (C.I.D.E.R.), is a local organization dedicated to providing transportation services to seniors and people with disabilities in order to help them remain independent. CIDER provides paratransit transportation to critical needs such as to medical appointments.

Public Transportation. There are no regional public transit routes that directly serve South Hero, nor does the Town provide any public transportation for its residents (other than the services offered by CIDER). The closest transit stop is located at the Chimney Corners Park and Ride in Milton, which provides service on Green Mountain Transits Milton Commuter (Route 56) or the St. Albans Link Express (Route 96) to Winooski and Burlington. The Town supports a new proposed State Park and Ride off of Interstate 89 Exit 17 in Colchester.

This new Park and Ride would be on the west side of Interstate 89 and would offer easy access to South Hero residents.

The Town supports the expansion of public transportation in South Hero, including expansion of flexible and micro transit options.



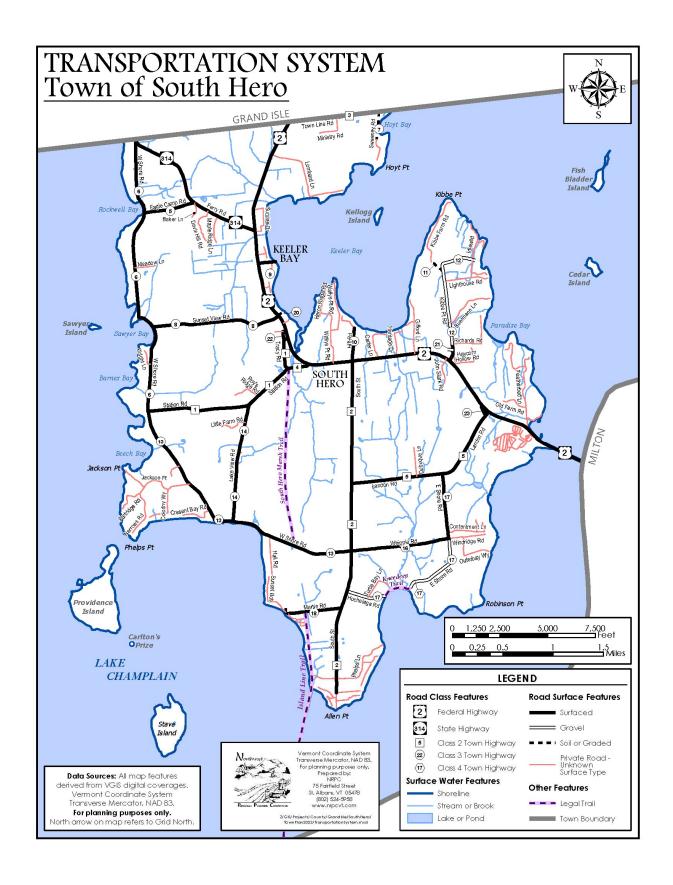
Figure 3.2: Credit: Beth Curtis

South Hero Town Plan Survey Results

As part of the South Hero Town Plan Survey, roughly half of residents stated they would or were unsure of if they would use public transit. The most common reasons for wanting to use public transit were for appointments and transit connections. Almost 2/3s of those interested in using public transit were only interested in occasional use. Microtransit or other flexible public transit options may be able to address these public transit needs.

Ferries. The Lake Champlain Transportation Company provides year-round ferry service between the Town of Grand Isle and Plattsburgh, New York. The ferry dock is located on VT 314 in the Town of Grand Isle. Route 314 is an important link for the ferry traffic traveling to US 2 and I-89.

Air and Rail. Amtrak provides passenger rail service out of the St. Albans and Burlington depot on the Vermonter line which extends down to Washington, D.C. via Boston. A new route was added in 2021 with service to New York City. The Patrick Leahy Burlington International Airport in South Burlington, the Plattsburgh International Airport in Plattsburgh, and the Trudeau Airport in Montreal provide air service to the region. There is one identified water airstrip, West of Stave Island. New airstrips and helipads, although not compatible with most areas of South Hero, shall be considered on a case-by-case basis. Emergency Services shall have access to all areas of South Hero.



## 4 Municipal and Community Facilities and Services Goals & Objectives

- 1. Maintain and upgrade, where reasonable and necessary, municipal facilities and grounds at reasonable costs.
- 2. Strive to meet the basic needs of residents and access to affordable goods and services within Town, including in times of emergency.
- 3. Ensure that new growth does not overburden Town services by planning, budgeting, and exploring new ways to cover costs of growth such as impact fees.
- 4. Increase civic infrastructure, community engagement, and communication through transparent government.
- 5. Support and create outdoor recreation opportunities that are available to the public, including a system of multiple use paths, trails and recreational areas on municipal and private lands.
- 6. Support through policies and regulations the preservation of historic buildings and sites in South Hero.

### **Implementation**

- 1. Promote Town Plan objectives in the adoption of tax policies and planning for public facilities and services.
- 2. Explore innovative ways to finance and provide Town services to reduce property tax burdens.
- 3. Explore ways to save on supplies, equipment and Town services (such as plowing) through cooperative efforts with other towns.
- 4. Encourage the involvement of community members in community affairs and Town government in order to increase the number of individuals represented while addressing Town issues. This will provide a broader perspective of ideas to consider when making important decisions.
- 5. Develop and maintain a capital budget and program that will identify anticipated Town and school capital needs for a six-year period. Seek ways to minimize tax burdens on residents in any one year. The budget and program would contain a time frame for meeting anticipated needs and a method of financing the improvements.
- 6. Support efforts for education funding reform to address the property tax burdens imposed by Acts 60 and 68.
- 7. Investigate adopting impact fees, which would help finance the cost of specific Town services.
- 8. Explore ways to increase the tax base without adding significant burdens on Town services. Among the ways to do this are to encourage light business growth in central locations, the use of vacant private and Town buildings for new uses, and encourage home-based businesses.
- 9. Encourage public/private partnerships to improve Town services whenever possible.
- 10. Encourage volunteers to participate in Town government.
- 11. Support volunteers who are interested in creating and maintaining Town trails and coordinate with regional trail projects.
- 12. Redevelop the Meeting House as a location for municipal and community events.
- 13. Support community events and activities such as farmers markets and Weekend in the Islands (WiTI)
- 14. Ensure the Town continues to be represented in and participate in local and regional planning organizations such as the Northwest Regional Planning Commission, Lake Champlain Islands Economic Development Corporation (LCIEDC) Northwest Solid Waste District, etc.
- 15. Encourage the availability of safe and affordable child care.
- 16. Support the expansion of the Fire District #4 private water district and/or setting up other water districts in concentrated areas of the Town.

- 17. Support efforts to allow properly treated and filtered water from Lake Champlain to be used as potable water for domestic and business use.
- 18. Encourage water conservation and the use of water conservation devices.
- 19. Continue to support state-approved innovative solutions for safe sewage disposal for homes and businesses with waste water challenges. Encourage and embrace innovative new technologies for septic systems that would allow safe effluent disposal in challenged soils.
- 20. Review the results of the 2022-2023 Wastewater Feasibility Study for any possible future action.
- 21. Address the staffing issues of the Rescue Squad and the Fire Department.
- 22. The Town does not provide public facilities and services to the outer islands.
- 23. Encourage the development of communication technology infrastructure to and within the community.
- 24. Ensure a robust emergency services communication infrastructure.
- 25. Encourage access to fast and reliable internet and cellular service in all areas of Town.
- 26. Continue to promote co-location of telecommunication facilities and appropriate siting and screening of these facilities from larger towers to smaller residential dishes.

### Tax Base & Cost of Services

In 2021 Grand List value is based on the 2019 reappraisal. Since 2013, property values on the Grand List have increased 5%. In the same time period, the municipal

budget has increased 60%. This increase has been driven by a few factors including increasing salaries for Town officers and adding emergency services personnel to the budget. The school budget has increased 24.5% in the same period, which is roughly in line with inflation.

Under Vermont's Act 60 and 68, South Hero is required to transfer a significant amount of money raised by property taxes to the State for redistribution to other towns. This means that the education tax burden for South Hero is about double what is needed to support local requirements. Many South Hero taxpayers already feel overburdened by property tax rates, making them reluctant to approve any other spending in the Town. Unless action is taken to relieve the property tax burden, improvements to existing Town services. and the expansion of Town services will be difficult to initiate.

Table 4.1 Property Values on Grand List					
Year	2013	2021	Change 2013-2021		
Total Property	\$492,005	\$516,456	5.0%		
Values (in	7 10 = 7000	, , , , , , , , , , , , , , , , , , , ,	0.073		
thousands)					

Table 4.2 Total Budget by Year						
	2003	2013	Change '03-'13	2022	Change '13-'22	
Town	\$441,025	\$756,439	71.5%	\$1,214,846	60.6%	
School	\$3,454,198	\$3,212,116	-7.0%	\$ 3,997,890	24.5%	
Total	\$3,895,223	\$3,968,555	1.9%	\$5,212,736	31.4%	

In 2022, the Town voted to approve a 1% local option tax on meals & alcohol to fund special projects without increasing municipal taxes. State law needs to be updated to include the Town of South Hero in the list of approved towns to collect the 1% local option tax. Our State legislators are attempting to update this legislation in 2023. Although most of its services are provided locally, the Town is joining with neighboring towns to identify services and resources that can be shared efficiently without sacrificing local control.

### Recreation

### **Recreation Commission**

A volunteer Recreation Commission plans several activities which are supported by tax dollars. For details and up-to-date information on programs visit https://southherovt.org/departments/rec/.

### **Current Recreational Facilities**

State Parks. The Round Pond State Park and Natural Area consists of approximately 125 acres of spectacular wetlands, fields, woodlands, and approximately 1,100 feet of Lake Champlain shoreline.

### Public Trails.

Trails make land available for walking, jogging, bicycling, horseback riding, skiing, and snowshoeing. These uses may not always be compatible with each other and trail planning should consider this.

Trail locations can include existing rights of way for roads and the former railroad bed and negotiated easements or licenses over private property.

There are 7 public trails in the Town. The Tracy Woods Community Trail and the Landon Community Trail are public trail easements on conserved private lands. Round Pond State Park has a trail system owned by the State with conservation and trail easements in place. The Landon-Round Pond Connector Trail is located on Round Pond State Park property. The Roy Marsh Trail is on State-owned land (Roy Marsh WMA) along the former rail bed between Tracy Rd and West Shore Rd. The Town-owned South Hero Recreation Park has trails and is adjacent to the Folsom Education & Community Center. The Island Line Trail is accessed from Martin Rd via the Stateowned Allen Point Fishing Access Area. A seasonal Bike Ferry connects to the Colchester portion of the Island Line Trail.

### Access to the Lake.

Public access to the lake from the Town of South Hero is an important asset which enhances the recreational and scenic value of the town as a whole for residents, seasonal homeowners and visitors.

The public access areas in the Town are shown on the Facilities and Utilities map, and listed below:

- at the end of the public portion of Hill Road;
- at the end of the public portion of Lavigne Road as it comes into Keeler Bay;
- Keeler Bay Road at the first hard curve to the right;
- Vermont Fish & Wildlife Accesses:
  - Guilmette Access Area, at 90
     U.S. Route 2 near Featherbed
     Lane
  - o Keeler Bay Access Area at the end of Sunrise Drive
  - o Allen Point Access to "the Fill";
- Sweeney Farm access off of Town Line Road (winter only);
- White's Beach (owned and maintained by the Town);
- The railroad bed on Keeler Bay, south of Keeler Bay Marina, and
- Round Pond State Park on Landon Road.

### **Future Recreation Planning**

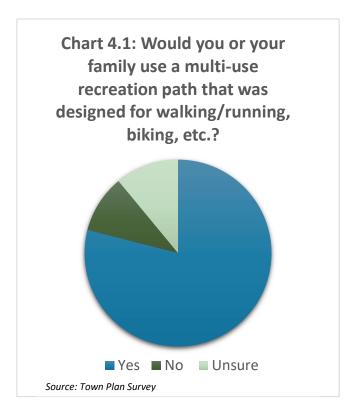
In recent years, there has been a significant increase in the use of trails & recreation spaces highlighting the value of these community spaces. Over 80% of all respondents to the Town Plan Survey stated they would use a multi-use path designed for walking & biking. Developing additional trails and recreational spaces that are inclusive & accessible to all residents is a priority for the Town. Such development will cooperation and negotiation require landowners, Town investigation of liability issues, good access including parking facilities, public support, provision of public safety, protection of wildlife habitat and natural areas, and public funds.

Volunteers can help in easement negotiations, trail planning, trail clearing, fundraising and monitoring. Federal and State funds are available for certain types of trails.

The Town and the Lake Champlain Islands Economic Development Corporation (LCIEDC) (<a href="www.champlainislands.com">www.champlainislands.com</a>) are also considering how to best manage the Island Rail Trail to maximize economic benefits while reducing unintended consequences. The 2022 South Hero Town Plan Survey asked an open-ended question on the role of bicycle tourism in South Hero. While a plurality of residents stated they supported bicycle tourism, residents also noted that there is a need for better planning to ensure safety and reduce traffic impacts.

### Future Park Plans

Recognizing the need for additional recreational opportunities, the Town has begun planning for a future public park to be located behind the Old White Meeting House (South Hero Meeting House) in the South Hero Village. The Planning Commission has put forward as an initial recommendation that \$50,000 of ARPA funds be dedicated to the project and the Town is seeking additional funding sources to further plan & implement this priority.

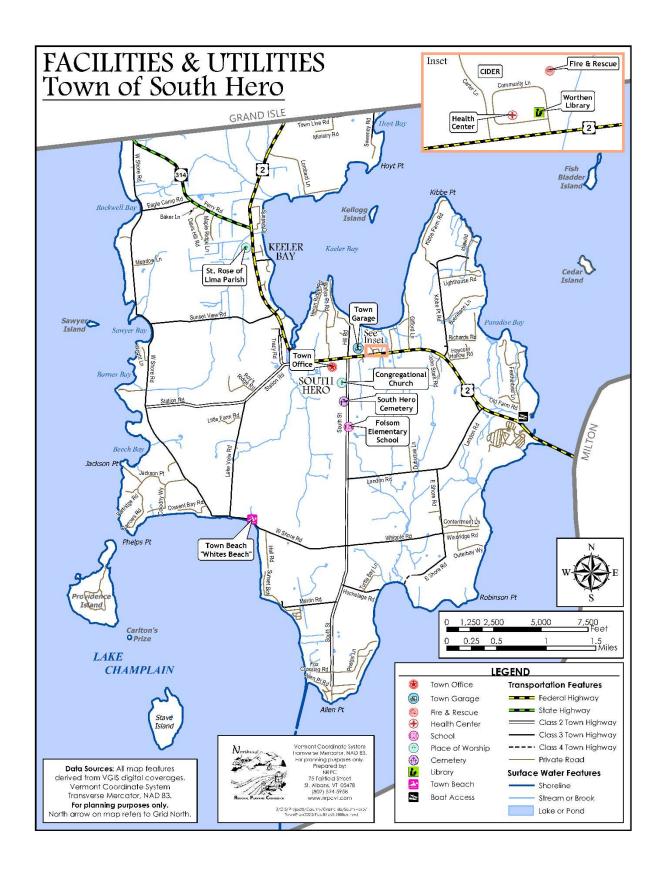


### **Education & Childcare**

### Education

The residents of South Hero recognize that a strong school system has a positive influence on the community. For this reason, it is important that the Town keep, maintain, and enhance the Folsom Education and Community Center. It is integral to the identity of the Town. The school provides a safe educational environment for students and a community building that serves as a focal point for community activities and events.

Built in 1948, and expanded in 1973, Folsom Education and Community Center serves grades K-8. It is noted for the dedication and morale of its teachers and staff, its high academic standards, and activism of volunteers in school and after-school programs. The school maintains an excellent student library. The gymnasium is also the site for the annual Town Meeting and other large community meetings.



After experiencing a peak of around 220 students in 1997, enrollment declined to about 110 students in 2012. Enrollment rebounded to around 150 by 2016 and has been level ever since.

Since GISU does not have a high school, students have school choice. Tuitions are set by the State Agency of Education.

Vocational and continuing education resources available to South Hero residents include the technical centers in Burlington & St. Albans, Vermont Adult Learning in St. Albans, and numerous post-secondary college opportunities throughout the State. Online courses offer continued learning opportunities from home or via the Worthen Library's computer stations.

### Childcare

Over two-thirds of children under age 6 have all parents in the workforce and are likely in need of childcare. There are 1.2 children under 6 for each childcare spot in South Hero, meaning that many South Hero families may have challenges finding licensed care in their community.

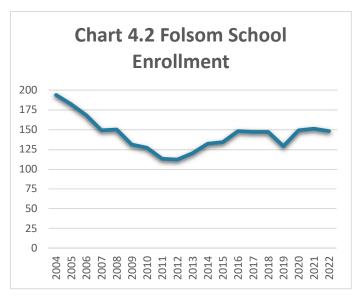
### Champlain Islands Parent Child Center (CIPCC)

The Center received the Allen House in 2002, and the large "Red Building" portion of the Center was built in 2008 and serves as its primary facility for children ages 6 weeks through 5 years.

The Allen House is where universal pre-K students are taught. The Red Building serves as both daycare and preschool. Between both buildings, CIPCC serves 32 preschoolers annually and 24 infants and toddlers. The Allen House is also where the school provides after school care for Folsom students.

### Registered Daycare Centers & Homes

There are two other registered daycare facilities in South Hero. Turn to Joy Early Learning Center is located in South Hero Village and has Infant and Toddler Programs with a total capacity of 24 children. Their preschool program operates in Grand Isle. A registered home-based childcare provider, Roots & Wings, is located on South Street It has a capacity of 10 children from infants to school-ages.



Source: Vermont Department of Education

## Municipal & Community Facilities

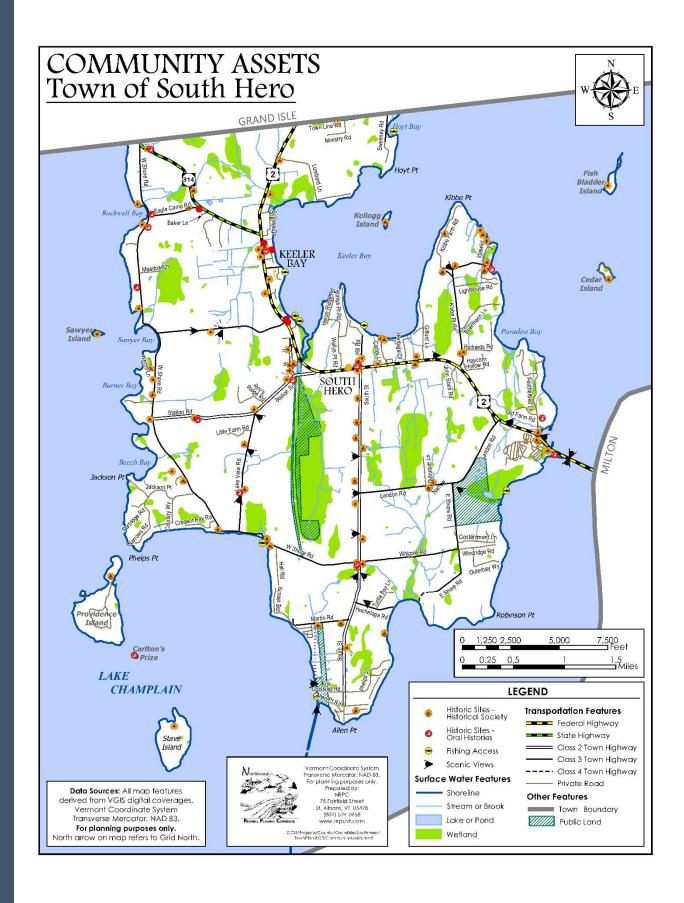
### Solid Waste

There is no Town program for curb-side trash pickup. Residents are responsible for contracting their own service. Several times a year, special trash days are coordinated with the Northwest Vermont Solid Waste Management District (NWSWD) for the disposal of large items. The Town is a member of the NWSWD with transfer stations located at 362 West Shore Road in North Hero and the Georgia Recycling Center located at 158 Morse Dr, Fairfax, VT (see <a href="https://www.nwswd.org">www.nwswd.org</a> for operating hours & closing) and continues to address the problems of household hazardous waste, sludge and other long term solid waste issues through the district.

### Fire Department & Rescue Squad

The Rescue Squad is staffed by a combination of trained volunteers and paid staff. Paid staff were funded by the Town voters starting in 2019 to alleviate staffing shortages. With the construction of the new senior housing facility the Rescue Squad anticipates an increase in calls and is considering hiring staff for nighttime shifts.

The Town Fire Department is staffed by trained volunteers. The main funding of the operations of both these organizations is through public contributions.



Some purchases of equipment for the Fire and Rescue Departments are funded by tax dollars. In 2018, both organizations moved into a shared building on Community Lane.

#### Law Enforcement

The Town has no local police department. Vermont State police as well as the Grand Isle County Sheriffs Department cover all areas of law enforcement from traffic violations to major crimes. The Town currently contracts with the County Sheriff's office for additional coverage and help with enforcement of local traffic ordinances. This coverage includes patrolling of the Town Beach during the summer months and various other extra coverage. If you have an emergency call 911.

#### Library

After a \$1.5 million-dollar fundraising campaign, the Worthen Library was opened in 2019. Moving the library to its own dedicated building has allowed for an expansion in hours, additional programming, and for the library to be used for community meetings. Current programming includes lending books, movies, equipment as well as holding events for adults and children. The Library is primarily funded by Town tax dollars and by private fundraising through The South Hero Library Foundation (an IRS 501(c)(3)).The library is staffed by two salaried librarians and many volunteers from the community.

#### Water & Wastewater

There is no Town water & wastewater system. Fire District 4 is the current private water system which has a pumping and chlorination system to supply water to some of the residents of South Hero and Keeler Bay Villages The District maintains its own budget and funds its operations with assessments separate from Town property taxes. Existing and future water supply needs in the Town could be impacted by the emerging zebra mussel problem in Lake Champlain and the State's prohibition on the use of lake water for water supply in subdivisions. Investment and/or coordination with adjoining towns in providing water supply and distribution should continue to be considered.

In 2021, Fire District #4 installed 1,400 feet of upgraded and new water line to support the development of BayView Crossing, a 30-unit senior housing in the South Hero Village. The extended water line may also support additional growth in the Village.

All residences and businesses must comply with State regulations when installing their wastewater systems. Being a Lake community the Town of South Hero encourages old wastewater systems be upgraded before there is a failure issue. New technologies are available that can even pre-treat wastewater.

The lack of wastewater capacity in the villages creates some barriers to the goal of having vibrant villages with a mix of housing, businesses, and municipal services. Development potential and density (the amount of development per acre) are directly dependent on the capacity of the soil and land to accommodate soil-based wastewater treatment. The Town is currently conducting a feasibility study to understand the potential options for decentralized wastewater treatment in the villages.



#### Cemetery

There is a Town cemetery located on South Street which operates with some Town funding as well as funding from a cemetery trust fund and income from the sale of lots. Old White Meeting House

#### Old White Meeting House

Also known as the South Hero Meeting House, was an historic church & meeting house constructed in 1816 in the heart of South Hero Village. Currently the building's second floor houses Granny's Attic seasonally, while the first floor is unused. In 2019, the Town conducted an extensive survey effort and found that the majority of respondents wanted to keep the building and renovate it for year-round use. The Town has completed initial conceptual design and has received \$100,000 in grants to fund the renovations. The Town and South Hero Foundation (a 501(c)(3) non-profit) are currently working towards funding the remainder of renovation costs through grants, fundraising and potential Town funds. At the 2023 Town Meeting day, residents voted in favor of a motion to conduct a study of the feasibility, cost, and seek grants for moving the Town Offices to the Old Meeting House site.

### Community Health

Community health is measured by a variety of social factors such as education, health care access & quality, economic stability, neighborhood & housing stability, and social & community context. The Town's investments in community planning such as; creating complete streets, recreation opportunities and community spaces like the Worthen Library, Old White Meeting House and proposed Recreation Park will all serve to support multigenerational community health goals.

South Hero has diverse array of health care services, both professional and volunteer, that contribute to the well-being of its residents. They include fire and rescue squads, a physical therapist, chiropractor, yoga studios, massage therapist, the Visiting Nurses Association and the Champlain Islands Parent Child Center and Champlain Islanders Developing Essential Resources, Inc. (C.I.D.E.R.).

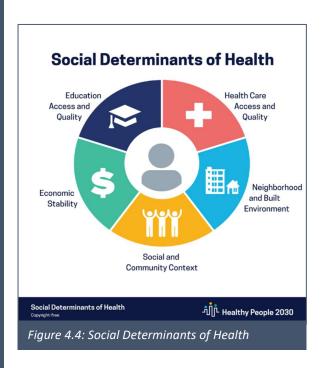


Figure 4.3: South Hero Meeting House (circa 1895)

CIDER is a non-profit group whose mission is "to develop and foster resources that enable the people of Grand Isle County, Vermont to live in their community with dignity." C.I.D.E.R. provides direct services such as transportation and accessibility services, as well as collaborating with other groups. C.I.D.E.R.'s efforts are directed at providing the resources and assistance that individuals need in order to remain living independently in their own homes, including providing wheelchair accessible transportation, senior meals, constructing wheelchair ramps and a variety of other programs. C.I.D.E.R. relies heavily upon over 130 volunteers.

The Community Health Center: Champlain Islands is located in South Hero Village at 52 Community Lane. Offered services include; primary care, medical, mental health and psychiatry. For appointments call: 802-372-4687. The Center is a Federally qualified Heath Center with a mission to serve all, including those typically underserved. The Center is planning to add a Dentist office in 2024. The nearest hospitals to South Hero are Northwestern Medical Center in St. Albans and the University of Vermont Medical Center in Burlington.

A notable loss to the healthcare services of South Hero was the closure of the South Hero Pharmacy in 2020. Residents must now travel off the Islands to access a pharmacy. This has created a healthcare barrier for some residents. There is a need for a pharmacy and the Town supports efforts to restore this health service.



#### **Telecommunications**

Telecommunications facilities in South Hero include Consolidated Communications phone lines, Consolidated Communications Digital Subscriber Loop (DSL), Comcast Cable TV and internet, satellite television and radio, various cellular phone service antennas, wireless Internet providers such as HughesNet and GlobalNet, and shortwave radio frequencies that are operated by amateur operators and emergency services. Free Wi-Fi is available at the Worthen Library on Community Lane in the South Hero Village.

As telecommunications continue to become a vital part of everyday functions both at home and at work, pressures to increase the speed, reliability, and affordability of these networks will continue to escalate.

Northwest Vermont is currently served by one internet transmission line originating to the south. While the majority of South Hero residents have access to service that meets the minimum standards for broadband, 2% still lack broadband service and none are served by high-speed fiber.

The majority of residents have cellular access. The Town should continue to support improvements to the communication infrastructure so that all residents, government services, businesses, and the like can take advantage of existing and developing technologies. To support enhanced broadband access, the Town has joined the Northwest Communications Union District (NWCUD). The goal of the NWCUD is to bring fiber to every home and business in the district.

### Civic Organizations

Civic organizations are involved in children's activities, historic preservation, agriculture, business, social services, church activities, and community events among other activities. The organizations and activities include Masons, Eastern Star, Granny's Attic, 4-H, churches and church activities, Camp Hochelaga (a YWCA girls camp), South Hero Players, and 4th of July Parade Committee.

The South Hero Land Trust (SHLT) is an active organization with the mission of protecting farmland, woodland, natural and recreational areas, and open spaces which help give South Hero its distinctive quality of life. According to their website, over 1,800 acres of land have been conserved in South Hero, protecting farmland, natural areas, lakeshore, and scenic vistas of Lake Champlain and the Green Mountains. SHLT's work also includes farm viability and food accessibility projects, environmental and farm-based education for youth and adults, trail management and building, and ecological restoration projects.

### 5 Housing

### Goals & Objectives

- 1. Encourage the availability of safe, adequate and affordable housing for South Hero residents.
- 2. Guide the Town in achieving well-managed residential growth that includes a diversity of housing types that meet the needs of South Hero's population at every stage of life.

### **Implementation**

- 1. Implement zoning regulations in the Town's rural areas that encourage residential subdivisions to use land efficiently by clustering lots, expanding on the existing road network and sharing infrastructure, while preserving important resource lands, including but not limited to agricultural land and wetlands.
- 2. Implement zoning regulations that allow for concentrated residential development in the village districts at higher densities than allowed in other zoning districts.
- 3. Support efforts to provide adequate infrastructure to support concentrated development in village areas, including community wastewater, bicycle and pedestrian improvements and complete streets.
- 4. Support efforts that incentivize the development of accessory dwelling units for their ability to provide affordable housing options.
- 5. Consider the impact of short-term rentals on the availability of affordable housing for year-round residents.
- 6. Support, and share information about, programs and resources that help to lower cost of home ownership or rental and assist in the preservation and maintenance of existing housing units, such as energy conservation, weatherization, and utility assistance.
- 7. Support, and share information about, programs and resources that assist seniors or low mobility residents to remain in their homes such as HomeShare Vermont, Meals on Wheels, and CIDER.

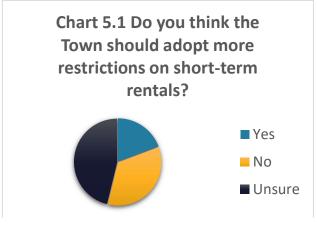
# Current Housing Stock & Households

South Hero has 1,096 housing units. South Hero's housing stock is comprised primarily of single-unit detached homes, the majority of which were built between 1960 and 1999. Approximately 163 units have been permitted in the past 20 years. These permitted units are overwhelmingly single-unit detached dwellings with just 2% of all permits being for multi-unit developments. It is important to note that not all permitted units may have been constructed. In 2022, the Bayview Crossing senior apartment complex opened. This complex has 30 rental units and includes a mix of market-rate and affordable units.

85% of South Hero's year-round occupied housing units are owner-occupied, while 15% are renter-occupied.

#### Seasonal Housing & Short-Term Rentals

Of the 1,096 total housing units, roughly 35% of South Hero's housing stock is used seasonally, which is defined by the Census as units that are lived in less than half the year. According to the Grand List, over 90% of seasonal units have lake frontage. The proportion of seasonal units as a percentage of all housing units has grown by 9% over the last 10 years.



Source: Town Plan Survey

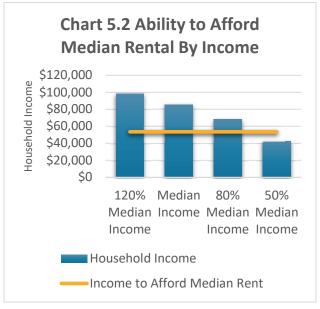
In recent years, the number of short-term rentals has increased across the State of Vermont. Short-term rentals are properties rented for 30 days or less. In South Hero up to 2% of units are used as whole-house short-term rentals. Respondents to the Town Plan Survey were divided on whether or not the Town should implement specific regulations for short-term rentals. The plurality were unsure, while a third opposed restrictions and 20% supported restrictions

### Housing Affordability

Affordable housing is defined under 24 V.S.A . §4303 as shown in the box to the right. According to the U.S. Census American Community Survey, the median household income in the county in 2021 was \$85,154. This is higher than the median income of the MSA or State and was therefore used in the affordability calculations below.

#### Rental Housing

According to the 2021 American Community Survey the median rent & utilities in South Hero is \$1,337. To meet the definition of affordability, a household would need to earn at least \$53,480 to pay the median rent. The median rent is affordable to most residents, but not to those with very low incomes. 18% of current renters in South Hero pay more than 30% of their income for rent (17 households).



Source: U.S. Census American Community Survey S1901 ACS 5 Year Estimate; U.S. Census American Community Survey DP04 ACS 5 Year Estimate

#### **Definitions**

**Affordable Housing**: Under 24 V.S.A. §4303 affordable housing is defined as:

- 1) Owner-occupied housing for which the total annual cost of ownership does not exceed 30% of the gross annual income of a household at 120 percent of the highest of the county median income, MSA median income, or statewide median income.
- 2) Rental housing for which the total cost of renting does not exceed 30% of the gross annual income of a household at 80% of the highest of the county median income, MSA median income, or statewide median income.

**Burlington-South Burlington MSA:** A Censusdefined geographic region consisting of Chittenden, Franklin and Grand Isle Counties.



Figure 5.3. Image of Bayview Crossing Senior Housing Complex. Image Courtesy of Cathedral Square.

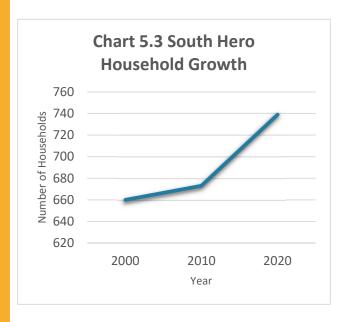
#### Homeownership

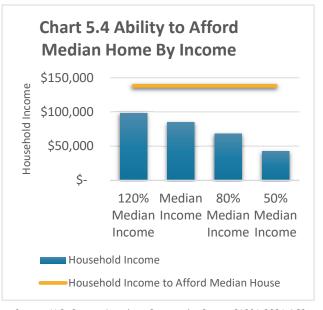
The median sale price of a home in South Hero has increased 74% from 2015 to 2021. Homeownership is extremely unaffordable for households making the median incomes for the county. A household would need an income of almost \$140,000 to afford the median home in South Hero.

Homeownership affordability limits were calculated using the VHFA Affordable Home Price Calculator under the assumption of a mortgage with 5% downpayment, and average interest rates, insurance, PMI and property taxes.

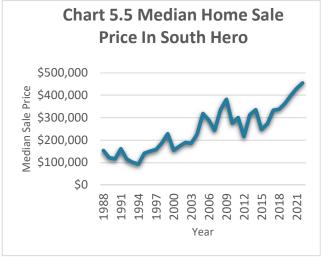
¼ of current South Hero homeowners pay more than 30% of their income on housing (97 households). Senior homeowners were more likely to find housing unaffordable.

Many South Hero residents are concerned about the impact of high housing prices. In an open-ended survey question about the impact of the increased prices of housing in South Hero common response themes included concerns that only wealthy households would be able to afford to live in South Hero, that South Hero locals would be priced out, and that workers and young people would be priced out. Only 7% of respondents did not feel that price increases had an impact on the community. Roughly 30% of respondents were unsatisfied with current housing options in South Hero.





Source: U.S. Census American Community Survey S1901 2021 ACS Year Estimate; Vermont Department of Taxes, Property Transfer Tax (PPT) Records via Housingdata.org, VFHA Housing Affordability Calculator



### **Future Housing Needs**

While the population of South Hero is relatively stagnant, the number of households has continued to increase over the last 20 years due to the trend of smaller households. If household sizes continue to get smaller, there will be a need for new housing units even if population remains similar. In South Hero many of these new smaller households are senior households, with the number of residents over the age of 65 nearly doubling in the last 10 years. Many of these households would likely prefer smaller, more affordable housing units that are easily accessible to services and community spaces.

There is also a need for more affordable housing options in South Hero. Very low-income households are unlikely to find affordable housing option in South Hero, and even those making above median incomes may be unable to afford homeownership.

To meet future housing needs, the Town will need to move away from the current development pattern of almost entirely large lot singe unit houses.

Meeting housing demand with exclusively this type of development will lead to sprawl and will not address the affordability issues. Smaller units, multiunit structures, accessory dwelling units and manufactured homes can all provide more affordable options. For instance, adding an accessory dwelling unit to an existing home provides a new rental unit and can reduce the housing costs for the homeowner.

Municipal regulations and policy play a major role in determining the location, density type and amount of housing available in South Hero.

The Town has identified South Hero Village and Keeler Bay Village as an appropriate place for denser housing development and should consider how best to reduce regulatory barriers to appropriately scaled residential development in these areas. Investments into infrastructure, such as community wastewater, can also support denser residential development.

#### **Equity and Housing**

Having a broad range of housing options at all price points can support an equitable and inclusive community. When housing options are unaffordable, those with median or low incomes are shut out of the community. Municipal regulations can contribute to this problem by creating unnecessary barriers to housing types other than single-unit structures.

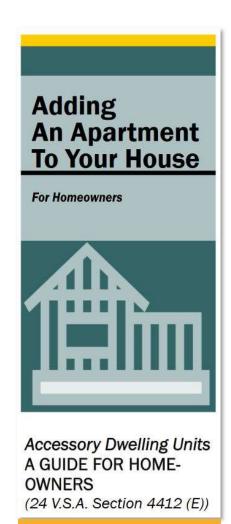


Figure 5.4. This brochure is available at the Town Office or online: use link below: <a href="https://outside.vermont.gov/agency/ACCD/ACCD">https://outside.vermont.gov/agency/ACCD/ACCD</a> Web Docs /Housing/Accessory-Dwelling-Units/ADU-brochure-2021pdf.pdf

### 6 Local Economy

### Goals & Objectives

- 1. Support expansion of year-round businesses and jobs in South Hero, while continuing to ensure a strong seasonal economy.
- 2. Actively encourage commercial and small, light-industrial enterprises in and near the village areas, in suitable locations on major roads, and in small, mixed-use homesteads.
- 3. Support farming and maintain agricultural land to keep the rural landscape of the Town and help the local economy.
- 4. Support the development of home businesses and economic opportunities that fit with the rural character of South Hero.
- 5. Encourage and preserve economic diversity.

### **Implementation**

- 1. Home businesses should be encouraged, provided such operations do not interfere with the residential and agricultural character of the surrounding area.
- 2. Commercial development should be limited to where there is adequate sewage disposal capability, water supply, and road access and where the development will not adversely impact gateways to the village areas or contribute to strip development.
- 3. Promote incentives to maintain farms and preserve agricultural land, through tax policies, regulations, and the purchase of development rights and conservation easements.
- 4. Continue to study and support solutions to the lack of water and wastewater capacity in South Hero.

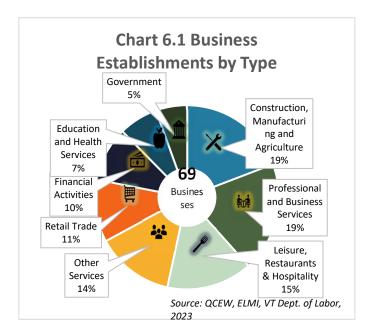
### **Employment Trends**

The labor force in South Hero hovers around 1,000, which includes residents of South Hero aged 16 and over that are employed or unemployed, including those in active military duty. The size of the labor force shrank by about 6% during the pandemic but seems to have recovered to pre-pandemic levels by the end of 2022. In December of 2022, the labor force was 1,029. The annual average unemployment rate for 2021 was 3%, down from an all-time monthly high of 10.2% in April of 2020.

South Hero has 69 year-round and seasonal businesses with 363 employees based on 2021 data from the VT Department of Labor. The number of businesses in 2021 is about the same as the number of businesses in 2010. 25% of the employees in South Hero work in the leisure and hospitality sector, 17% work in government and 16% work in retail trade.

Tourist and recreation businesses continue to be an area of economic growth; residents run riding stables, recreation facilities, charter fishing, restaurants and year-round lodging facilities.

While not a major employer, agriculture remains a prominent sector of the local economy.



### Local Businesses 🙋

Businesses in South Hero are largely concentrated in the villages and include restaurants, health care, small grocery stores, and a several other personal and professional services. There are many tourist services and attractions including: museums, gift stores, marinas, fishing/boating accesses, nearby ferry service, fossil sites, farmers' markets restaurant/snack bars/delis, gas stations, groceries, bed & breakfasts, campgrounds and historic sites. The closest chain supermarket is located off island in Milton. The Lake Champlain Islands Economic Development Corporation provides a directory of local businesses (www.champlainislands.com).

There is no data on the number of people that have home businesses (also referred to as home occupations) but there are many in South Hero due to good internet access and its remote location. The pandemic also increased the number of residents that work from home and while some returned to offices many maintained remote work. This is supported by data from the American Community Survey, which reports that the percentage of workers commuting to work 10 minutes or less increased from 19% in 2019 to 25% in 2021.

#### Income

Median incomes in South Hero are higher than the County and State. The median family adjusted gross income (AGI) in 2021 was \$116,985, a 12% increase since 2019. This figure reflects income tax returns filed as married filing jointly and head of household.

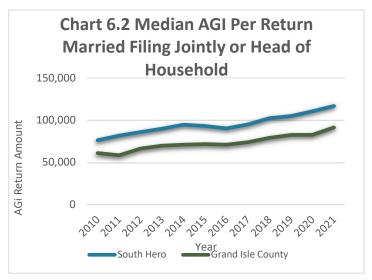
While the increase is sizable, the 2021 increase was not as high as the increase in inflation during that year. The poverty rate in South Hero is 4.8%, which is lower than the County and the State (U.S. Census Bureau, 2021 American Community Survey (ACS) 5-year estimates). The poverty rate is higher for the population aged 18-34 and for the population 5 years and under, indicating that affordability for young families is an issue in the community.

### Looking to the Future

South Hero's economic development strategy is centralized around concentrating commercial and housing in the villages and continuing to expand and maintain its recreation and trail amenities to support local residents and a robust tourism economy. South Hero is a destination in the summer months for vacationers along with day time tourists arriving by bike on the ferry. Efforts to increase bicycle and pedestrian safety, amenities and better connect visitors to businesses and vice versa will grow this sector of the economy. The opportunity and impact of the tourist and recreation economy in South Hero is significant and cannot be emphasized enough.

Factors that influence current and future economic development in South Hero include current zoning and permitting processes, access to high-speed internet, cell phone coverage, and access to water and wastewater infrastructure.

Recently, the Town worked with local developers on a new mixed-use development at the eastern side of South Hero Village in response to the need for new municipal facilities, senior housing and businesses. The development on Community Lane is a great success that includes the Worthen Library, Fire & Rescue Departments, the Community Health Center, a deli/restaurant, 30 rental units of senior housing and additional commercial office space, including for South Hero Land Trust. A local brewery built a new space next door.



The Town has zoning regulations that allow for increased density and mixed-use development in its village areas, while limiting the density and intensity of development allowed outside the village areas. South Hero does not have any areas designated for industrial development but does allow for light-industrial development in all areas of Town, including the village areas, as a conditional use with site plan review. It is important to allow for light-industrial development, but further work is needed to better define this use. It may be appropriate to designate certain areas where light-industry is not allowed.

lt is important to ensure adequate telecommunications infrastructure for business development, including the increased demand for home occupations and remote work. While the majority of South Hero residents have access to service that meets the minimum standards for broadband, 2% still lack broadband service and none are served by high-speed fiber. The majority of residents have cellular access. To support enhanced broadband access, the Town has joined the Northwest Fiberworx (formerly Northwest Communications Union District).

Wastewater and water supply infrastructure are a significant hurdle for current and new development in the villages. There are several small private water districts, however there is no municipal wastewater system and local soils severely limit the capacity for on-site soil based wastewater management. In 2023 a feasibility study was in process to determine the potential for small, community waste-water systems to possibly serve the village areas.



Figure 5.1 Parasailing in South Hero. Credit: Jared Katz



Figure 5.2 Volleyball in South Hero. Credit: South Hero Land Trust

### 7 Flood and Climate Resilience

### Goals & Objectives

- 1. Encourage flood emergency preparedness and response planning in South Hero.
- 2. Encourage the protection and restoration of floodplains, wetlands and upland forested areas that attenuate and moderate flooding and fluvial erosion.

### **Implementation**

- 1. Continue to be a member of the National Flood Insurance Program & ensure that the Land Development Regulations meet all NFIP minimum requirements to protect floodplains, prevent damage to property, and mitigate risk to human lives.
- 2. The Planning Commission, Selectboard, and Town emergency services personnel shall work with State and Federal agencies to ensure that connection to mainland Vermont via U.S. Route 2 is maintained during a flood event.
- 3. The Planning Commission and Selectboard shall draft and adopt a Local Hazard Mitigation Plan (LHMP) for South Hero that addresses mitigating risks posed by flooding and other disasters.
- 4. The Town Plan endorses the recommendations of the LHMP.
- 5. The Selectboard shall annually adopt a Local Emergency Operations Plan (LEOP).
- 6. The Planning Commission and Zoning Administrator should work with the Vermont Agency of Natural Resources to investigate future adoption of River Corridor or Fluvial Erosion maps and regulations.

### Flood Resilience

#### Floodplain

The Town of South Hero is in the unique position of being on an island, surrounded by the waters of Lake Champlain. The land is fairly flat, and there are few streams of any significance on the island. The result is that the island typically does not face catastrophic inundation resulting from single major storm events such as hurricanes. The flooding that does occur tends to be from the rising waters of Lake Champlain. Such flooding tends to start slowly and last for an extended amount of time. Flooding can pose major transportation issues, property damage, and environmental damage to Lake Champlain.

South Hero's Land Development Regulations include standards specific to development in the Special Flood Hazard Area (SFHA), or 100-year floodplain, as delineated by FEMA on the Town's Flood Insurance Rate Maps (FIRM).

Existing FIRMs are dated as effective on June 15, 1978 and the Flood Insurance Study was published on June 3, 1988. A new version of the FIRM is expected to be released in 2023.

The 100-year flood plain includes several tributaries to Lake Champlain, the "Crick", and several wetlands (See Flood Insurance Rate Maps for Town of South Hero in Town Clerk's Office for official descriptions.) The Flood & River Corridor Map also depicts the 100-year flood zones.

#### South Hero Local Hazard Mitigation Plan

In 2018, the Town adopted a local hazard mitigation plan (LHMP) which has been approved by FEMA. The plan details historic events and future mitigation of major disasters, including flooding, severe thunderstorms and winter storms.

All adopted flood hazard regulations meet or exceed minimum requirements set by the National Flood Insurance Program minimum. Adoption of flood hazard regulations and the FIRM allows the Town to be a member of the National Flood Insurance Program (NFIP) and enables all residents of South Hero to purchase flood insurance. As new flood maps are released by FEMA, the Town may need to further update its floodplain regulations to maintain NFIP compliance.

The primary flood threat facing the Town is posed by Lake Champlain. The last time Lake Champlain exceeded the USGS Major Flood Stage Elevation (101.5 feet above Sea Level) was in 2011. The Lake has exceeded 100 feet in elevation approximately 5 times in the past 15 years (see Chart X). The most recent large flooding event was the Flood of 2011. During that flood Lake Champlain's waters reached a height of 103.27 feet above sea level (ASL) as measured at the USGS gage at the Echo Center in Burlington. Flooding was exacerbated by waves caused by high winds.

Flood risk on Lake Champlain in South Hero is greatest from mid March to early June, with the highest risk during early May as melting snow from the mountains flows into the Lake and raises the water level. Abnormally high rainfall during this time frame increases the likelihood of flooding.

Roughly 5% of all structures in South Hero are located in the 100-year floodplain. The location of private property in the floodplain has led to issues with septic systems and unsecured personal property such as propane tanks. More attention should be paid by the Town to ensure that lakeshore property owners located within or near the Special Flood Hazard Area take proper precautions against flooding. Such precautions should include securing propane or other fuel tanks in compliance with the NFIP, as well as securing any loose personal property that might get washed into the Lake during a flood. Further investigation needs to be done regarding ways to improve septic systems to be

There are four flood stages defined by USGS for Lake Champlain. These are:

- Action Stage, at 99.9 feet Above Sea Level (ASL),
- Flood Stage, at 100.0 feet ASL,
- Moderate Flood Stage, at 101 feet ASL, and
- Major Flood Stage, at 101.5 feet ASL.

more tolerant of flooding in cooperation with the State Agency of Natural Resources.

Parts of South Hero, such as the south end of Keeler Bay, Wally's Point, and parts of West Shore Road, and U.S. Route 2 near Milton are and will continue to be the parts of South Hero most at risk for flooding from Lake Champlain. West Shore Road is a Town road and Route 2 is a U.S. highway. During the 2011 flood, access to South Hero across the causeway from Milton on U.S. Route 2 was reduced to one lane due to flooding through the wildlife preserve at the State Park. A more severe flood could pose serious access problems for residents of South Hero because U.S. Route 2 is one of the only three means of vehicle access to the Lake Champlain Islands within the United States.

Lake Champlain flows north into Canada, via the Richelieu River before proceeding to the St. Lawrence River in Montreal before eventually flowing to the Atlantic Ocean. That means that Canada, which is north of Vermont, is actually "downstream" when referring to Lake Champlain's flow. After the flooding in 2011, an international joint commission was formed to examine potential structural and non-structural solutions to minimize impacts of flooding. The report recommends two measures as possible structural measures to reduce flooding, selectively removing material and constructing a weir in the Richelieu River and allowing moderate levels of waters to be diverted through the Chambly Canal during flood events. South Hero encourages cooperative efforts between the US and Canada to reduce Lake flooding.

#### Stream Corridor

Another type of flooding that occurs in rivers and streams is fluvial erosion. Fluvial erosion occurs when fast lateral and vertical movement of streams and rivers cause erosion of the bank. Historic attempts to control stream flows, such as channelization, can increase risks for fluvial erosion. For smaller streams with a drainage area of between .5-2 square miles, the Vermont Agency of Natural Resources recommends limiting development in a stream corridor of at least 50 feet from the top of the bank to protect human life and infrastructure. South Hero has adopted river corridor standards that limit development near its streams.

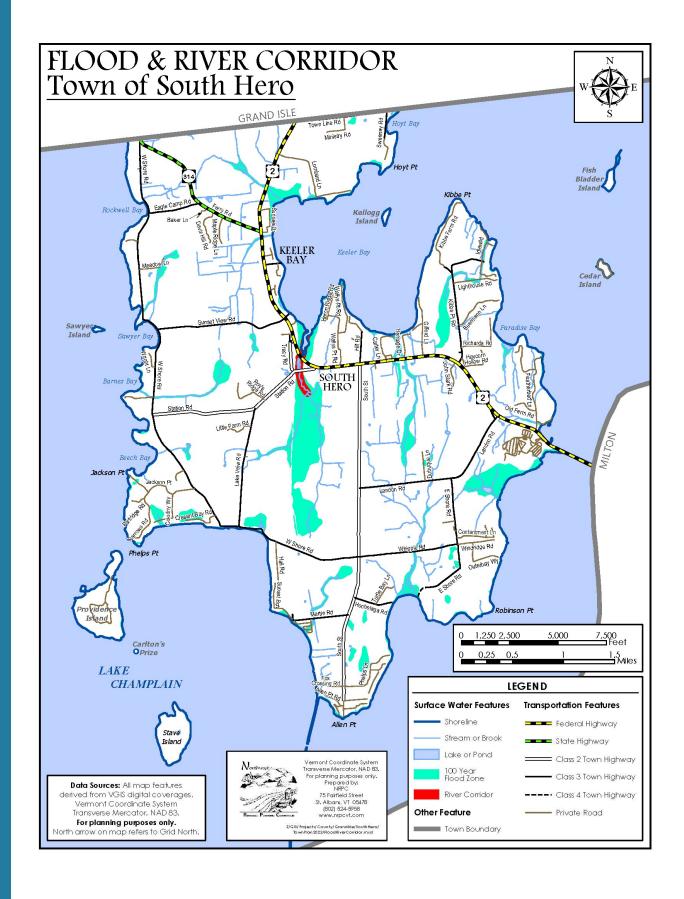
#### Climate Resilience

In Vermont as a whole, climate change is expected to bring increased precipitation, warmer average temperatures, and increases in the strength and frequency of storms (Vermont Climate Action Plan). In the Lake Champlain Basin, rising temperatures are expected to result in less ice cover and an increase in average annual precipitation and increased storm intensity. In the shorter term, increased heavy storms will likely increase flooding. In the long term, by 2100 the Lake's average level may rise as much as 1-2 feet (Lake Champlain Basin Program). Statewide insured losses are expected to increase 2-4% by 2050 as a result of climate change (Vermont Climate Action Planhttps://climatechange.vermont.gov/about).

The Town will need to plan for and adapt to these effects in order to reduce impacts to residents, infrastructure and property. South Hero is uniquely vulnerable to climate impacts because of its location on Lake Champlain and the high number of shoreland properties. Town should consider developing a climate resilience plan to identify climate vulnerabilities. Many climate vulnerabilities will need to be addressed at the regional or State level, such as the resiliency of the electric grid against severe storm events.

#### **Equity in Flood & Climate Resilience**

Climate and flood resilience planning efforts must focus first on those most impacted by climate change and who have the least social and economic resources to adapt to its effects. Studies have shown that groups such as lowincome residents, senior residents and residents of color are among those more likely to be impacted by climate change (Vermont Climate Action Plan). For instance, while the homes of individuals at all income levels may be located in the floodplain, those with lower incomes are less likely to be able to afford mitigation efforts. Furthermore, frontline communities should be included in climate resilience planning to ensure that proposed solutions meet the needs of those most impacted.



### 8 Implementation Program

The Town Plan includes a number of implementation strategies to implement the goals & objectives of the plan. The table below outlines the key plan implementation strategies, recommended timeline and who is responsible for the action. The timing for each action is either ongoing, long (5+ years), medium (2-3 years) or short (less than 2 years).

Line*	Implementation Strategy	Specific Implementation Action	Timing	Responsibility	
1	ENGAGE	Encourage citizen participation at all levels of the	Ongoing	Planning	
	(Introduction)	planning process.		Commission	
2	ENGAGE	Continue working with Town residents to find	Ongoing	Planning	
	(Introduction)	ways to turn their vision for the future of South		Commission	
		Hero into reality.			
3	ENGAGE	Encourage the involvement of community	Ongoing	Planning	
	(Facilities and Services)	members in community affairs and Town		Commission	
		government in order to increase the number of			
		individuals represented while addressing Town			
		issues. This will provide a broader perspective of			
		ideas to consider when making important			
4	FNCACE	decisions.	0	Calaathaaad	
4	ENGAGE	Encourage volunteers to participate in Town	Ongoing	Selectboard	
5	(Facilities and Services)	government.	Ongoing	Dlanning	
5	COLLABORATE AND COORDINATE	Collaborate with other municipalities and regional organizations to address important regional	Ongoing	Planning Commission &	
	(Introduction)	issues, such as improving water quality in Lake		Conservation	
	(introduction)	Champlain.		Commission	
6	COLLABORATE AND	Consider the impact of land use decisions on	Ongoing	Planning	
	COORDINATE	adjacent municipalities.	Oligonig	Commission	
	(Introduction)	a a jacona mamo pama con			
7	COLLABORATE AND	Explore ways to save on supplies, equipment and	Ongoing	Selectboard,	
	COORDINATE	Town services (such as plowing) through		Town Highway	
	(Facilities and Services)	cooperative efforts with other towns.		Dept.	
8	COLLABORATE and	Ensure the Town continues to be represented in	Ongoing	Planning	
	Coordinate	and participate in local and regional planning		Commission &	
	(Facilities and Services)	organizations such as the Northwest Regional		Selectboard	
		Planning Commission, Lake Champlain Islands			
		Economic Development Corporation (LCIEDC)			
		Northwest Solid Waste District (NWSWD), etc.			
9	COLLABORATE AND	Support and participate with the LCIEDC's	Short	Recreation	
	COORDINATE	S.H.O.R.E project to improve bicycle safety, share		Commission &	
	(Transportation and	the road etiquette and other opportunities to		Planning	
	Complete Streets)	create optimal experiences for cyclists from the		Commission	
10	COLLABORATE AND	Island Line Bike Ferry and local residents.	Madium	Highway Dort	
10	COLLABORATE AND COORDINATE	Communicate and coordinate with local residents on planned road improvements.	Medium	Highway Dept.	
	(Transportation and	on planned road improvements.			
	Complete Streets)				
11	COLLABORATE AND	Support regional cooperation on trails	Medium	Recreation	
	COORDINATE	development, interconnectivity of trails and	Wicalam	Commission	
	(Transportation and	connectivity of trails with destinations in order to		25	
	Complete Streets)	provide non-motorized means of travel.			
	*Line number for organizational purposes, not in any particular order.				

<sup>\*</sup>Line number for organizational purposes, not in any particular order.

12	COLLABORATE AND	Coordinate with VTrans on pedestrian	Short	Planning
	COORDINATE	accessibility and the need for reduced speeds and		Commission,
	(Transportation and	a crosswalk near the Apple Island Resort		Zoning
	Complete Streets)	property.		Administrator
13	COLLABORATE AND	Support and participate in Federal, State and	Ongoing	Planning
	COORDINATE	local efforts to improve water quality in Lake		Commission
	(Natural Resources and	Champlain.		
	Land Use)			
14	COLLABORATE AND	Support State of Vermont efforts to minimize	Ongoing	All Town
	COORDINATE	pollution to the Lake and groundwater.		Departments
	(Natural Resources and			
	Land Use)			
15	COLLABORATE AND	Work cooperatively with the newly created	Ongoing	Planning
	COORDINATE	Conservation Commission where appropriate.		Commission &
	(Natural Resources and			Conservation
	Land Use)			Commission
16	COLLABORATE AND	Support the construction of an additional park	Ongoing	Planning
	COORDINATE	and ride lot near Exit 17.		Commission &
	(Transportation and			Selectboard
	Complete Streets)			
17	COLLABORATE AND	Support and coordinate with CIDER on providing	Ongoing	CIDER
	COORDINATE	transportation for elderly, disabled or other		
	(Transportation and	nondrivers. This may include micro-transit		
	Complete Streets)	possibilities.		
18	COLLABORATE AND	Continue to be a member of the National Flood	Ongoing	Selectboard
	COORDINATE	Insurance Program.		
	(Climate and Flood			
	Resilience)			
19	COLLABORATE AND	The Planning Commission, Selectboard, and Town	Ongoing	All Town
	COORDINATE	emergency services personnel shall work with		Departments
	(Climate and Flood	State and Federal agencies to ensure that		
	Resilience)	connection to mainland Vermont via U.S. Route 2		
		is maintained during a flood event.	_	
20	COLLABORATE AND	The Town Plan endorses the recommendations of	Ongoing	All Town
	COORDINATE	the Local Hazard Mitigation Plan (LHMP).		Departments
	(Climate and Flood			
24	Resilience)		61	
21	REGULATE	Restructure the Town's Development Regulations	Short	Planning
	(Natural Resources and	to define and include the Proposed Land Use		Commission
22	Land Use)	Areas of Village Core and Village Neighborhood.		<b>7</b> ·
22	REGULATE	Encourage agricultural easements in subdivisions	Medium	Zoning
	(Natural Resources and	and promote Planned Unit Developments (PUDs)		Administrator
22	Land Use)	where soils are suitable.	Cla a set	7
23	REGULATE	Require that "building envelopes" be defined for	Short	Zoning
	(Natural Resources and	house sites in subdivisions to ensure coexistence		Administrator &
	Land Use)	with wetlands, natural areas, and farmland.		Development
2.4	DECUMATE.		CI :	Review Board
24	REGULATE	Reconsider the lot size limitations in zoning	Short	Planning
	(Natural Resources and	regulations.		Commission
	Land Use)			

25	DECLU ATE	to the Town Development 2. Let	Cl ···	Disconica
25	REGULATE (Natural Resources and Land Use)	In the Town Development Regulations, provisions shall ensure that development compatibly coexists with the following special environmental	Short	Planning Commission
	Land Ose)	areas:		
		a. Natural areas, especially significant fossil sites b. Critical habitat		
		c. Public access areas on the lake shore		
		d. Lake Champlain shoreline i.e., wetlands,		
		including the "Crick" and the area of Round Pond e. Scenic views		
		f. Flood plain areas		
26	REGULATE	Ensure that the conversion of seasonal homes to	Medium	Zoning
	(Natural Resources and	year-round use meets local zoning standards and		Administrator
	Land Use)	results in safe and adequate sewage disposal, water supply, and road access.		
27	REGULATE	To protect the Lake Champlain shoreline and	Short	Planning
	(Natural Resources and	recognize its diverse and unique character, the		Commission &
	Land Use)	Town Planning Commission and Conservation		Zoning
		Commission shall keep apprised of lakeshore land use and identify shoreland areas that may be		Administrator
		treated differently in the Town regulations.		
28	REGULATE	Town zoning and subdivision regulations shall be	Ongoing	Zoning
	(Natural Resources and	strictly and consistently enforced. All Town		Administrator
	Land Use)	officials should be well-informed about these regulations.		
29	REGULATE	Implement zoning regulations in the Town's	Short	Planning
	(Housing)	village districts that allow for concentrated		Commission
		residential development at higher densities than		
30	REGULATE	allowed in other zoning districts.  Support efforts that incentivize the development	Short	Planning
30	(Housing)	of accessory dwelling units for their ability to	311011	Commission
		provide affordable housing options.		
31	REGULATE	When conversions of seasonal homes to year-	Short	Planning
	(Transportation and Complete Streets)	round occupancy are proposed, ensure that adequate all-season access is provided for the		Commission & Development
	complete streets)	occupants as well as for emergency vehicles as		Review Board
		part of the zoning approval process for		
22	DECLUATE	conversions.	Chart	Diamaina
32	REGULATE (Natural Resources and	Ensure the Town's Development Regulations are complimentary to regional and State water	Short	Planning Commission &
	Land Use)	quality improvement efforts.		Conservation
	,			Commission
33	REGULATE	The Planning Commission and Conservation	Medium	Planning
	(Natural Resources and Land Use)	Commission should determine how best to regulate these areas and monitor the		Commission & Conservation
	23.10 030/	effectiveness and enforcement of Town		Commission
		regulations.		
34	REGULATE	The Planning Commission and Zoning	Short	Planning
	(Climate and Flood Resilience)	Administrator shall ensure that the Land Development Regulations meet all NFIP minimum		Commission & Zoning
	Neshierice)	requirements. The Planning Commission shall		Administrator
		ensure that the Land Development Regulations		
		continue to protect floodplains, prevent damage		
		to property, and mitigate risk to human lives.		

35	REGULATE (Local Economy)  EVALUATE/STUDY/PLAN (Natural Resources and Land Use)	Commercial development should be limited to where there is adequate sewage disposal capability, water supply, and road access and where the development will not adversely impact gateways to the village areas or contribute to strip development.  Evaluate making provision for a Town Center with adequate capacity to host the Town Offices, recreation fields and other functions and facilities	Medium  Medium	Planning Commission, Development Review Board, and Zoning Administrator Selectboard, Planning Commission &
	Land Ose)	as the need develops. Commercial enterprises, in a public/private partnership or just private, should also be included in the evaluation.		Development Review Board
37	(Natural Resources and Land Use)	The Town Planning Commission and Conservation Commission should stay up to date on State and Federal regulations concerning wildlife, wetlands, natural areas, and water quality.	Ongoing	Planning Commission & Conservation Commission
38	(Facilities and Services)	Explore innovative ways to finance and provide Town services to reduce property tax burdens.	Ongoing	Town Administrator & Selectboard
39	EVALUATE/STUDY/PLAN (Facilities and Services)	Investigate adopting impact fees, which would help finance the cost of specific town services.	Medium	Planning Commission & Town Administrator
40	EVALUATE/STUDY/PLAN (Facilities and Services)	Explore ways to increase the tax base without adding significant burdens on Town services.  Among the ways to do this are to encourage light business growth in central locations, the use of vacant private and Town buildings for new uses, and encourage home-based businesses.	Ongoing	All Town Departments
41	EVALUATE/STUDY/PLAN (Transportation and Complete Streets)	Complete a Streetscape Scoping Study to improve pedestrian accessibility, including sidewalks, traffic calming elements and other streetscape amenities. Coordinate with LCIEDC's S.H.O.R.E. project.	Short	Planning Commission, Selectboard, Zoning Administrator & Town Administrator
42	EVALUATE/STUDY/PLAN (Climate and Flood Resilience)	The Planning Commission and Selectboard shall draft and adopt a Local Hazard Mitigation Plan (LHMP) for South Hero that addresses mitigating risks posed by flooding and other disasters.	Short	Planning Commission, Selectboard, Town Administrator
43	EVALUATE/STUDY/PLAN (Climate and Flood Resilience)	The Selectboard shall annually adopt a Local Emergency Operations Plan (LEOP).	Short	Selectboard & Town Administrator
44	EVALUATE/STUDY/PLAN (Local Economy)	Continue to study and support solutions to the lack of water and wastewater capacity in South Hero.	Medium	Planning Commission, Selectboard & Town Administrator
45	(Natural Resources and Land Use)	Support, encourage and inform the public about innovative solutions for safe sewage disposal.	Short	Planning Commission & Zoning Administrator

46	EDUCATE AND INFORM (Facilities and Services)	Promote Town Plan objectives in the adoption of tax policies and planning for public facilities and services.	Ongoing	Planning Commission, Selectboard &Town Administrator
47	(Housing)	Support, and share information about, programs and resources that help to lower cost of home occupancy and assist in the preservation and maintenance of existing housing units, such as energy conservation, weatherization, and utility assistance.	Ongoing	Planning Commission & Zoning Administrator
48	(Local Economy)	Promote incentives to maintain farms and preserve agricultural land, through tax policies, regulations, and the purchase of development rights and conservation easements.	Ongoing	All Town Departments
49	FACILITATE (Facilities and Services)	Encourage public/private partnerships to improve Town services whenever possible.	Ongoing	Selectboard & Town Administrator
50	FACILITATE (Facilities and Services)	Encourage the availability of safe and affordable child care.	Medium	Selectboard
51	FACILITATE (Facilities and Services)	Support community events and activities such as, but not limited to, farmers markets and weekend in the Islands	Short	Selectboard, Planning Commission & South Hero Land Trust
52	FACILITATE (Facilities and Services)	Support the expansion of the Fire District #4 private water district and/or setting up other water districts in concentrated areas of the Town.	Medium	Selectboard, Planning Commission & Fire District #4
53	FACILITATE (Facilities and Services)	Support efforts to allow properly treated and filtered water from Lake Champlain to be used as potable water for domestic and business use.	Medium	Planning Commission, Selectboard
54	FACILITATE (Housing)	Support efforts to provide adequate infrastructure to support concentrated development in village areas, including municipal wastewater, bicycle and pedestrian improvements and complete streets.	Medium	Selectboard, Planning Commission & Town Administrator
55	FACILITATE (Facilities and Services)	Support efforts for education funding reform to address the property tax burdens imposed by Acts 60 and 68.	Medium	Town Administrator
56	FACILITATE (Natural Resources and Land Use)	Support purchase and/or donation of development rights to maintain agriculture and important natural areas outside of the village areas.	Ongoing	Planning Commission, Development Review Board, Conservation Commission, Zoning, Town Administrator
57	FACILITATE (Natural Resources and Land Use)	Support the development of retail, hospitality and service-based businesses best suited to serve the needs of residents, seasonal residents and the tourist population.	Ongoing	Planning Commission, Development Review Board, Zoning, Town Administrator

58	FACILITATE (Transportation and Complete Streets)	Support Safe Routes to School and other pedestrian projects.	Short	Planning Commission, Recreation Commission
59	FACILITATE (Transportation and Complete Streets)	Support public and private policies, programs or other efforts that promote alternatives to single occupancy vehicle travel such as public transit improvements, car-sharing, telecommuting, flexible work schedules and school bus usage.	Short	Town Administrator
60	DEVELOP/CONSTRUCT	Redevelop the Meeting House as a location for	Medium	Selectboard,
	(Facilities and Services)	municipal and community events.		Town Administrator
61	DEVELOP/CONSTRUCT	Implement necessary improvements for	Short	Selectboard,
	(Transportation and	compliance with the Municipal Roads General		Highway
	Complete Streets)	Permit.		Department
62	DEVELOP/CONSTRUCT	Identify and upgrade undersized culverts to	Ongoing	Selectboard,
	(Transportation and	prevent washouts. Use best management		Highway
	Complete Streets)	practices for managing runoff during road		Department
		construction or reconstruction.		

### 9 Appendix 1: Scenic Resources

#### **#1 Scenic Views**

- Sunset View Road overlooking the ridge to the south/west and west with the lake and Adirondacks in the background.
- At the intersection of Landon Road and East Shore Road there is a view across Round Pond into the bay with the Green Mountains in the background. The view is enhanced by the farm fields which surround the intersection.
- Along causeway traveling in both directions on Route 2: panoramic view.

#### #2. Scenic Views

- Route 2 from Kibbe Point Road east to the town line on the Sand Bar; offers views of the Green Mountains to the east with the lake in the foreground.
- Route 314 as it tops the hill approximately 300 yards from the Town line. This slope offers a view of the lake with Plattsburgh and the foothills of the Adirondacks in the background.
- West Shore Road at junction with Eagle Camp Road looking west over Rockwell Bay. The lake is in the foreground with Plattsburgh in the background.
- West Shore Road overlooking Sawyer Bay with the lake in the foreground and Adirondacks in the background. Also, scenic looking east into the fields surrounding the bay.
- White's Beach on West Shore Road viewing the lake to the west with the Adirondacks in the background. Sunsets and beautiful island views of Providence Island, Carleton's Prize and Stave Island.
- South Street from the top of the hill headed south after Whipple Road and for a distance of approximately 100 yards. Views of the lake, greater Malletts Bay, the Adirondacks and the Green Mountains.
- The railroad bed from the point where it emerges into the lake at the south end of the island and proceeds into the lake, i.e. The Fill. Views are spectacular in all directions.
- Hochelaga Road from the top of the hill as you turn off of South Street to the turn off for Camp Hochelaga. Views of the lake and the Green Mountains.
- Town Line Road looking east and south from the top of the hill at Sweeney's Farm. Views are of the lake, Keeler Bay and the Green Mountains.

#### #3. Scenic Views

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- South Street has views to the west from Folsom School to the Kinney's Farm. Some lake views but mostly the Adirondacks.
- The intersection of Lakeview Road and Station Road has views to the east and south with fields in the foreground and the Green Mountains in the background.

#### #4. Scenic Views

- All of Lakeview Road may be considered scenic from views of the farm fields and the "Crick" to the left with the ridge line running along the right and finally the lake and the Adirondacks to the west.
- All lake public access areas afford views of the lake and surrounding areas.
- From Kibbe Point Road at the first sharp curve to the right there are views of the lake and the Green Mountains to the east with farm fields all around the area.

### 10 Appendix II: Enhanced Energy Plan

### Goals & Objectives

- 1. Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
- 2. Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- 3. Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
- 4. Focus growth within and adjacent to the villages.
- 5. South Hero supports energy conservation efforts and the efficient use of energy across all sectors.
- 6. South Hero supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
- 7. South Hero supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from South Hero to other parts of the region.
- 8. South Hero supports the development and siting of renewable electricity generation resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
- 9. South Hero supports the conversion of fossil fuel heating to advanced wood heating systems, geothermal, or electric heat pumps.
- 10. Support local farms and the local food system.

### Implementation

- 1. Coordinate annually with Efficiency Vermont and State low-income weatherization programs to encourage residents to participate in weatherization programs available to South Hero residents.
- 2. Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.
- 3. Determine if there is a need to create a municipal Energy Committee, appoint an Energy Coordinator, or provide greater funding and support to existing municipal boards to coordinate energy-related planning in South Hero and to educate residents about the goals of this plan.
- 4. Investigate a revision to the zoning bylaw that would incentivize compliance with the State's stretch code, or similarly high environmental standard, through the issuance of a bonus density.
- 5. Review the 2011 energy audit for any needed updates and make recommendations to the Selectboard for the municipal capital budget.
- 6. Promote and provide information about the GoVermont website (<a href="https://www.connectingcommuters.org/">https://www.connectingcommuters.org/</a>) which provides information to citizens about ride share, vanpool, and park-and-ride options.
- 7. Identify areas that may be appropriate for a wood-fired district heating facility.
- 8. Study the expansion of public transit routes in South Hero.
- 9. Plan for and install electric vehicle charging infrastructure on municipal property.
- 10. Review municipal road standards to ensure that they reflect the "complete streets" principles as outlined by Vermont Agency of Transportation and Vermont Department of Health (<a href="http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP\_PA&N%20Complete\_streets">http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP\_PA&N%20Complete\_streets</a> guide for VT communities.pdf).
- 11. Review local policies and ordinances to limit water and sewer services to those areas of Town where additional development will not contribute to sprawl.

- 14. Enourage firefighters to have training in fighting fires on structures that have solar installed and on battery storage facilities & vehicles. .
- 15. Develop and adopt a municipal solar screening ordinance.
- 16. Investigate the need for an additional municipal park and ride facility.

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further local, regional, and State energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
- B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
- C. Vermont's building efficiency goals under 10 V.S.A. § 581;
- D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
- E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable South Hero to achieve "substantial deference" instead of "due consideration" in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that South Hero will have a greater "say" in CPG proceedings before the Vermont Public Utility Commission about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. "Pathways," or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

# Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each sector of energy use (thermal, transportation, electricity) and electricity generation in South Hero. Several different units of measurement are used in this section. Please refer to Table A.13 for more information about unit conversions.

Thermal Energy. Table A.1 shows an estimate of current residential thermal energy demand in South Hero, based on data from the American Community Survey (ACS 2016-2021). The data shows that 43% of households in South Hero depend on fuel oil as their primary source for home heating. This is followed by propane (29.1%) and wood (16.8%). Wood includes both cord wood and wood pellets. The nearest natural gas pipeline is located in Milton and is not likely to be extended to South Hero in the future.

Table A.1 - Current South Hero Residential Thermal Energy Use				
Fuel Source	South Hero Households (ACS 2016- 2021)	South Hero % of Households	South Hero - Households Square Footage Heated	Municipal Thermal Energy Use in British Thermal Units (BTUs) BTU (in Billions)
Natural Gas	3	0.5%	6,480	0
Propane	161	29.1%	33,2080	20
Electricity	22	4.0%	33,800	2
Fuel Oil	238	43.0%	469,000	28
Coal	0	0.0%	0	0
Wood	93	16.8%	193,040	12
Solar	2	0.4%	4,320	0
Other	31	5.6%	66,960	4
No Fuel	3	0.5%	6,480	0
Total	553	100.0%	1,112,160	67

The ACS data showing households in South Hero using natural gas for heating is an error. Data from Efficiency Vermont shows that South Hero residents are adopting heat pumps at a higher than average rate, despite consisting of only 3% of the population of Grand Isle and Franklin Counties nearly 7% of reported heat pump installations in the region occurred in South Hero.

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. Table A.2 provides an estimate of total commercial energy use (thermal and electricity). The estimate is based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 50 billion BTUs per year, is used as thermal energy for commercial uses.

Electricity Use. Table A.3 shows 2021 electricity use in South Hero per data available from Efficiency Vermont.

<b>Table A.2- Current South Hero</b>		
Commercial Energy Use		

Commercial Establishments in South	
Hero (VT DOL)	73
Estimated Thermal Energy BTUs per	
Commercial Establishment/year (in	
Billions) (VT DPS)	0.725
Estimated Thermal Energy BTUs by	
Commercial Establishments in South	
Hero/year (in Billions)	50

South Hero's total electricity use has increased since 2015 from 10.5 million kWh in 2015 to about 11.6 million kWh per year in 2021. According to Efficiency Vermont, the average residential usage per household has increased from 6,450 kWh per year to 7,309 kWh per year between 2015 and 2021. During the same period, overall commercial and industrial electricity usage decreased from 3.8 million kWh to 3.5 million kWh.

South Hero's average residential usage in 2021 was about 300 kWh lower than the average residential kWh use in the region (but this may be due in part to the high number of seasonal homes in South Hero).

Table A.3 - Current South Hero Electricity Use			
Use Sector	Current Electricity Use (in Billion BTUs)		
Residential	8,090,868	27.6	
Commercial and Industrial	3,532,267	12.1	
Total	11,623,135	39.7	

Increases in electrical energy usage may be partially related to increases in use of electricity for heating and transportation, as data from Efficiency Vermont shows that more South Hero residents are adopting electric vehicles and cold climate heat pumps.

South Hero is served by one electric utility: Vermont Electric Cooperative.

Transportation. Table A.4 contains an estimate of transportation energy use in South Hero. NRPC estimates that South Hero residents drive personal vehicles approximately 12.925 million miles per year and spend about \$2 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

As of 2021, there were 37 electric and hybrid vehicle registrations in South Hero according to the Vermont Department of Motor Vehicles.

Electricity Generation. There is currently .4 MW of electricity generation capacity from renewable generation facilities located in South Hero. This capacity results in approximately 812.39 MWh of electricity generation per year. All of this generation is from net-metering solar facilities located in South Hero. The amount of electricity generation in South Hero is roughly equal to the annual electricity use of about 121 households in Vermont based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table A.5 organizes information about existing generation in South Hero by type of facility. Map A.4 shows the location of all electricity generators in South Hero with a capacity greater than 15 kW. A full list of electricity generators in South Hero can be found at the end of this section (Table A.12).

South Hero has good access to electric transmission and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. The ease of access to this type of infrastructure in South Hero may make development of renewable energy facilities easier and more cost-effective than in other surrounding communities with more existing grid infrastructure.

Table A.4 – Current South Hero Transportation Energy Use		
Transportation Data	Municipal Data	
Total # of Passenger Vehicles (ACS 2016-2021)	1,098	
Average Miles per Vehicle (VTrans- 2019)	11,772	
Total Miles Traveled	12,925,656	
Realized MPG (2013 - VTrans 2015 Energy Profile)	23.4	
Total Gallons Use per Year	552,378	
Transportation BTUs (Billion)	67	
Average Cost per Gallon of Gasoline in 2021 (NRPC)	\$3.50	
Gasoline Cost per Year	\$1,933,324	

Map A.2 shows the electricity transmission and three-phase distribution infrastructure in South Hero. The map shows a three-phase distribution line in the Town along VT Route 314, US Route 2 and South Street. There is also a transmission line that carries electric from New York State to Milton, VT via South Hero. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

Table A.5 – Existing Renewable Electricity Generation				
Generation Type MW MWh				
Solar	0.65	797.17		
Wind	0.01	15.33		
Hydro	0.00	0.00		
Biomass	0.00	0.00		
Other	0.00	0.00		
Total Existing Generation	0.40	812.49		

Biodigesters. While not included in the targets for energy use and generation, another potential source of energy in South Hero are anerobic biodigesters. Biodigesters capture methane from manure or food waste and convert it into a renewable gas which either can be used in natural gas pipelines or transformed into electrical energy on-site through use of a generator. Anerobic biodigesters can have beneficial climate impacts as they reduce methane emissions and can offset use of traditional natural gas. Biodigesters can also provide an important source of income for farmers. A major barrier to the expansion of biodigesters is that many small farms do not generate enough manure to make the biodigester profitable.

Equity and Affordability. Reaching South Hero's energy goals will bring both environmental and economic costs and benefits. The equity issues related to who will bear those costs is of continuing concern to South Hero. A just energy transition requires that all residents have equitable access to the benefits and costs of the energy transition. The efficiency of green technologies offers savings for consumers as seen with electric vehicles, electric heat pumps, newer appliances, residential solar, etc. technologies often These require upfront investment, making them more difficult to access for residents with lower income. Low-income workers in Vermont also tend to work in industries that are more susceptible to the effects of climate change such as tourism and agriculture and are often disproportionality impacted by natural disasters like flooding. Equity for all residents will be considered in every decision about energy.

### Targets for Use and Generation

The second required element of an enhanced energy plan is creation of targets for future energy use.

Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and renewable electricity generation to meet the State of Vermont's 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please the Northwest Regional Energy Plan (www.nrpcvt.com).

Regional targets for energy use and renewable electricity generation were disaggregated to create municipal targets. These municipal targets were also designed to ensure compliance with the Department of Public Service's Municipal Determination Standards. Tables A.6, A.7 and A.8 show the targets for future energy use for South Hero by sector (totals are cumulative).

One thermal target for South Hero in 2050 is to have 85.3% of structures heated by renewable energy sources. Much of this transition is likely to come from conversion to electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Regionally, the target also relies on wood heating being a continued source of residential heating. However, South Hero has a low target for new efficient wood heat systems (5 by 2050). This is due primarily to the high proportion of existing households in South Hero that already use wood heating systems. Although there is only a low target for converting other types of heating to efficient wood heating, South Hero strongly encourages residents' conversion of existing wood heating systems to more advanced wood heating systems.

Table A.6 - Thermal Targets					
Thermal Targets	2025	2035	2050		
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	44.5%	57.6%	85.3%		
New Efficient Wood Heat Systems (in units)	0	0	5		
New Heat Pumps (in units)	84	191	358		
Percentage of municipal households to be weatherized	5%	16%	78%		
Percentage of commercial establishments to be weatherized	25%	25%	73%		

Table A.7 - Transportation Targets			
Transportation Targets	2025	2035	2050
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	11.2%	34.0%	91.2%
Electric Vehicles	125	937	2229
Biodiesel Vehicles	285	569	1100

Newer wood heating systems are more efficient and have less greenhouse gas emissions than older wood heating systems. Table A.6 also includes targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

The transportation energy targets for South Hero are similarly ambitious. By 2050, almost 91.2% of transportation energy will need to come from renewable sources in order to meet the 90 x 50 goal. This will primarily be done through the conversion light-duty passenger vehicles from fossil fuels energy sources to electric energy.

However, for heavy-duty vehicles, conversion from diesel to biodiesel sources is necessary. Biodiesel technology and infrastructure will certainly need to advance tremendously in coming years to meet this ambitious target.

Targets for electricity use are complex to interpret. Electricity use in South Hero is targeted to double by 2050 (Table A.8). This increase in use will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels (Vermont Comprehensive Energy Plan - 2016, page 44).

Table A.9 shows the electricity generation targets for new electricity generation in South Hero in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (10,927.45 MWh) is about 22 times more than the current generation capacity (493.63 MWh) within the Town of South Hero.

Table A.8 - Electricity Targets						
<b>Electricity Targets</b>	Electricity Targets 2025 2035 2050					
Increased Efficiency and						
Conservation (BTUs)	25.2%	48.3%	100.7%			

Table A.9 – Ren Targets	ewable [	Electricity	Generation
Renewable			
Generation			
Targets	2025	2035	2050
Total Renewable Generation Target (in MWh)	3,606	7,212	10,927

Table A.10 - Renewable Electricity Generation Potential				
Resource	MW	MWh		
Rooftop Solar	1	1,149		
Ground-mounted Solar	515	631,111		
Wind	1,285	3,939,726		
Hydro	0	0		
Biomass and Methane	0	0		
Other	0	0		
Total Renewable Generation Potential	1,801	4,571,986		

Based on mapping and calculations completed by NRPC, South Hero has sufficient land to meet the above electricity generation targets. South Hero has access to the renewable electricity generation capacity outlined in Table A.10. This estimate shows that South Hero has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table A.9. This generation capacity was calculated using the "base" layers for solar and wind. For an explanation of what constitutes a "base" layer, please see the mapping subsection below.

South Hero supports NRPC's position regarding "commercial" and "industrial" wind facilities. The NRPC Regional Plan finds that the construction of new "industrial" or "commercial" wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an "industrial" or "commercial" wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. South Hero encourages the use of these sources for electricity and thermal energy generation, especially on farms.

Figure A.1 – Ground Mounted Solar Potential SOLAR POTENTIAL **South Hero** If this represents the total land area of South Hero... (about 9,552.71 acres) Then this is the amount of that area which is considered Prime Solar... (about 728.03 acres) And this is about the area that would be needed to reach the 2050 goal of 6.54 MW new in-region capacity through on-ground installations... (about 45.75 acres or 0.4% of town land area)

## Mapping Energy Resources and Constraints

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities. South Hero has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Municipal Determination Standards, including access to energy resources and constraints to renewable development. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable electricity generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When an electricity generation facility is proposed, the presence of all natural resources constraints on site shall be verified as a part of the application.

Mapping Methodology Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass "potential" in South Hero based on information provided by the Vermont Sustainable Jobs Fund. "Known" and "possible" constraints were subsequently identified on the maps. constraints are conservation resources that shall be protected from all future development of renewable electricity generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table A.11. The known constraints and possible constraints used to create the maps include constraints that are required per the Municipal Determination Standards from the Department of Public Service and regional constraints selected by NRPC.

Solar and Wind. The solar and wind maps show both "base" and "prime" areas. Base areas are areas with electricity generation potential, yet may contain possible constraints. Prime areas are areas that have electricity generation potential that do not contain known or possible constraints. Areas that do not contain electricity generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general abundance of base and prime solar areas in South Hero, including many areas located within ½ mile of transmission and three-phase distribution lines. The following preferred locations for solar generation facilities by the Town of South Hero: rooftops, parking lots, and landfills. Brownfield sites located outside of the village areas of South Hero and Keeler Bay are also considered preferred locations.

South Hero strongly prefers solar facilities that have less than 5 MW (~20 acres) in generation capacity. This preference is a reflection of the community's dedication to preserving the aesthetic and rural qualities of South Hero by restricting the geographic size of solar facilities. In addition, South Hero prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to "break up" the visual impact of two or more solar facilities located next to each other and to preserve South Hero's rural character.

All solar facilities to be sited in South Hero shall include proper screening. The Town of South Hero hopes to adopt a municipal solar screening ordinance in the future.

South Hero has relatively good access to base and prime wind resources. These areas are generally concentrated near the lakeshore, particularly in the western part of Town.

Hydro and Biomass. The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays "base" and "prime" areas. However, these categories are not necessarily indicative of electricity generation potential. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map (Map A.6) is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide electricity generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites. South Hero has no existing dam sites and the development of new dam sites is extremely unlikely due to South Hero's island location and the extensive regulatory process involved in developing new dams.

#### Conclusion

Achieving the 90 x 50 goal to have 90% of energy used in Vermont come from renewable sources by 2050 and the other energy goals in State statute, will be difficult. South Hero is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, affordable, and secure energy future.

	Table A.11 – Mapping Constraints	
Solar, Wind and Biomass Maps	- Known Constraints	
Constraint	Description	Source
Confirmed and unconfirmed vernal pools	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species River corridors	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.  Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams	VCGI
	with a drainage area less than 2 square miles.	VCGI
National wilderness areas		VCGI
FEMA Floodways		VCGI/NRPC
Class 1 and Class 2 Wetlands		VCGI
Designated Downtowns, Designated Growth Centers, and Designated Village Centers	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain - 500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
Ground and surface waters drinking protection areas	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
Vermont Conservation Design Highest Priority Forest Blocks	The lands and waters identified here are the areas of the State that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal	ANR

	natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)	ANR
Public water sources	A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. No areas identified in the South Hero Town Plan were included in this category.	NRPC
Constraint	Description	Source
Protected lands	This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.	VCGI
Deer wintering areas	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
Hydric soils	Hydric soils as identified by the US Department of Agriculture.	VCGI
Agricultural soils	Local, statewide, and prime agricultural soils are considered.	VCGI
Act 250 Agricultural Soil Mitigation Areas	Sites conserved as a condition of an Act 250 permit.	VCGI
Class 3 wetlands	Class 3 wetlands in the region have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. No areas identified in the South Hero Town Plan were included in this category.	NRPC
Hydro Map - Known Constraint	<u>S</u>	
Constraint	Description	Source
None		
None Hydro Map - Possible Constrain	ts	
	ts Description	Source
Hydro Map - Possible Constrain		Source ANR
Hydro Map - Possible Constrain  Constraint		

The date in Table A.12 displays facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of South Hero recognizes that some of the data in the table may be out of date or incorrect. The Town of South Hero also recognizes that some identified facilities may no longer generate electricity.

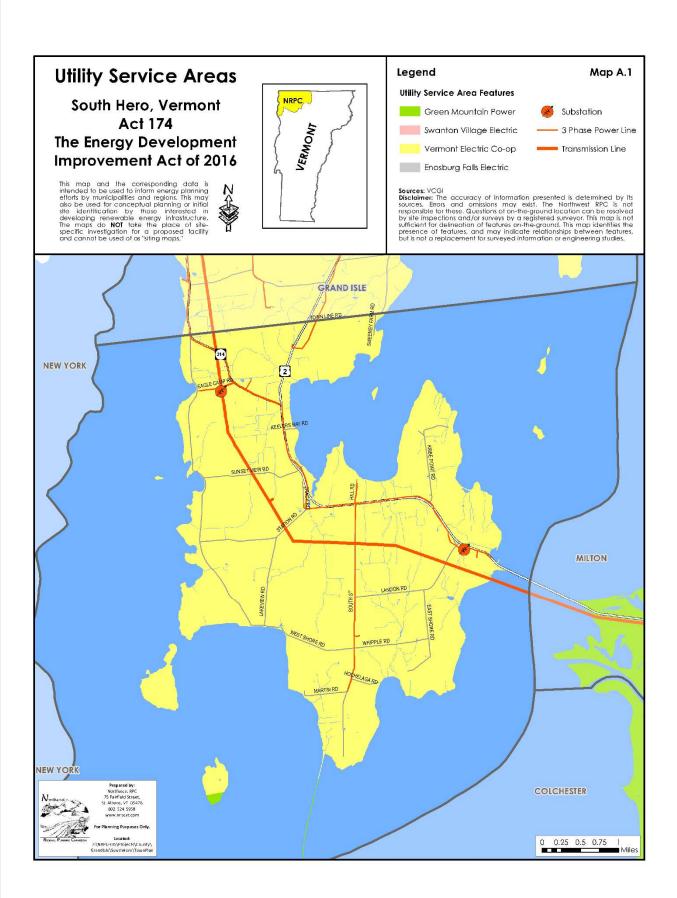
Categor Y	Sub Category	Address	CPG Number	Electricity Type	Utility	Capacity kW
	Ground-	565 West		Net	Vermont Electric	
Solar	mounted PV	Shore Road	2960	Metered	Соор	20
	Ground-	89 East Shore		Net	Vermont Electric	
Solar	mounted PV	Road	17-3418	Metered	Соор	15
	Ground-					
	mounted PV:	76 Lakeview		Net	Vermont Electric	
Solar	Tracker	Road	414	Metered	Соор	11.59
	Ground-					
	mounted PV:	316 South		Group Net	Vermont Electric	
Solar	Tracker	Street	18-2204	Metered	Соор	11.4
	Ground-					
	mounted PV:	135 Kibbie		Net	Vermont Electric	
Solar	Tracker	Point Rd	5078	Metered	Соор	11
	Ground-					
	mounted PV:			Net	Vermont Electric	
Solar	Tracker	142 Ferry Rd	3986	Metered	Соор	10.8
	Ground-	561 West		Net	Vermont Electric	
Solar	mounted PV	Shore Road	2977	Metered	Соор	8.89
	Ground-			Net	Vermont Electric	
Solar	mounted PV	72 South St	17-2858	Metered	Соор	7.6
	Ground-			Net	Vermont Electric	
Solar	mounted PV	549 Rt 2	2345	Metered	Соор	6.41
	Ground-			Net	Vermont Electric	
Solar	mounted PV	74 Whipple Rd	17-4328	Metered	Соор	6
	Ground-			Net	Vermont Electric	
Solar	mounted PV	16 Hall Road	3063	Metered	Соор	4.03
	Ground-				'	
	mounted PV:	134 East Shore		Net	Vermont Electric	
Solar	Tracker	Road	6264	Metered	Coop	4
55.0.	Ground-		020.	Net	Vermont Electric	<u> </u>
Solar	mounted PV	14 Whipple Rd	1740	Metered	Coop	2.74
30101	Ground-	14 Narrows	27.10	Net	Vermont Electric	2.71
Solar	mounted PV	Road	506	Metered	Coop	2.17
30101	Roof-Mounted	479 West	300	Net	Vermont Electric	2.17
Solar	PV	Shore Rd	1861	Metered	Coop	26.93
Joidi	Roof-Mounted	505 W Shore	1001	Net	Vermont Electric	20.55
Solar	PV	Rd	19-0628	Metered	Coop	22.8
30101	Roof-Mounted	159 Landon	13 0020	Net	Vermont Electric	22.0
Solar	PV	Road	17-4672	Metered	Coop	13.6
Joiai	Roof-Mounted	Noau	17-4072	Net	Vermont Electric	13.0
Solar	PV	320 South St	2726	Metered	Coop	12.08
Julai	Roof-Mounted		2/20		Vermont Electric	12.00
Solar	PV	316 South	7200	Group Net		12
Solar	* *	Street	7288	Metered	Coop	12
Colon	Roof-Mounted	30 Wally's	2025	Net	Vermont Electric	11
Solar	PV Roof-Mounted	Point Rd	3935	Metered	Coop	11
	POOT-IV/Journtad	51 Martin	1	Net	Vermont Electric	1

Table A	.12 Generation F	acilities				
	Roof-Mounted	25 Martin		Net	Vermont Electric	
Solar	PV	Road	17-3741	Metered	Соор	10.4
	Roof-Mounted	153 West		Net	Vermont Electric	
Solar	PV	Shore Road	3801	Metered	Соор	10
	Roof-Mounted	15 Lakeview		Net	Vermont Electric	
Solar	PV	Rd	18-3630	Metered	Соор	10
	Roof-Mounted	14 Featherbed		Net	Vermont Electric	
Solar	PV	Lane	18-1230	Metered	Coop	10
30101	Roof-Mounted	14 Melcher	10 1200	Net	Vermont Electric	10
Solar	PV	Place	6932	Metered	Coop	10
Joiai	Roof-Mounted	113 East Shore	0332	Net	Vermont Electric	10
Solar	PV	Rd	6673	Metered		10
Solai			00/3		Coop	10
	Roof-Mounted	29 Kibbe Farm	2706	Net	Vermont Electric	
Solar	PV	Rd	2796	Metered	Соор	9.83
	Roof-Mounted	75 South		Net	Vermont Electric	
Solar	PV	Street	1268	Metered	Соор	9.19
	Roof-Mounted	25 Haycorn	3126, 18-	Net	Vermont Electric	
Solar	PV	Hollow	0631	Metered	Соор	8.9
	Roof-Mounted			Net	Vermont Electric	
Solar	PV	122 Station St	4007	Metered	Соор	8.25
	Roof-Mounted	7 Hochelaga		Net	Vermont Electric	
Solar	PV	Road	2639	Metered	Соор	8.08
	Roof-Mounted			Net	Vermont Electric	0.00
Solar	PV	30 Ferry Rd	1716	Metered	Coop	7.87
Joiai	Roof-Mounted	39 Eagle Camp	1710	Net	Vermont Electric	7.07
Solar	PV	Road	18-2771	Metered		7.6
Solai			10-2//1		Coop	7.0
6.1	Roof-Mounted	31 Featherbed	40.0576	Net	Vermont Electric	7.6
Solar	PV	Lane	19-0576	Metered	Coop	7.6
	Roof-Mounted	10 Keeler Bay		Net	Vermont Electric	
Solar	PV	Rd	18-4181	Metered	Соор	7.6
	Roof-Mounted			Net	Vermont Electric	
Solar	PV	245 South St	18-4017	Metered	Соор	7.6
	Roof-Mounted	17 Turtle Bay		Net	Vermont Electric	
Solar	PV	Lane	18-3281	Metered	Соор	7.6
	Roof-Mounted	467 West	·	Net	Vermont Electric	
Solar	PV	Shore Road	17-4795	Metered	Соор	7.6
	Roof-Mounted	17 Tourville		Net	Vermont Electric	
Solar	PV	Drive	17-3596	Metered	Соор	7.6
	Roof-Mounted	33 Colony		Net	Vermont Electric	
Solar	PV	Way	7263	Metered	Coop	7.6
	Roof-Mounted	33 Crescent		Net	Vermont Electric	1.0
Solar	PV	Bay Road	3881	Metered	Coop	7.6
Joidi	Roof-Mounted	Day Nodu	3001	Net	Vermont Electric	7.0
Solar	PV	135 Ferry Rd	19-3600	Metered	Coop	7.6
Julai		-	19-3000		· ·	7.0
Calar	Roof-Mounted	139 East Shore	10 2000	Net	Vermont Electric	7.6
Solar	PV	Rd	19-3898	Metered	Coop	7.6
	Roof-Mounted		F 407	Net	Vermont Electric	_
			5437	Metered	Coop	7
Solar	PV	77 Landon Rd	3437		•	
	Roof-Mounted	328 U.S. Route		Net	Vermont Electric	
Solar	Roof-Mounted PV		1135	Net Metered	Vermont Electric Coop	6.65
Solar	Roof-Mounted PV Roof-Mounted	328 U.S. Route	1135	Net Metered Net	Vermont Electric	6.65
	Roof-Mounted PV	328 U.S. Route		Net Metered	Vermont Electric Coop	6.65 6.6

Solar   PV	Table A	1.12 Generation F	acilities				
Solar		Roof-Mounted	88 Kibbe Point		Net	Vermont Electric	
Solar   PV	Solar	PV	Road	2722	Metered	Соор	6.42
Roof-Mounted   25 Sweeney   Farm Rd   18-1991   Metered   Coop   6		Roof-Mounted	117 Lakeview		Net	Vermont Electric	
Solar   PV	Solar	PV	Rd	2692	Metered	Соор	6.38
Solar   PV		Roof-Mounted	25 Sweeney		Net	Vermont Electric	
Roof-Mounted   S49 West   Shore Road   17-4329   Net	Solar	PV		18-1991	Metered	Соор	6
Solar   PV		Roof-Mounted	349 West		Net	· · · · · · · · · · · · · · · · · · ·	
Roof-Mounted   PV	Solar			17-4329			6
Solar   PV			0.10101000			· · · · · · · · · · · · · · · · · · ·	
Roof-Mounted   PV	Solar		357 South St	17-2600			6
Solar	00.0.		007 000			<u> </u>	
Roof-Mounted	Solar		1 Mott Lane	17-3269			6
Solar         PV         4 Chase Ln         17-2780         Metered         Coop         6           Solar         Roof-Mounted         146 East Shore         Net         Vermont Electric           Solar         Roof-Mounted         64 Featherbed         Net         Vermont Electric           Solar         PV         42 Sweeney         Net         Vermont Electric           Solar         PV         Roof-Mounted         42 Sweeney         Net         Vermont Electric           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         5.93           Solar         PV         15 Fox         Net         Vermont Electric         Coop         5.93           Solar         PV         Crossing Rd         2652         Metered         Coo	30101	1.4	1 WOLL EATTE	17 3203	Wicterea	Соор	-
Solar         PV         4 Chase Ln         17-2780         Metered         Coop         6           Solar         Roof-Mounted         146 East Shore         Net         Vermont Electric           Solar         Roof-Mounted         64 Featherbed         Net         Vermont Electric           Solar         PV         42 Sweeney         Net         Vermont Electric           Solar         PV         Roof-Mounted         42 Sweeney         Net         Vermont Electric           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         5.93           Solar         PV         15 Fox         Net         Vermont Electric         Coop         5.93           Solar         PV         Crossing Rd         2652         Metered         Coo		Do of Married			NI-+	Manus and Elastic	
Roof-Mounted   PV   Road   17-2737   Metered   Coop   6	6.1		4.61	47.2700			
Solar         PV         Road         17-2737         Metered         Coop         6           Solar         Roof-Mounted         64 Featherbed         Net         Vermont Electric           Solar         PV         Ra         5542         Metered         Coop         6           Solar         PV         Rd         5370         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         Ridge Rd         2732         Metered         Coop         5.93           Solar         PV         Crossing Rd         2652         Metered         Coop         5.99           Solar         PV         Lane         2875         Metered         Coop         5.59           Solar         PV         321 Rt 2         2877         Metered	Solar			17-2780		<u> </u>	6
Roof-Mounted   PV							_
Solar         PV         Lane         5642         Metered         Coop         6           Solar         PV         Rd         5370         Metered         Coop         6           Roof-Mounted         Roof-Mounted         Net         Vermont Electric         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         Ridge Rd         2732         Metered         Coop         5.93           Solar         PV         Ridge Rd         2732         Metered         Coop         5.93           Solar         PV         Crossing Rd         2652         Metered         Coop         5.93           Solar         PV         Lane         2875         Metered         Coop         5.59           Solar         PV         Lane         2875         Metered         Coop         5.59           Solar         PV         321 Rt 2         2877         Metered         Coop         5.24           Solar         PV         321 Rt 2         2877	Solar			17-2737		· · · · · · · · · · · · · · · · · · ·	6
Roof-Mounted   42 Sweeney   Rd   S370   Net   Vermont Electric   Coop   6							
Solar         PV         Rd         5370         Metered         Coop         6           Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Roof-Mounted         45 Heron         Net         Vermont Electric         Coop         5.93           Solar         PV         Ridge Rd         2732         Metered         Coop         5.93           Solar         PV         Roof-Mounted         15 Fox         Net         Vermont Electric         Coop         5.93           Solar         PV         Crossing Rd         2652         Metered         Coop         5.9           Solar         PV         Lane         2875         Metered         Coop         5.59           Roof-Mounted         A4 RichaRds         No         Net         Vermont Electric         Coop         5.46           Solar         PV         Roof-Mounted         No         Net         Vermont Electric         Coop         5.24           Solar         PV         161 Landon Rd         17-3362         Metered         Coop         5.24           Solar         PV         161 Landon Rd         17-3362         Metered         Coop         5.1	Solar			5642		· ·	6
Roof-Mounted   19 Ferry Rd   3894   Metered   Coop   6							
Solar         PV         19 Ferry Rd         3894         Metered         Coop         6           Solar         PV         Ridge Rd         2732         Metered         Coop         5.93           Solar         PV         Roof-Mounted         15 Fox         Net         Vermont Electric           Solar         PV         Crossing Rd         2652         Metered         Coop         5.93           Solar         PV         Crossing Rd         2652         Metered         Coop         5.99           Solar         PV         Lane         2875         Metered         Coop         5.59           Roof-Mounted         Lane         2875         Metered         Coop         5.59           Solar         PV         Rd chichards         No         Net         Vermont Electric           Solar         PV         321 Rt 2         2877         Metered         Coop         5.24           Solar         PV         161 Landon Rd         17-3362         Metered         Coop         5.2           Solar         PV         161 Landon Rd         17-3362         Metered         Coop         5.1           Solar         PV         161 Landon Rd         1	Solar	PV	Rd	5370	Metered	Соор	6
Roof-Mounted		Roof-Mounted			Net	Vermont Electric	
Solar         PV         Ridge Rd         2732         Metered         Coop         5.93           Solar         PV         15 Fox         Net         Vermont Electric         5.9           Solar         PV         21         Coop         5.9           Roof-Mounted         Contentment         Net         Vermont Electric         Coop         5.59           Solar         PV         Lane         2875         Metered         Coop         5.46           Solar         PV         Roof-Mounted         No         Net         Vermont Electric         5.46           Solar         PV         321 Rt 2         2877         Metered         Coop         5.24           Solar         PV         321 Rt 2         2877         Metered         Coop         5.24           Solar         PV         321 Rt 2         2877         Metered         Coop         5.2           Solar         PV         161 Landon Rd         17-3362         Metered         Coop         5.2           Solar         PV         Lane         2173         Metered         Coop         5.1           Solar         PV         Street         18-3182         Metered         Coo	Solar	PV	19 Ferry Rd	3894	Metered	Соор	6
Roof-Mounted		Roof-Mounted	45 Heron		Net	Vermont Electric	
Solar PV Crossing Rd 2652 Metered Coop 5.9  Roof-Mounted Lane 2875 Metered Coop 5.59  Roof-Mounted 44 RichaRds No Net Vermont Electric Coop 5.59  Roof-Mounted 44 RichaRds No Net Vermont Electric Coop 5.46  Roof-Mounted PV Rd number Metered Coop 5.46  Solar PV 321 Rt 2 2877 Metered Coop 5.46  Solar PV 321 Rt 2 2877 Metered Coop 5.24  Roof-Mounted 161 Landon Rd 17-3362 Metered Coop 5.2  Roof-Mounted 9 Meadow Net Vermont Electric Coop 5.2  Roof-Mounted 9 Meadow Net Vermont Electric Coop 5.1  Roof-Mounted 180 South Net Vermont Electric Coop 5.1  Roof-Mounted Street 18-3182 Metered Coop 5.1  Roof-Mounted 86 Featherbed Net Vermont Electric Coop 5.1  Roof-Mounted 18-1748 Metered Coop 5.1  Roof-Mounted 5 Sandbar Net Vermont Electric Coop 5.1  Roof-Mounted 5 South Net Vermont Electric Coop 5.1  Roof-Mounted 5 South Net Vermont Electric Coop 5.1  Roof-Mounted 69 Sunset Net Vermont Electric Coop 5.1  Roof-Mounted South Net Vermont Electric Coop 5.1	Solar	PV	Ridge Rd	2732	Metered	Соор	5.93
Roof-Mounted   Contentment   Lane   2875   Metered   Coop   5.59		Roof-Mounted	15 Fox		Net	Vermont Electric	
Roof-Mounted   Contentment   Lane   2875   Metered   Coop   5.59	Solar	PV	Crossing Rd	2652	Metered	Соор	5.9
SolarPVLane2875MeteredCoop5.59SolarRoof-Mounted PV44 RichaRds RdNo numberNet MeteredVermont Electric Coop5.46SolarPV321 Rt 22877MeteredCoop5.24SolarPV321 Rt 22877MeteredCoop5.24SolarPV161 Landon Rd17-3362MeteredCoop5.2Roof-Mounted Solar9 Meadow LaneNet 2173Vermont Electric Coop5.1SolarPVLane2173MeteredCoop5.1Roof-Mounted Solar308 South StreetNet 18-3182Vermont Electric Coop5SolarPVLane18-3182MeteredCoop5Roof-Mounted Solar5 Sandbar Heights DriveNet 17-0233Vermont Electric Coop5SolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted Solar45 South StreetNet 18-0496Vermont Electric MeteredCoop5SolarPV14 South St17-2641MeteredCoop5SolarPVBeach Road7277MeteredCoop5SolarPVBeach Road7277MeteredCoop5SolarPVHollow5563MeteredCoop5Roof-Mounted80 Haycorn HollowNetVermont Electric Vermont Electric						'	
SolarPVLane2875MeteredCoop5.59SolarRoof-Mounted PV44 RichaRds RdNo numberNet MeteredVermont Electric Coop5.46SolarPV321 Rt 22877MeteredCoop5.24SolarPV321 Rt 22877MeteredCoop5.24SolarPV161 Landon Rd17-3362MeteredCoop5.2Roof-Mounted Solar9 Meadow LaneNet 2173Vermont Electric Coop5.1SolarPVLane2173MeteredCoop5.1Roof-Mounted Solar308 South StreetNet 18-3182Vermont Electric Coop5SolarPVLane18-3182MeteredCoop5Roof-Mounted Solar5 Sandbar Heights DriveNet 17-0233Vermont Electric Coop5SolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted Solar45 South StreetNet 18-0496Vermont Electric MeteredCoop5SolarPV14 South St17-2641MeteredCoop5SolarPVBeach Road7277MeteredCoop5SolarPVBeach Road7277MeteredCoop5SolarPVHollow5563MeteredCoop5Roof-Mounted80 Haycorn HollowNetVermont Electric Vermont Electric		Roof-Mounted	Contentment		Net	Vermont Electric	
Roof-Mounted   44 RichaRds   No   Net   Net   Vermont Electric   Coop   5.46	Solar			2875	Metered		5.59
SolarPVRdnumberMeteredCoop5.46Roof-Mounted SolarPV321 Rt 22877MeteredCoop5.24Roof-Mounted SolarPV161 Landon Rd17-3362MeteredCoop5.2Roof-Mounted Solar9 Meadow LaneNetVermont Electric Coop5.2Roof-Mounted Solar308 South StreetNetVermont Electric Coop5.1Roof-Mounted Solar86 Featherbed LaneNetVermont Electric Coop5Roof-Mounted Solar18-3182MeteredCoop5Roof-Mounted Solar5 Sandbar Heights DriveNetVermont Electric Coop5SolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted Solar45 South PVNetVermont Electric Coop5SolarPV14 South St17-2641MeteredCoop5Roof-Mounted Solar69 Sunset PVNetVermont Electric Coop5Roof-Mounted Solar14 South St17-2641MeteredCoop5Roof-Mounted Solar30 Haycorn HollowNetVermont Electric Coop5Roof-Mounted Solar10 Hollow5563MeteredCoop5Roof-Mounted Solar10 Hollow5563MeteredCoop5		Roof-Mounted			+		0.00
Roof-Mounted   Solar   PV   321 Rt 2   2877   Metered   Coop   5.24	Solar						5 46
SolarPV321 Rt 22877MeteredCoop5.24Roof-MountedPV161 Landon Rd17-3362MeteredCoop5.2Roof-Mounted9 MeadowNetVermont ElectricSolarPVLane2173MeteredCoop5.1Roof-Mounted308 SouthNetVermont ElectricSolarPVStreet18-3182MeteredCoop5Roof-Mounted86 FeatherbedNetVermont ElectricSolarPVLane18-1748MeteredCoop5Roof-Mounted5 SandbarNetVermont ElectricSolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted45 SouthNetVermont ElectricSolarPVStreet18-0496MeteredCoop5Roof-Mounted59 SunsetNetVermont ElectricSolarPV14 South St17-2641MeteredCoop5Roof-Mounted69 SunsetNetVermont ElectricSolarPVBeach Road7277MeteredCoop5Roof-Mounted30 HaycornNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric						<u> </u>	51.10
Roof-Mounted   Solar   PV   161 Landon Rd   17-3362   Metered   Coop   5.2	Solar		321 Rt 2	2877			5 24
SolarPV161 Landon Rd17-3362MeteredCoop5.2Roof-Mounted9 MeadowNetVermont ElectricSolarPVLane2173MeteredCoop5.1Roof-Mounted308 SouthNetVermont ElectricSolarPVStreet18-3182MeteredCoop5Roof-Mounted86 FeatherbedNetVermont ElectricSolarPVLane18-1748MeteredCoop5Roof-Mounted5 SandbarNetVermont ElectricSolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted45 SouthNetVermont ElectricSolarPVStreet18-0496MeteredCoop5Roof-Mounted14 South St17-2641MeteredCoop5Roof-Mounted69 SunsetNetVermont ElectricSolarPVBeach Road7277MeteredCoop5Roof-Mounted30 HaycornNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont ElectricSolarPVHollow5563MeteredCoop5	30101		3211112	2077		-	3.24
Roof-Mounted 9 Meadow 2173 Metered Coop 5.1  Roof-Mounted 308 South Net Vermont Electric Coop 5.1  Roof-Mounted 86 Featherbed Net Vermont Electric Coop 5  Roof-Mounted For Lane 18-1748 Metered Coop 5  Roof-Mounted For Sandbar Net Vermont Electric Coop 5  Roof-Mounted For Sandbar Net Vermont Electric Coop 5  Roof-Mounted Heights Drive 17-0233 Metered Coop 5  Roof-Mounted 45 South Net Vermont Electric Coop 5  Roof-Mounted For Street 18-0496 Metered Coop 5  Roof-Mounted Net Vermont Electric Coop 5  Roof-Mounted For Street 18-0496 Metered Coop 5  Roof-Mounted For Street Net Vermont Electric Coop 5  Roof-Mounted For Sunset Net Vermont Electric Coop 5  Roof-Mounted For Sunset Net Vermont Electric Coop 5  Roof-Mounted For Sunset Net Vermont Electric Coop 5  Roof-Mounted For Shape Net Vermont Electric Coop 5	Solar		161 Landon Pd	17-2262			5.2
SolarPVLane2173MeteredCoop5.1Roof-Mounted Solar308 South Street18-3182MeteredCoop5Roof-Mounted Solar86 Featherbed LaneNetVermont ElectricSolarPVLane18-1748MeteredCoop5Roof-Mounted Solar5 Sandbar Heights DriveNetVermont ElectricSolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted Solar45 South PVNetVermont ElectricSolarPV14 South St17-2641MeteredCoop5Roof-Mounted SolarPV14 South St17-2641MeteredCoop5Roof-Mounted SolarPVBeach Road7277MeteredCoop5Roof-Mounted30 HaycornNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric	Julai			17-3302	+	· · · · · · · · · · · · · · · · · · ·	3.2
SolarRoof-Mounted PV308 South Street18-3182Metered MeteredVermont Electric Coop5Roof-Mounted Solar86 Featherbed Lane18-1748MeteredCoop5Roof-Mounted Solar5 Sandbar Heights DriveNet 17-0233Vermont Electric Coop5Roof-Mounted Solar45 South StreetNet 18-0496Vermont Electric Coop5Roof-Mounted SolarNetVermont Electric Coop5Roof-Mounted SolarNetVermont Electric Coop5Roof-Mounted Solar69 Sunset PVNetVermont Electric Coop5Roof-Mounted Solar7277MeteredCoop5Roof-Mounted Solar30 Haycorn HollowNetVermont Electric Vermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric	Color			2172			F 1
SolarPVStreet18-3182MeteredCoop5Roof-Mounted Solar86 Featherbed LaneNetVermont ElectricRoof-Mounted Solar5 Sandbar Heights DriveNetVermont ElectricRoof-Mounted Solar45 South PVNetVermont ElectricSolarPVStreet18-0496MeteredCoop5Roof-Mounted SolarNetVermont ElectricSolarPV14 South St17-2641MeteredCoop5Roof-Mounted Solar69 Sunset PVNetVermont ElectricSolarPVBeach Road7277MeteredCoop5Roof-Mounted Solar30 Haycorn HollowNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric	Sulai	1		21/3		<u> </u>	5.1
SolarRoof-Mounted PV86 Featherbed LaneNet 18-1748Vermont Electric CoopSolarRoof-Mounted PV5 Sandbar Heights DriveNet 17-0233Vermont Electric CoopSolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted Solar45 South StreetNet 18-0496Vermont Electric Coop5Roof-Mounted SolarNetVermont Electric Coop5Roof-Mounted Solar69 Sunset PVNetVermont Electric Coop5Roof-Mounted Solar30 Haycorn HollowNetVermont Electric Coop5Roof-Mounted30 Haycorn HollowNetVermont Electric Coop5Roof-MountedNetVermont ElectricNetVermont ElectricNetVermont ElectricNetVermont Electric	Calan			10 2102			_
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Roof-Mounted PV Heights Drive 17-0233 Metered Coop 5  Roof-Mounted 45 South Net Vermont Electric Coop 5  Roof-Mounted PV Street 18-0496 Metered Coop 5  Roof-Mounted PV 14 South St 17-2641 Metered Coop 5  Roof-Mounted 69 Sunset Net Vermont Electric Coop 5  Roof-Mounted 69 Sunset Net Vermont Electric Coop 5  Roof-Mounted Beach Road 7277 Metered Coop 5  Roof-Mounted 30 Haycorn Net Vermont Electric Coop 5  Roof-Mounted Net Vermont Electric Coop 5	Cal-			10 4740			_
SolarPVHeights Drive17-0233MeteredCoop5Roof-Mounted45 SouthNetVermont ElectricSolarPVStreet18-0496MeteredCoop5Roof-MountedNetVermont ElectricSolarPV14 South St17-2641MeteredCoop5Roof-Mounted69 SunsetNetVermont ElectricSolarPVBeach Road7277MeteredCoop5Roof-Mounted30 HaycornNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric	Solar			18-1748	1	<u> </u>	5
Roof-Mounted 45 South Street 18-0496 Metered Coop 5  Roof-Mounted PV 14 South St 17-2641 Metered Coop 5  Roof-Mounted 69 Sunset Net Vermont Electric Coop 5  Roof-Mounted 69 Sunset Net Vermont Electric Coop 5  Roof-Mounted 30 Haycorn Net Vermont Electric Coop 5  Roof-Mounted 30 Haycorn Net Vermont Electric Coop 5  Roof-Mounted Net Vermont Electric Coop 5  Roof-Mounted Net Vermont Electric Coop 5  Roof-Mounted Net Vermont Electric Coop 5							_
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Roof-Mounted PV 14 South St 17-2641 Metered Coop 5  Roof-Mounted 69 Sunset Net Vermont Electric PV Beach Road 7277 Metered Coop 5  Roof-Mounted 30 Haycorn Net Vermont Electric Solar PV Hollow 5563 Metered Coop 5  Roof-Mounted Net Vermont Electric Vermont Electric Net Vermont Electric Net Vermont Electric							_
SolarPV14 South St17-2641MeteredCoop5Roof-Mounted69 SunsetNetVermont ElectricSolarPVBeach Road7277MeteredCoop5Roof-Mounted30 HaycornNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric	Solar		Street	18-0496		<u> </u>	5
Roof-Mounted 69 Sunset Net Vermont Electric Solar PV Beach Road 7277 Metered Coop 5 Roof-Mounted 30 Haycorn Net Vermont Electric Solar PV Hollow 5563 Metered Coop 5 Roof-Mounted Net Vermont Electric							
SolarPVBeach Road7277MeteredCoop5Roof-Mounted30 HaycornNetVermont ElectricSolarPVHollow5563MeteredCoop5Roof-MountedNetVermont Electric	Solar			17-2641			5
Roof-Mounted 30 Haycorn Net Vermont Electric Coop 5 Roof-Mounted Net Vermont Electric Vermont Electric Net Vermont Electric						Vermont Electric	
Solar     PV     Hollow     5563     Metered     Coop     5       Roof-Mounted     Net     Vermont Electric	Solar	PV	Beach Road	7277	Metered	Соор	5
Roof-Mounted Net Vermont Electric		Roof-Mounted	30 Haycorn		Net	Vermont Electric	
	Solar	PV	Hollow	55 <mark>63</mark>	Metered	Соор	5_
		Roof-Mounted			Net	Vermont Electric	
	Solar	PV	8 Whipple Rd	3099	Metered		4.26

Table A	1.12 Generation F	acilities				
	Roof-Mounted	6 Sandbar		Net	Vermont Electric	
Solar	PV	Heights	17-4611	Metered	Соор	3.8
	Roof-Mounted			Net	Vermont Electric	
Solar	PV	9 Old Farm Rd	17-0213	Metered	Соор	3.8
	Roof-Mounted	86 LombaRd		Net	Vermont Electric	
Solar	PV	Lane	7222	Metered	Соор	3.8
	Roof-Mounted	104 Kibbe		Net	Vermont Electric	
Solar	PV	Point Road	2302	Metered	Соор	3.73
	Roof-Mounted	10 Windridge		Net	Vermont Electric	
Solar	PV	Road	17-3398	Metered	Соор	3.6
	Roof-Mounted	58 West Shore		Net	Vermont Electric	
Solar	PV	Road	2851	Metered	Соор	3.21
	Roof-Mounted			Net	Vermont Electric	
Solar	PV	50 Whipple Rd	1838	Metered	Соор	3.19
	Roof-Mounted	380 South		Net	Vermont Electric	
Solar	PV	Street	1026	Metered	Соор	3.19
	Roof-Mounted	22 South		Net	Vermont Electric	
Solar	PV	Street	18-0270	Metered	Соор	3
	Roof-Mounted	15 Allen Point		Net	Vermont Electric	
Solar	PV	Road	7257	Metered	Соор	3
	Roof-Mounted	47 Colodny		Net	Vermont Electric	
Solar	PV	Way	3929	Metered	Соор	3
		134 East Shore		Net	Vermont Electric	
Wind	Small Wind	Road	398	Metered	Соор	2.5
		76 Lakeview		Net	Vermont Electric	
Wind	Small Wind	Road	414	Metered	Соор	2.5

Table A.13 Standard Conversions - BTU to Unit							
	Unit						
Unit	Туре	British Thermal Units					
	Kilowat						
Kilowatt	t	3,412					
Gasoline	Gallon	120,404					
Ethanol	Gallon	84,714					
Diesel Fuel	Gallon	137,571					
Heating Oil	Gallon	137,571					
Residual Fuel Oil	Gallon	149,690					
LPG	Gallon	84,738					
Kerosene	Gallon	135,000					
Biodiesel	Gallon	127,595					
Wood Pellets	Ton	16,500,000					
Cord Wood	Cord	20,000,000					
Wood	Pounds	8,000					
	Cubic						
Natural Gas	Feet	103,200					
Compressed Natural Gas	Pounds	20,160					
	Short						
Coal	Ton	19,490,000					



## Transmission & 3 Phase Power Infrastructure

#### South Hero, Vermont Act 174 The Energy Development Improvement Act of 2016

This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. This may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. The maps do NOT take the place of site-specific investigation for a proposed facility and cannot be used of as "siting maps."



# Legend Map A.2 Substation 3 Phase Power Line Transmission Line 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)

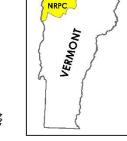
Sources: VCGI
Disclaimer: The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Northwest RPC is not responsible tor these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for defineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.



## Existing Generation Facilities

South Hero, Vermont **Act 174 The Energy Development** Improvement Act of 2016

This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. This may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. The maps do NOT take the place of site-specific investigation for a proposed facility and cannot be used of as "stling maps."



## NRPC.

#### Map A.3 Legend Biomass Facility

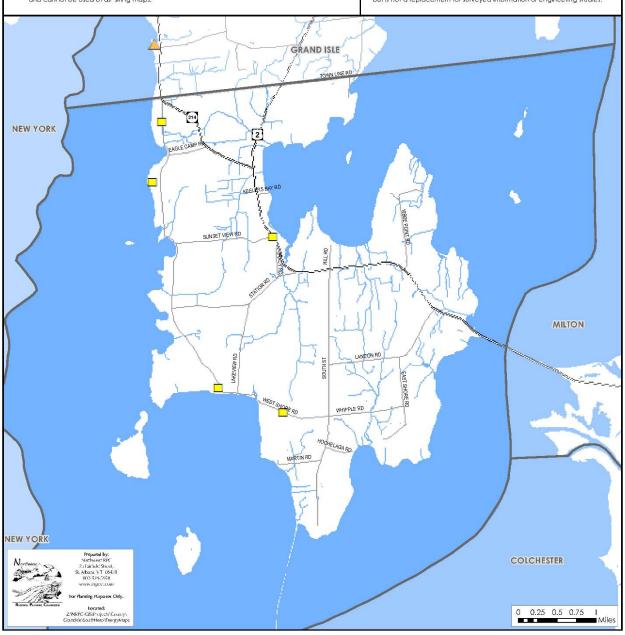
**Note:** Only generators 15kW are shown on the map. A full list of all generators is available.

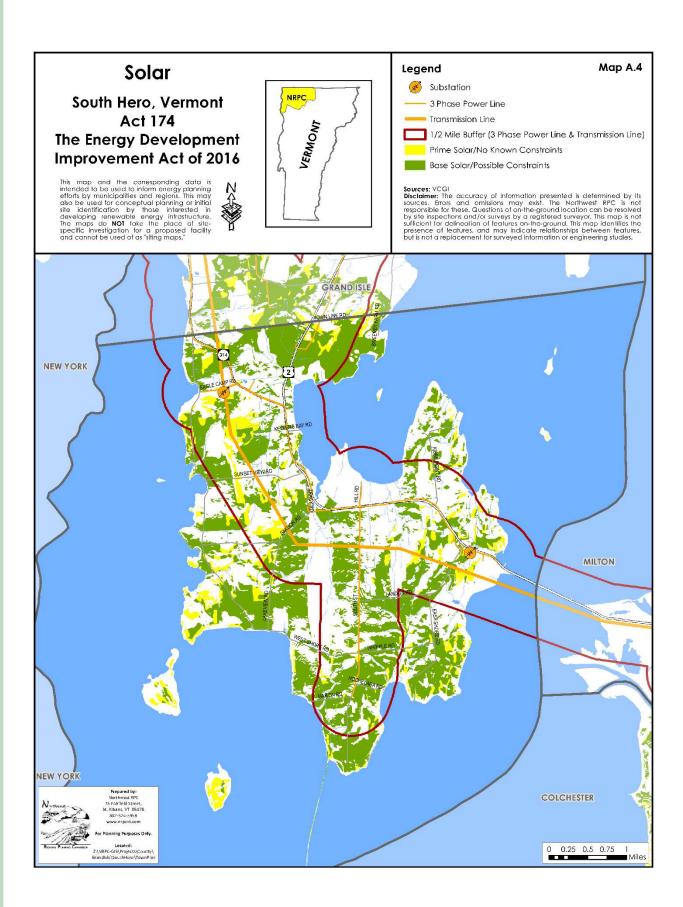
Hydro Facility

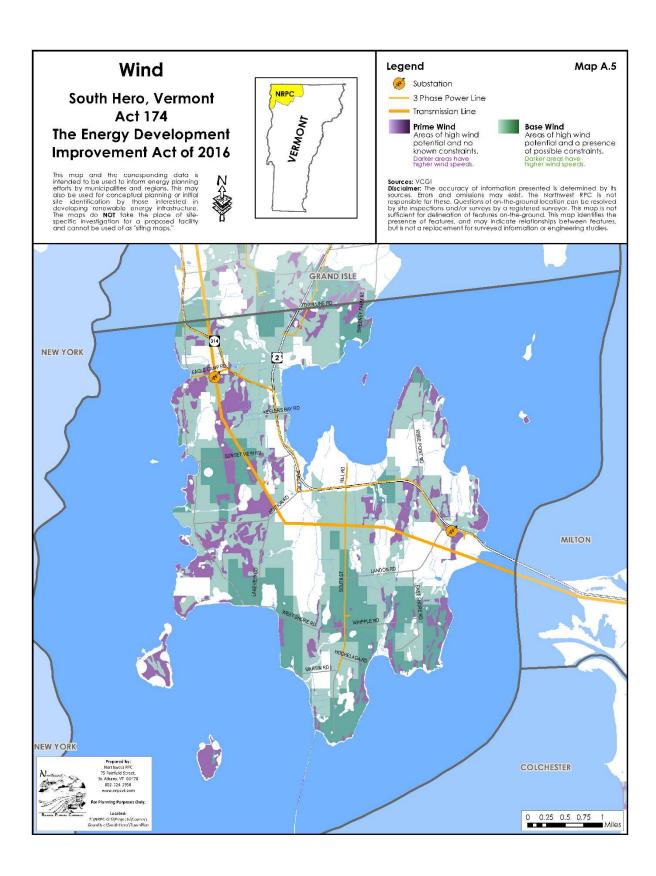
Solar Facility

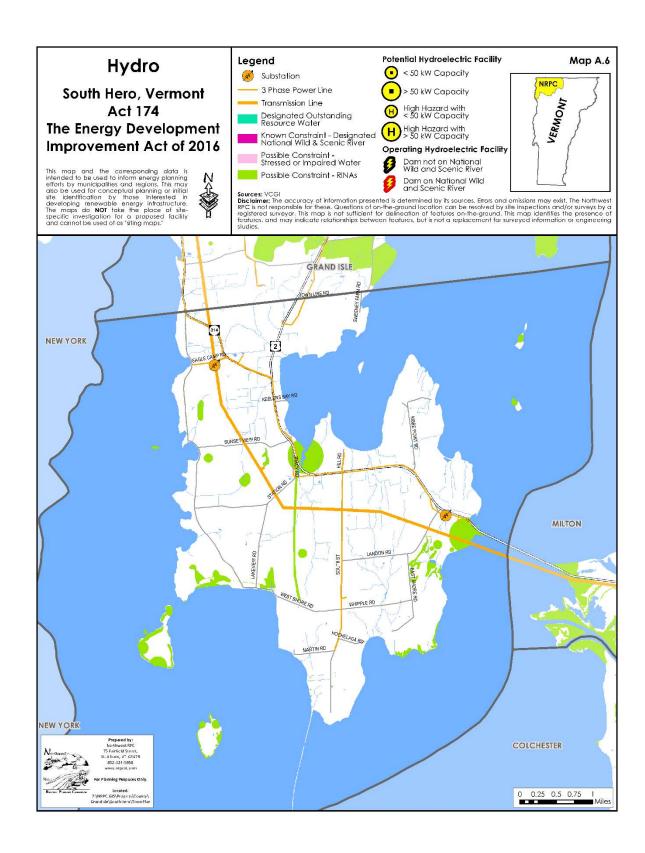
Wind Facility

Sources: VCGI Disclaimer: The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Northwest RPC is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map is not sufficient for delineation of features on-the-ground. This map is definities the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.









### 11 Appendix III: South Hero Town Plan 2022 Survey



75 Fairfield Street • St. Albans, VT 05478-1850 • (802) 524-5958 • (800) 564-5958 • Fax (802) 527-2948

#### **MEMORANDUM**

To: South Hero Planning Commission

From: Emily Klofft- Regional Planner & Greta Brunswick-Senior Planner

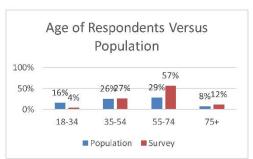
Date: August 3, 2022

Subject: South Hero Town Plan Survey

#### **Distribution and Response Rate**

The survey was available online at the South Hero Town Plan website and via paper copy at the Town office. Residents were sent a postcard with a link to the survey and the survey was advertised on local social media platforms. Copies of and links to the survey where also provided at the June Community Cheers and Cheese event.

The survey received 207 responses. 162 responses were received from year-round residents, which represents 11.7% of the year-round adult population. 32 responses were received from seasonal residents. Adults ages 55-75 are significantly overrepresented by survey respondents, while adults ages 18-34 are underrepresented. No responses were received from residents under the age of 18.



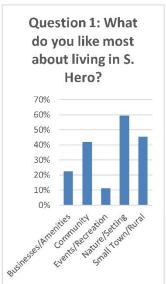
Renters are underrepresented, only 4% of survey respondents were renters despite rentals making up 15% of the housing stock. Results of the survey should be considered with this context, especially as it relates to issues that might most impact renters or younger residents.

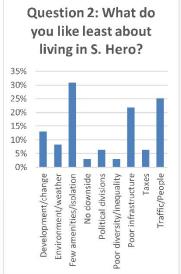
Respondents were distributed across South Hero, with 11% living in the Village Zoning District, 42% in the Rural Residential District and 34% in the Shoreland Zoning District. Roughly 40% of respondents were retired, 18% work in Chittenden County, 19% worked at home and 8% worked a hybrid schedule. 7% worked at businesses in South Hero and 2% were unemployed. Other respondents worked out-of-state, were homemakers or disabled.

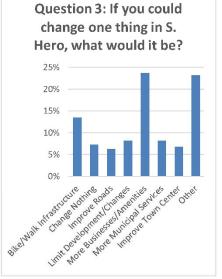
#### What Do You Think About South Hero?

When asked what they liked most about South Hero, common themes were the natural beauty of South Hero (59%), the small & rural nature of South Hero (45%) and the community of South Hero (42%). Common themes that respondents liked least include the lack of amenities/isolation (31%), traffic and crowds (25%), and poor infrastructure (22%). Respondents most wanted more businesses/amenities (24%) and to change pedestrian and bicycle infrastructure (14%).

 $\textit{Serving the municipalities of:} \ \ \textbf{Alburg T} \bullet \textbf{Alburg V} \bullet \textbf{Bakersfield} \bullet \textbf{Berkshire} \bullet \textbf{Enosburg Falls} \bullet \textbf{Enosburg T} \bullet \textbf{Fairfield} \bullet \textbf{Fletcher} \bullet \textbf{Franklin} \bullet \textbf{Georgia} \bullet \textbf{Fletcher} \bullet \textbf{Flet$ 







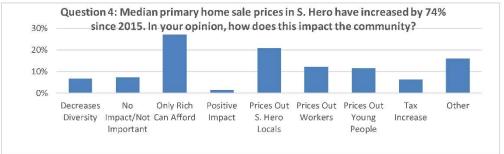
#### **Housing & Transportation**

#### Housing

When asked about the impact of home price increases, respondents were concerned about only wealthy people being able to afford homes (25%), as well as South Hero locals (21%), workers (12%) and young people (12%) being priced out. Only 7% of respondents did not feel it had an impact on the community. 34% of respondents were satisfied with housing options, while 30% were dissatisfied. 96% of respondents lived in single household homes, with 2% in ADUs and 1% in small apartment buildings.

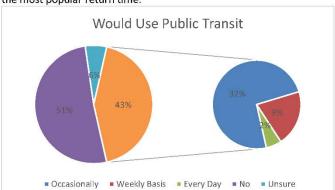
Respondents were divided on short-term rentals, with the plurality being unsure if they should be restricted (46%), while 19% believed they should be restricted and 35% believing they should not be restricted.





#### **Public Transit**

Roughly half of respondents would not use public transit, and a quarter were unsure. Of the half of respondents who stated they may would use public transit the most common reasons would be for appointments and transit connections. 68% would use public transit only occasionally, with just 5% stating they would use it every day. Mornings were the most popular departure time, and evenings were the most popular return time.

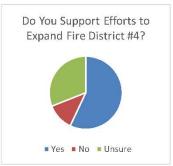


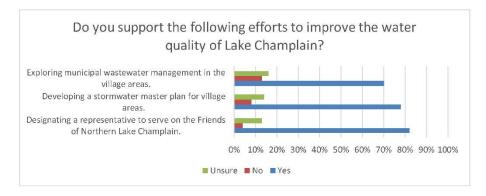
Note: Orange represents yes and unsure answers who provided a frequency of potential use answer in a later question.

#### **Climate Change and Resilience**

Just over half (57%) of respondents supported expanding Fire District #4, while 1/3 were unsure and 11% opposed such efforts.

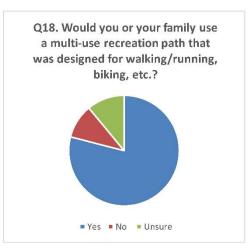
Over 90% of respondents supported efforts to improve the water quality of Lake Champlain. Efforts to do so were supported by most, including designating a representative to serve on the Friends of Northern Lake Champlain (82%), developing a stormwater master plan for village areas (78%), and exploring municipal wastewater management in the village areas (70%).





#### **Recreation and Recreation Economy**

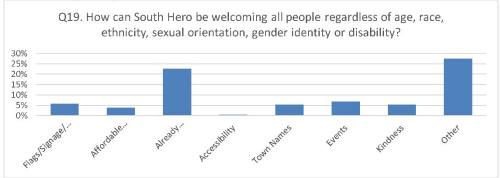
When asked what would help bicyclists be more safe and comfortable on South Hero's roads, the most common responses were wider shoulders & bike lanes (41%), and a bike path (19%). Respondents particularly identified South Street as too narrow to be safe, and many bike path suggestions were aimed at moving bike traffic off Route 2, South Street or Route 314. In regards to an open-ended question about the role of bike-centric tourism, 22% of respondents specifically stated support for it, with 16% noting it was a benefit to local businesses. 5% of respondents specifically stated they did not support bike tourism, and 6% believed it needed to be better planned or controlled. Roughly 80% of respondents stated they would use a multi-use recreation path.





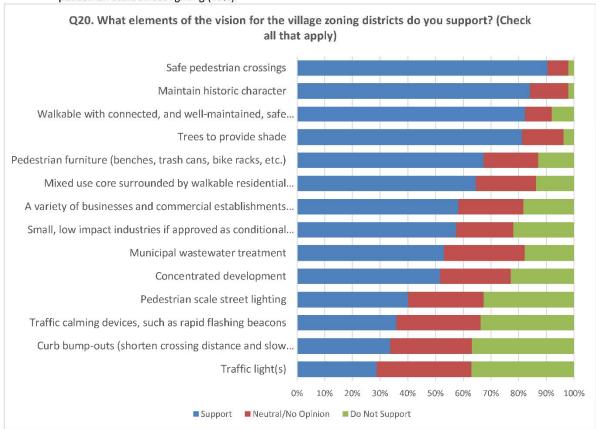
#### **Equity and Inclusion**

Roughly one-quarter of all respondents stated they felt South Hero was already welcoming to all people. Common ideas for making the community more welcoming included flags/signage/art (6%), diverse events (7%), and a culture of kindness (5%). 5% of respondents specifically mentioned changing the names of South Hero's municipally-owned beach (White's Beach) and the South Hero Meeting House (White Meeting House).



#### Vibrant Villages

Most elements of the village zoning district statement received at least 50% support from respondents. The most popular elements were: safe pedestrian crossings (90%), maintain historic character (84%), and walkable with connected, and well-maintained safe sidewalks (83%). Four elements received less than 50% support: traffic lights (29%), curb bump-outs (34%), traffic calming devices (36%) and pedestrian scale street lighting (40%).



#### **Other Comments**

10% of respondents used this space to state that they did not want to see any changes or increased density in South Hero. 8% had comments about town infrastructure.