

# **RANDOLPH TOWN PLAN**



**Adopted**

**September 13, 2018**

# RANDOLPH TOWN PLAN

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## Preface

Located in the Green Mountains in the Heart of Vermont, Randolph is a vibrant forward looking community dedicated to enriching the life of its people.

A lasting legacy of Randolph's geologic history is that it claims the highest concentration of prime farm soils in the county. As a result, agriculture and forestry are a large contributor to the economic and cultural development of the town. Most of the population, and the richest agricultural land, lie in and around the villages of Randolph (a.k.a. West Randolph) and East Randolph along the river valleys, with a third important population and farming center lying between these valleys on a fertile ridge comprising Randolph Center.

Already endowed with a wealth of historical, cultural, recreational, educational, and entertainment venues, we have a home town atmosphere that inspires all of our citizens. Folks who want to raise their families in one of the best cultural and educational environments in the country will find that Randolph is a vibrant, fun, and cultural enhancing community with a wealth of activities to be engaged in. When businesses decide to build or relocate in an area, they look at factors such as Education, Recreation, and Cultural Resources. Randolph has these in spades plus a bonus of Gifford Medical Center, one of the best run Medical facilities in the State.



*Gifford Medical Center*

## Educational Institutions



*Educational Excellence*

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We're among the best centers of learning in Vermont. We have a modern elementary school and our high school is in the top 5 of all high schools in the state. Randolph Technical Career Center teaches state of the art technical skills and Vermont Technical College is proud of its 98% success rate in job placements and entry into higher education.

## Cultural Assets

### *Chandler Music Hall*

We're blessed with the Chandler Music Hall, a historic performance venue and one of the best-preserved period theatrical interiors in northern New England. It boasts outstanding acoustics and has hosted world renowned performers as well as presenting local youth productions, gallery exhibitions, and cultural programs for hundreds of central Vermont residents.



### *Playhouse Theatre*



### *New World Festival*





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Our Playhouse is one of the nation's oldest surviving theatres. Digitally upgraded with Dolby 3D surround-sound it shows first-run hit movies.

The New World Festival celebrates Vermont's Celtic and French Canadian heritage with more than 70 exceptional musicians drawn from New England, Canada and Europe on five continuous stages from noon until 11 PM. The Vermont Chamber of Commerce has awarded the New World Festival status as a permanent Time-Honored Event for Vermont.

## Recreation Four-Season Activities



An 18-hole golf course is great for a small town, along with a bowling alley and ice skating rink. There are tennis courts, numerous off-road trails for mountain bike use, an 18-hole disk golf course, two ball fields with dugouts, two parks connected by a foot bridge over the Third Branch of the White River, indoor and outdoor swimming pools, two campgrounds – Lake Champagne and Abel Mountain - as well as an area for equestrian events as shown below.



### *The Heart of Vermont*

We certainly have a lot going for us. But most of all we have heart. People are our most important resource – many people donate money anonymously or give of their free time because they are proud to be from Randolph. With two Rotary clubs in town, Rotary alone has given over \$100,000 in scholarships to deserving High School graduates. Rotarians have also volunteered their efforts to support numerous community service projects.



Randolph is fortunate to have such a remarkable foundation on which old and new assets can be positioned to help build our town's future well-being.

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## **Chapter 1 - Introduction**

### **What is a Town Plan?**

All planning and zoning authority for Vermont municipalities come from 24 VSA Chapter 117, The Vermont Municipal and Regional Planning and Development Act, more commonly referred to as “The Development Act”. This Act dictates that all municipalities adopt a municipal plan (a.k.a. town plans). The Act also spells out both general and specific elements which must be addressed in a plan:

- Land use
- Transportation
- Utilities and facilities
- Natural, scenic and historic resources
- Educational facilities
- Energy
- Affordable housing
- Economic development
- Flood resilience
- Relationship to plans of adjacent towns and the regional plan
- Implementation

### **Organization of the Town Plan**

There is a chapter dedicated to each of the elements listed above. However, there is some cross-over between elements. For instance, there are some energy considerations in the transportation chapter. In general, in each of the chapters except the last two, there is at least one “**goal**” (or objective) which is supported by at least one “**policy**” which is implemented by at least one “**action**” (or program). Some policies may support more than one goal and some actions may implement more than one policy. The last chapter provides a compilation of all the actions recommended in this Plan and who or what is responsible for taking that action.

Additionally, there are appendices to this Plan that provide background information for many of the chapters, as well as statistical data and maps.

### **Implications and Uses of the Town Plan**

In its broadest terms, the Town Plan establishes a vision and goals for a future that the citizens of Randolph want for the Town and themselves. It serves as a guidance document for assessing and directing desirable development and growth within a community. The goals and policies in this Plan are also considered in state permitting and review processes for Land Use Permits (commonly called “Act 250”) and Certificates of Public Good through the Public Utility Commission. Similarly, many state grant programs look to town plans to demonstrate if a project to be funded will further or support an identified Town’s goal or goals.

The Development Act requires that all municipal zoning and related bylaws implement the plan and be in accordance with the policies set forth in the Plan. This Town Plan must be updated and adopted at least every eight years to ensure, in part, that it keeps current with the evolving nature of community life and the requirements of state statute.

## **Chapter 2 - Land Use**

### **Introduction**

Land use involves consideration of many things: current land use, land covers (i.e. forest, open, high density residential, etc.), natural resources, historic features and economic development, to name a few. Many of these have chapters dedicated to them in this Plan and there are other goals, policies and actions that relate to land use within these other chapters. This chapter is primarily guidance for updating the Land Use Regulations.

### **General Goals**

- I. Maintain and enhance Randolph's villages as pedestrian-friendly centers of community life.
- II. Plan for orderly growth while preserving the essential rural character and livelihoods that are central to Randolph's beauty, traditions and quality of life. Maintain a rural landscape and lifestyle.
- III. Safeguard natural resources and maintain and enhance open space and recreational "infrastructure" important for long-term health and quality of life for the Randolph community.
- IV. Protect and enhance property values.
- V. Encourage a compact, efficient pattern of settlement.
- VI. Encourage appropriately-sited energy development which is scaled to meet the needs of the Town. Support the maintenance of sufficient acreage to produce ample renewable energy for local and state purposes, whether by trees or crops, small-scale commercial or residential solar or wind, and to produce ample food.
- VII. Encourage and support agricultural lands and food production and promote agri-prenuerial enterprises.

### **Policies**

The following are land use policies for use in amending the Randolph Land Use Regulations and guiding other Town actions which may affect land use.

- A. Geographic and natural features should be a consideration in determining appropriate land use, with particular attention to:
  1. the relative ability of different land types (e.g. wetlands, floodplain, etc.) to support development without contributing to water quality or other natural resources degradation, nuisance, safety hazards, or other potential ill-effects; and
  2. the conservation of natural resources, including prime and important farm and forest soils in rural areas.
- B. Farming and forestry is encouraged and fragmentation of working lands is discouraged within the rural areas.
- C. Growth and density of development which provides or relies heavily upon services should be targeted primarily to those areas served by existing municipal infrastructure, including: paved roads, water, wastewater and stormwater. However, it should also consider the effect of growth and density on overall energy use and the capacity of existing municipal services, such as fire and police protection, schools, and road maintenance.
- D. Consider areas of town important for open space, natural resource and recreational purposes, in capital investment decisions and town planning, particularly along our major water courses.



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- E. Continue to accommodate a wide variety of compatible land uses within each zoning district to assure that Randolph continues to be a diverse community and landowners can protect and enhance their property values.
- F. Local review or licensing of salvage yards shall ensure that adequate buffers are in place for wetlands and surface waters, all hazardous materials are properly handled, noise impacts are minimized, materials are screened from public view, and truck traffic does not adversely impact the area.
- G. Commercial- and industrial-scale solar and wind projects are not compatible with the bucolic rural areas that typify Randolph. As such, renewable energy facilities shall be sized to meet local and state demand and shall not be built exclusively for export of power or renewable energy attributes (REC's) to other states and shall go towards meeting the State's 2050 energy goal. All renewable energy facilities shall be sited and substantially screened to prevent solar glare and to minimize viewed from I-89, state highways, town roads and neighboring properties and to mitigate any adverse impact to the aesthetic and scenic and natural beauty of the surround area and its viewsheds.

## Actions to Implement the Policies

There are provisions currently in the Randolph Land Use Regulations that support the goals and implement the policies of this chapter. Below are actions to further implement these policies.

- 1. The Randolph Sign Ordinance should be amended to regulate LED signage and consider provisions to reduce total lighting and energy use, eliminate off-site glare, avoid degradation of the night sky and limit illumination to hours of public operation. Additionally, the Sign Ordinance should consider more specific sign standards in design control areas.
- 2. The Randolph Land Use Regulations should be amended to:
  - A. Require as a review standard the accessibility of any development to emergency equipment in the review of applications where the slope, terrain, distance, or other factors could create unnecessary cost, delay, hardship or danger in emergency response situations.
  - B. Improve energy efficiency through lot layout, landscaping, building orientation, construction methods, appliances and light fixtures.
  - C. Rezone all or parts of the current Rural Residential District between VT Route 12N and the interstate to Residential.
  - D. Consolidate zoning districts that currently have similar purposes and development standards, such as the East Randolph Village and the North and South Village Districts.
  - E. Include the boundaries of the Designated Downtown and Designated Village in East Randolph on the Official Map.
  - F. Further the purposes of the zoning districts as described below.

## PROPOSED DISTRICT PURPOSES

### 1) Central Business (CB)

The purpose of the Central Business District is to concentrate retail and customer-oriented businesses and services in multiple-level buildings that are consistent in height with other buildings in the district, with customer-oriented businesses and services favored at street level, to promote a thriving, pedestrian-friendly downtown business area that is essentially commercial in nature and that respects the historic nature of the buildings in this district.

This zone will strongly encourage multiple-level buildings that are consistent in height with other buildings in the district, with customer-oriented businesses and services favored at street level to

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promote a thriving, pedestrian-friendly downtown business area. Office and residential uses are encouraged in upper stories and mixed uses, in general, are encouraged. Development should not detract from the pedestrian-friendly and essentially commercial nature of the area. The purpose of this district is promoted through the Designated Downtown program. The area for the Designated Downtown should closely follow the boundaries of the CB District. Historic structures within the zone originally built and occupied as residences, should be allowed to continue to be used as such. Resource extraction and heavy industry are not suitable in this zone. Solar is appropriate on rooftops.

The establishment of a coordinated parking strategy would contribute to the success of this zone.

## 2) **Randolph Village High Density and Medium Density (RVHD and RVMD)**

The purposes of both of this and the Randolph Village Medium Density Districts are to allow for continued growth and development of Randolph's main village as a pedestrian-friendly center, to preserve the medium (RVMD) to high-density (RVHD) residential neighborhoods, and to allow these neighborhoods to co-exist with a limited mix of businesses and services complementary in scale and type to the primarily residential character.

As the state rules govern the location of on-site sewage disposal systems and private wells, it is expected that some newly-created lots may have to be larger to accommodate on-site septic systems and wells if the property is not serviced by public water and/or wastewater systems.

Small, accessory residential uses such as 3-room bed and breakfasts and boarding houses are allowed in this district. Other non-residential uses, if allowed, are conditional uses or are limited in size or scope to fit the essentially residential purpose of the neighborhoods. The CB District is valued as the concentrated commercial center of the Town and the business uses in the RVHD and RVMD Districts are intended to be small in scale and enhance and complement the zone's residential uses thereby maintaining the larger commercial uses in the CB District. Large-scale non-residential uses, resource extraction, heavy industry and other uses that would generate nuisances are not suitable in this zone.

## 3) **Randolph Center Village (RCV) and Randolph Center Overlay (RCO)**

The RCV district promotes more densely clustered development than surrounding residential areas, and encompasses the campus of Vermont Technical College, and allows limited, small-scale commercial uses. The RCO is an overlay district whose purpose is to preserve the historic integrity and architectural character of the Randolph Center National Historic District.

The RCO currently has its own design review committee – the Randolph Center Design Review Panel - whose membership is required to either reside in the District or be an owner of property within the District and a resident of Randolph. Given the small area of the District, this membership requirement may be a hindrance in the Panel being able to carry out its duties, as members are likely to have interested party status with an application and thus unable to participate in the review of that application. It is recommended that one design review committee have the responsibility of design review for all design review overlay districts. Such a committee could be required to have at least one member who either resides in the District or is a Randolph resident and owner of property within the District.

## 4) **Rural Village (RV)**

This district designation shall replace the current East Randolph Village and North and South Village Districts. The purpose of this new district is to define areas that are primarily residential at higher densities than the surrounding countryside and where, to maintain a sense of community, small commercial services are encouraged and carefully conditioned to fit with the scale of the villages.

The village of East Randolph should maintain its Village Designation to promote new commercial development and support existing businesses.

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## 5) **Gateway Commercial Retail and Gateway Commercial (GCR and GC)**

The purpose of the GC district is to allow for residential development and for medium-scale business development in relatively close proximity to the downtown and within the public water and sewer districts, thereby maintaining the villages as the centers of commercial life and free of out-of-scale development and avoiding commercial sprawl beyond this district.

The purpose of the GCR district is to allow for residential development and medium-scale development that may have off-site impacts along transportation corridors, thereby maintaining the downtown, the villages and the GCR Districts as the centers of retail business life without requiring out-of-scale development, and avoiding commercial sprawl beyond this district.

The intent of creating two types of gateway commercial districts is to discourage strip development in areas outside of the CB District, while allowing well-planned commercial development (including certain primary retail) in areas within close proximity to the CB District that have access to town services and are more accessible by pedestrians. A goal of these zones is to cluster such uses into attractive and compact areas with co-located access to roadways, in consideration of the safety and convenience of pedestrians and automobile traffic alike in order to reduce traffic and land-consumption. Solar is an appropriate use of rooftops and large new structures should take this into account when being designed.

## 6) **Residential (RES)**

The purpose of this zone is to allow for a primarily low-density residential zone in close proximity to the downtown, with single- and 2-family residential, home occupations, B&B's and other uses compatible with the essentially residential nature of the zone.

Other uses, such as multi-family residential uses, outdoor recreational uses, or small-scale commercial uses allowed as conditional uses upon compatibility with the essentially residential nature of the zone. In the Residential zone, mixed uses will not be as encouraged as in the RVHD and RVMD Districts. Resource extraction, industrial and non-tourism-related commercial are not anticipated in this zone. Solar installations for individual homes are appropriate in this areas, and smaller (<±150kw) community ground-mounted systems may be allowed in this area with appropriate screening or landscaping.

## 7) **Rural (RUR)**

Consider merging the current Rural Residential and Rural Agricultural, Interchange Southwest and parts of the Interchange Northwest District into one district. The purpose of this district would be to maintain the traditional rural character and economy, including agriculture, while allowing for residential uses and encouraging clustering of those uses to maintain large blocks of contiguous undeveloped land.

Where prime and statewide agricultural soils, collectively hereinafter referred to as "agricultural soils", exist on non-forested sites, agriculture should be promoted to maintain a "critical mass" of agricultural activity and to minimize impact to active and future agricultural uses. Development on agricultural soils in this district should be configured to reduce the number of acres of such agricultural soils developed or fragmented, while still enabling a landowner to realize financial benefits through clustering. Development on prime and important non-forested farm soils in this district should be configured to reduce the number of acres of good farm soils developed. Standards in this district should be particularly flexible in supporting the viability and practicality of alternative development scenarios to help enable a landowner to realize his or her financial goals, and at the same time conserve prime non-forested agricultural soils.

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While it is a legitimate community concern that agricultural soils be conserved and available for current and future agricultural use, care should be taken that the regulations on development of agricultural soils in this district are not over-burdensome to farmers, in particular.

As the Town institutes financial incentives or conservation programs to promote agriculture, lands and agricultural businesses in this zone should be prioritized for these programs.

Anticipated uses in this low-density district include farming, forestry, supporting retail and service providers, residential development, clustered development on non-forested agricultural soils, passive recreation, agri-prenuerial enterprises and rural industry. Other kinds of small-scale commercial and industrial uses may be allowed as conditional uses provided they do not detract from the rural character of the zone and meet the other applicable requirements.

Small-scale solar energy projects (500kW or less) should be considered in this district in an effort to achieve the Town's long-term energy goals.

## 8) **Industrial District (IND)**

The purpose of the Industrial District is to allow and encourage a range of commercial and industrial uses of the type best located in a more traditional "industrial park" type of setting.

There are excellent sites for ground mounted solar in this district, along with potential on-site use of power. In this District, solar installations should not count against lot coverage limits. There is also substantial roof space that could produce power if the structures can handle the weight

## 9) **Interchange District (INT)**

The purposes of the Interchange District are:

- a. To encourage a limited mix of land uses which are primarily commercial in nature where new development will employ residents within the region in well-paying jobs which do not detract from the vitality of Randolph's traditional downtown and village centers. Some residential development is also encouraged within the district.
- b. To protect scenic views of open fields and woodlands that have prominent visibility from VT Route 66.
- c. To maintain and enhance traffic safety and efficiency on VT Route 66 and access to I-89.
- d. To protect natural features, including steep slopes and wetlands.

The current use categories should be used in determining what uses are allowed in this district. Site plan approval should be required and, when determining what uses are allowed, consideration should be given as to whether the use needs conditional use approval, especially given the extensive site plan review criteria. This district is not suitable for a large solar array except as an accessory use to a development on the same property. The area of such a solar array should not exceed the lot coverage of the development to which it is accessory and should not be considered in calculating the overall lot coverage.

Route 66 is a gateway to the Randolph Center Historic District, recognized on the federal register as containing several buildings of historic significance. Design review standards should be maintained in the INT district, but perhaps simplified. Given this district's proximity to the Randolph Center Overlay District, a joint design review committee should be considered that would have advisory jurisdiction over both design review areas.

## 10) **Flood Plain Overlay District (FPO)**

The purpose of the Flood Plain Overlay District is to protect the public safety, maintain eligibility in the National Flood Insurance Program in compliance with 10 VSA §751 and 753, reduce costs to the municipality and to private individuals for damage resulting from development in flood plains, and

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conserve the natural water retention capacity and special natural resource characteristics of flood plains, including flood plain forests.

The federal- and state-recommended protections shall continue to apply to the area outlined by the existing flood hazard areas designated by the Federal Emergency Management Agency. In addition, it is recommended that the Town consider adding some additional protections to areas of designated floodplain forests not already located within a flood hazard area, after comparison of the boundaries of each and a study of the best methods of protecting these sensitive areas.

## **11) Water Conservation Overlay District (WCO)**

The purpose of this overlay district is to protect and enhance the water quality and natural beauty of the rivers that run through Randolph by precluding development in this area, while allowing utility, safety or bank stabilization projects as well as low-impact recreational uses.

The Town may want to consider including some other waterways, such as Thayer, Chandler or Ayers Brook, in this overlay district, perhaps with a narrower restriction.

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## Chapter 3 - Transportation

### GOALS

- I. Provide a safe, energy-efficient, well-maintained, and cost-effective transportation system integrating all modes of travel (auto and, where appropriate, pedestrian, bicycle and public transportation), to meet the needs of Randolph residents and businesses and the general public.
- II. Maintain and promote expansion of the existing rail and public transportation services.

### Policies

- A. Minimize traffic congestion and conflicts on local roads and state highways through local land use regulations and ordinances. *(supports Goal I)*
- B. Integrate land use and transportation planning (including collaboration with Stagecoach) to reduce the energy and environmental impacts of transportation resulting from development. *(supports Goal I)*
- C. Keep Town sidewalks in good repair. *(supports Goal I)*
- D. For local road reconstruction projects, utilize complete street standards, provide sidewalks where pedestrian volume and safety warrant them, adequate space for bus stops and consider integrating traffic calming features *(supports Goal I)*
- E. Maintain up-to-date inventories of culverts, bridges, signs and other features of the local transportation systems. *(supports Goal I)*
- F. Maximize use of state grant programs to maintain, enhance and expand the Town's transportation systems. *(supports Goal I)*
- G. Support Amtrak and Stagecoach. *(supports Goal II)*
- H. Preserve town rights-of-way when they offer recreational and other benefits. *(supports Goal I)*

### Actions to Implement Policy A

- A.1. Work with VTrans to conduct a multimodal corridor study for the Route 66/Central Street corridor from Randolph Center into Randolph village and adopt an Access Management Plan.
- A.2. Though there have been studies of the junction in the past, the intersection of VT Route 66/Central Street, VT Route 12N (Forest Street) and Elm Street should still be reviewed to evaluate ways to improve traffic flow and safety at this intersection.
- A.3. Consider additional provisions for access management in the Randolph Curb Cut and Excavation Ordinance.

### Actions to Implement Policy B

- B.1. The Town should work with Stagecoach to encourage larger employers to increase the use of existing public transit routes as well as explore alternative transit options such as carpools.
- B.2. Transit providers should review individual rider needs to see if busses make more sense than individual rides.

### Actions to Implement Policy C

- C.1. Replace unsafe sidewalks or repair them so they have smooth surfaces.



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- C.2. Adopt a policy or ordinance that clearly defines who is responsible for clearing snow from the sidewalks in the downtown.

## **Actions to Implement Policy D**

- D.1. Develop complete street design standards for town roadways (including access standards, bicycle access/pathways, bus stops and expansion of road shoulders where feasible) sidewalks, utilities, plantings, parking, handicap accessibility, etc.
- D.2. On streets that currently have sidewalks, they should be replaced – at least on one side – as needed and in compliance with the ADA. A policy should be developed with objective criteria for choosing whether or not to have sidewalks on streets that currently do not have any.

## **Actions to Implement Policy E**

- E.1. Inventory, maintenance and replacement programs should be developed for road/traffic signs and for guardrails.
- E.2. Existing inventories of culverts and bridges should be kept up-to-date.

## **Action to Implement Policy F**

- F.1 Maintain State Downtown Designation to provide access to the Downtown Transportation Fund grants as well as access to other grants and incentives for property owners.

## **Actions to Implement Policy G**

- G.1. Promote the availability of public transportation within Town and between Randolph and regional employment markets such as Montpelier and the Upper Valley, and consider adding routes or lengthening hours of service.
- G.2. Support public transportation infrastructure needs such as dedicated bus stop spaces, signage and shelters.
- G.3. Promote the use of Amtrak and Stagecoach as not only amenities but as energy-efficient modes of transportation and participate in any regional rail projects.

## **Actions to Implement Policy H**

- H.1. Work with VAST and other recreational organizations to maintain and install trails.

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## Chapter 4 - Utilities and Facilities

The Town of Randolph has many public utilities and facilities, including public water and wastewater, police, town forests, to name a few. An inventory of all public utilities and facilities is included in Appendix D. A map of public facilities, public utility service areas and electrical transmission lines is included in Appendix C.

### **GOAL - MUNICIPAL PROPERTIES, SERVICES AND UTILITIES**

**Improve the town's physical infrastructure and the various entities in town which provide services in an efficient and cost-effective manner as Randolph grows into the future.**

#### **Policies**

- A. General - Provide residents with safe, effective, responsive and affordable municipal infrastructure, facilities and services consistent with other town goals, and, whenever possible, to encourage and work with other public and private utility or service providers to do the same.
- B. Fire Departments - Provide quality service from all three fire departments in terms of both qualified and adequately trained personnel and adequate equipment.
- C. Town Forests - Sustainably manage the town forests and to promote their use for recreation, forestry and habitat conservation, consistent with management plans and best management practices.

#### **Actions to implement Policy A - General**

##### A.1. Police

Investigate and implement a plan to provide adequate space for the Police Department's needs.

##### A.2. Village Water District

- a. Continue to replace and upgrade undersized and older water mains.
- b. Continue pursuing development of an alternate public water supply that would allow the Pearl Street well to be used only in emergencies.
- c. Replace the North Reservoir.

##### A.3. Village Sewer District

- a. Continue to replace and upgrade undersized and older sewer lines and replace and repair leaking manholes.
- b. Consider installing a solar array at the wastewater treatment plant, if safe from flood damage, to offset the cost of electricity to operate the plant.
- c. Map the wastewater system and develop an asset management plan.

##### A.4. Landfill & Transfer Station

- a. Reduce the waste stream by encouraging reuse and repair and by encouraging recycling of as many items as feasible at the transfer station at no charge, or minimal charge, to residents.
- b. Investigate possible methane recovery and power generation at the landfill from both PV solar and methane.

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## **A.5. Recreation**

- a. Coordinate recreational activities offered by the Town with other recreation providers in the town and surrounding area, and work with surrounding communities to develop a cost-sharing formula for shared recreational facilities.
- b. Improve and expand Town recreational trails within the region, including in the Town Forests, in cooperation with the Conservation Commission and other interested organizations.
- c. Consider the creation of additional small parks within the villages.
- d. Create or improve playgrounds/parks in Randolph Center and East Randolph.
- e. The Town-owned lots on Pearl Street should be reviewed as a potential green space for recreational activities.
- f. Improve or replace the pool facilities on School Street.

## **Actions to implement Policy B (Fire Departments)**

- B.1. Purchase new vehicles to replace high-maintenance or inadequate vehicles.
- B.2. Seek cost-sharing opportunities when specialized equipment and training are needed for special circumstances or facilities.
- B.3. Encourage participation in the Local Emergency Planning Commission to ensure that the Fire Department is aware of grant opportunities and to facilitate regular communication with neighboring fire departments and other emergency disciplines.
- B.4. Create a Task Force to study the impact of an accident or other emergency that severs the use of roads through Randolph's downtown, and that address the need for alternate access means or location of facilities to ensure emergency responders are not blocked in the village or along VT 12, including the possible relocation or additional location of emergency services.
- B.5. Expand or upgrade fire stations when needed to provide sufficient space for today's vehicles and to make them more energy efficient.
- B.6. Require the installation of "Knox boxes" for seasonal residences and commercial businesses so that fire departments can more easily access structures without forcible entry.

## **Actions to implement Policy C (Town Forests)**

- C.1. Continue to manage the forests sustainably.
- C.2. Keep management plans updated, including with regard to forest management, recreation, and habitat protection.
- C.3. Expand recreational trails, in conjunction with forest management activities in the Town system of forests and recreation areas.
- C.4. Inform the public of the recreational and non-recreational uses of these lands.
- C.5. Add all timber sale proceeds to the Town's Conservation Fund, administered by the Conservation Commission.
- C.6. Provide public parking and informational signage at each Town Forest.
- C.7. Investigate the extent of invasive plant species on Town forests and other town-owned properties, and the options for removal or control.

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## **GOAL - KIMBALL LIBRARY**

**To have an up-to-date library which accommodates and supports an expanding collection of materials and services using multiple media and which is used by all citizens.**

### **Policy**

Support the library as an essential town service which is provided through largely municipal funding, and support its mission to foster the lifelong learning, civic participation, and interaction of all of the community's members.

### **Actions to implement Policy**

1. Continue to upgrade the existing building while maintaining its historic character and include any recommended improvement or expansion in capital improvement plan.
2. Conduct an energy audit.
3. Foster cooperative relationships between the Library and area organizations to expand services, particularly outreach.

## **GOAL - CHANDLER CENTER FOR THE ARTS**

**Provide diverse opportunities for all members of the community, including students and youth, for artistic expression and education through programs in the creative and performing arts in the Chandler Music Hall and Gallery.**

### **Policies**

- A. Support Chandler in its endeavors to bring cultural, musical, educational, festival, and community events to the Town of Randolph for its citizens and visitors to enjoy, to give residents of all ages and abilities opportunities to experience and learn about the arts, and to contribute to making Randolph a very desirable place to live and work.
- B. Assure that the Chandler Music Hall and Gallery building is maintained and preserved so that it may function as a cultural and community center for the residents of Randolph and the surrounding communities and for the benefit and enjoyment of future generations.

### **Action to implement Policy A**

- A.1 Encourage and assist other charitable, non-profit organizations in their pursuit of cultural and artistic expression and, where desired, provide a home for such organizations.

### **Action to implement Policy B**

- B.1 The Chandler Center for the Arts Board of Directors shall report annually to the Selectboard on its state of affairs, including financial health and programming.

## **GOAL - SCHOOLS**

**Students have the knowledge, skills and tools to be prepared for the next stage of their lives, which justify the resources invested by the community.**

### **Policies**

- A. Critical thinking: Students creatively apply experiences and critical analysis to solve problems and make informed decisions.

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- B. Foundational Knowledge: Students possess comprehensive knowledge of a core curriculum in the following areas:
- Reading, writing and communication
  - Mathematics
  - Science
  - Social studies
  - Life Skills
  - The Arts
- C. Ability to Adapt: Students are adaptable, resilient and can manage change.
- D. Information Technology: Students use and apply information and technology appropriately, effectively and objectively.

## **Actions to implement Policy A**

1. Offer more Advance Placement (AP) courses in the high school
2. Re-organize course schedules to allow for more participation in visual art, music and drama programs
3. Expand Project-Based Learning (PBL) opportunities.
4. Continue the Artist-in-Residence program in the elementary school.
5. Expand the Community-Based Learning and Independent Learning Opportunity programs.

## **Actions to Implement Policy B**

- B.1. Create a tiered K-12 curriculum aligned with the Common Core in mathematics and ELA.
- B.2. Create a tiered K-12 curriculum in science and social studies aligned with the anchor, process and practice standards of the Common Core.
- B.3. Elementary teachers will participate in programs and trainings to gain confidence in mathematics by developing skills in best practice.
- B.4. Create summer programming, focusing primarily on mathematics, to provide extended time on learning opportunities for struggling learners.
- B.5. Add more time on learning for mathematics each day.

## **Actions to implement Policy C**

- C.1. Implement a structure for the delivery of special education services at the elementary level that includes extended time on learning beyond that provided to the general population.
- C.2. Implement programs that actively engage the entire student body in processing and improving their behavioral contributions to school climate.
- C.3. Create a position for an “outreach nurse” to improve student readiness for learning on a daily basis.
- C.4. Create an in-house therapeutic program for students with severe emotional disabilities.
- C.5. Train all district teachers in practices that allow them to accommodate and remediate low level trauma based behaviors that negatively impact learning.
- C.6. Create a full-day, year-round pre-school program.
- C.7. Hiring academic and behavioral interventionists and coaches to close the gaps in knowledge and skills that currently exist until the new programs and structures can take over that responsibility.

## **Actions to implement Policy D**

- D.1. Continue to expand the technology offerings and the digital audio collection in the media center.
- D.2. Create an advanced manufacturing option at the technical center.

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- D.3. Add new courses to the high school curriculum that support the development of STEM and STEAM based skills: coding, computer science, and robotics.
- D.4. Create a maker space for students.



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## **Chapter 5 - Natural Resources**

The careless use of land, water resources and our native flora and fauna saps future potential from a community. This plan acknowledges that when we talk about conserving resources, we are doing so both for ourselves, and for future generations of Randolph citizens.

The plants, animals, streams, surface waters, forests, bedrock, groundwater, soil and air that surround us exist in a complex set of relationships with each other and with us. This system can change and be resilient, but individual components of it may be quite fragile and may not survive those changes in the long run. Our health and welfare depends on this system remaining stable.

Forests ecosystems provide a significant number of benefits to our community, including environmental benefits (such as water quality, clean air, wildlife habitat, biological diversity, and mitigation against climate change), economic benefits (such as supporting a vibrant wood product and sugarbush industry, recreation and tourism), and a social/emotional attribute (a sense of well-being). Randolph has a strong tradition valuing the benefits of its forest landscape which is interspersed amongst a diverse agricultural land use pattern, all within a productive landscape where residents live, work and recreate. While Randolph's forest landscape is made up of relatively smaller parcel sizes, its forest landscape is an important natural resource which should be considered when further development occurs.

Randolph retains a rich diversity of landscapes and natural resources. It is important to better identify and document our natural areas, fragile and undisturbed areas, irreplaceable habitats, watersheds and aquifers, scenic views and special ecosystems. With these resources identified, policies can be put in place to promote their long-term viability as part of an overall public process to protect Randolph's natural resources to the greatest extent feasible.

Preventing degradation of our natural resources is likely to be much more effective and less costly than the consequences of poor land use decisions. Conserving Randolph's natural resources and protecting those areas identified as fragile, through regulatory and non-regulatory means, are likely to enhance property values and quality of life in the town, provide recreational and aesthetic benefits to the public, and draw visitors to the area.

### **GOAL - WETLANDS**

**Encourage the conservation of all wetland areas and the preservation of wetland areas.**

#### **Policies**

- A. Support the state and federal protection of Class 1 and Class 2 wetlands.
- B. Protect or provide for long-term stewardship of significant wetlands and prevent additional loss of wetlands within town.
- C. Preserve and enhance the functional values of wetlands already affected by human disturbance.

#### **Actions to implement Policy A**

- A.1 The Randolph Land Use Regulations should be amended to:
  - a. avoid development or land uses with adverse impacts to Class 1 and 2 wetlands; and
  - b. require that site plans for and subdivisions of properties in the RR and RA Districts show the location of mapped Class 1 and 2 wetlands and their associated state-required buffer zones, based on federal, state, or local inventories, and on landowner knowledge, whenever such wetlands are located within the parcel for which the application is being requested and require

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that site plan and subdivision reviews consider the impact of the proposal on loss or degradation of wetlands, flood plains and other water resources either on or contiguous to the parcel.

## **Actions to implement Policy B**

- B.1. Keep abreast of changes to and updates of the State's wetland delineations and encourage compliance with the State's wetland rules.

## **Action to implement Policy C**

- C.1. Landowners and Town Officials should work together to find voluntary solutions to reduce wetland loss or degradation, especially for wetlands that are not regulated by the state or federal government.

## **GOALS – FLOOD HAZARD AREAS AND FLOODPLAIN FORESTS**

- I. Minimize the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures which result from flood damage.**
- II. Conserve Randolph's floodplains and floodplain forests, through regulatory and non-regulatory methods, for their beneficial natural functions.**

## **Policies**

- A. Maintain regulations for development in the floodplains that meet state and federal guidelines and therefore continue to allow landowners to be eligible for flood insurance and avoid flood damages. *(supports Goal I)*
- B. Floodplain forests and flood hazard areas should be used for open space, greenbelts, recreational or agricultural uses which do not adversely impact their flood retention and habitat values. *(supports Goal II)*

## **Actions to implement Policy A**

- A.1 The Randolph Land Use Regulations should be amended so that:
- a. new buildings and structures are discouraged within flood hazard areas;
  - b. it meets all state and federal requirements, as well as prudent flood protection measures such as using one foot above base flood elevation as a standard and to minimize encroachment in the floodplain; and
  - c. site plan applications identify floodplains, located within the parcel for which the application is being requested.

## **Actions to implement Policy B**

- B.1. Identify and map Randolph's significant floodplain forest communities.
- B.2. Encourage landowners of floodplain forests to sustainably manage or protect them.
- B.3. Educate landowners and the general public regarding the importance of the floodplain forests on their lands, and assist in identifying, valuing, maintaining, or even restoring these resources.

## **GOAL – WATER RESOURCES**

**Maintain and improve the quality and quantity of both surface and groundwater water resources, such as the White River and tributaries, through careful management, and through education about the threats to water resources.**

## **Policies**

- A. Encourage individual understanding of the relationship between human activities and the hydrologic cycle, and encourage personal decision-making that contributes to water quality, and availability.

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- B. Maintain and enhance water resources for public water supplies, recreation, fisheries, wildlife habitats and aesthetics.

## **Actions to implement Policy A**

- A.1. Educate businesses and the public about water quality and conservation issues, perhaps in collaborative efforts with:
- a. government agencies, schools, and community groups to educate the public about water quality and quantity, and what individuals can do to protect our water resources; and
  - b. the State of Vermont and the U. S. Department of Agriculture to inform farmers and other landowners about programs to compensate them for steps to improve water quality and conservation.
- A.2. Support the emergency management efforts of the town and state to limit potential adverse impacts on water resources from spills and other activities.

## **Actions to implement Policy B**

- B.1. In its decision making, at a minimum, the Town should support state and federal standards for the protection of both the quality and quantity of surface and groundwater supplies that pass through Randolph, including the water management typing at the highest applicable level.
- B.2. The Randolph Land Use Regulations should continue to include the Conservation Overlay District which should be amended so that:
- a. land development which may significantly affect source protection areas of public supplies is strictly limited or conditioned, depending upon the level of threat; and
  - b. adverse impacts to water quality or quantity are minimized through proper siting and conditions on development.

## **GOALS – FLORA AND FAUNA**

**I. Minimize the spread of invasive species.**

**II. Maintain and enhance wildlife habitat through informed decision-making and public education.**

## **Policies**

- A. Support education on the impacts of invasive species and ways to minimize its spread. (*supports Goal I*)
- B. Plan for and promote development patterns that leave ample natural and open spaces for native plants, animals, and the resources they depend on to survive and to thrive. (*supports Goal II*)
- C. Support the conservation and stewardship of areas within the town that provide large contiguous forests, connecting habitat for wildlife, or significant natural communities of flora or fauna; and encourage the restoration of any such areas that have been degraded. (*supports Goal II*)

## **Actions to implement Policy A**

- A.1. The Town Forests' management plans should consider address invasive species and control thereof.
- A.2. The Town Highway Department should revise its roadside mowing operations to consider measures to reduce the spread of invasive species.

## **Action to implement Policy B**

- B.1. Identify the necessary corridors or connections that wildlife require to travel within and between Randolph and neighboring towns.

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## **Action to implement Policy C**

- C.1. Educate landowners and the public on policies and practices that provide for long-term protection of wildlife habitat in Randolph.

## **GOALS – FOREST BLOCKS AND HABITAT CONNECTORS**

- I. To maintain or enhance the natural diversity, population, and migratory routes of wildlife, including natural predators, in proper balance.**
- II. To provide the community with access to quality forestland for recreational use on town land and by supporting conservation acquisition activity by conservation groups.**
- III. To support a productive forest products industry within Randolph and the broader region.**

## **Policies**

- A. Encourage long-term protection of major habitats through such things as conservation easements, land purchases, leases and other incentives. *(supports Goal I)*
- B. Protect deer wintering areas from developments and other uses that adversely impact the resources without rendering a parcel undevelopable. *(supports Goal I)*
- C. New subdivision and construction shall take reasonable steps to avoid disruption or loss of major identified wildlife corridor crossings and minimize forest fragmentation. *(supports Goals I and II)*
- D. Encourage entrepreneurship in forestry activities, including those which add value to Randolph's forestry products. *(supports Goal III)*

## **Actions to implement Policy A**

- A.1. Encourage owners of necessary habitat for threatened species to contact the State for assistance in developing a management plan for these sites.
- A.2. Forestry management plans shall be kept up-to-date in order to properly manage Randolph's town forests and floodplain forests.
- A.3. Encourage landowners to maintain or improve the natural diversity, population, and migratory routes of wildlife habitat areas.

## **Actions to implement Policy B**

- B.1. Encourage sport and subsistence hunting of ecologically-sound intensities to provide continued success of the species and endangered or threatened wildlife.
- B.2. When possible, minimize fragmentation of deer habitat.

## **Actions to implement Policy C**

- C.1. Maintain provisions for conservation subdivisions in the Land Use Regulations.
- C.2. Encourage landowners with larger forestland parcels to reduce the fragmentation of their forestlands.

## **Actions to implement Policy D**

- D.1. Consider implementing buffer strips on streambanks and shorelines for forestry activities to prevent erosion.
- D.2. Consider creating a forest land conservation program to encourage more forest products.

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## **GOAL - SCENIC RESOURCES**

**Preserve and enhance, without undue burdens, the viewsheds within the Town of Randolph that are clearly deemed to be of high importance and mapped.**

### **Policy**

Protect from development scenic viewsheds which have been identified as important resources.

### **Actions to implement Policy**

1. The Town should have a public discussion to determine what constitutes a scenic resource important to the Town, including lands unsuitable for development, and how they should be selected.
2. Educate the public on mechanisms to preserve viewsheds.
3. The Randolph Land Use Regulations should continue to regulate lighting and should be amended to:
  - a. create flexible strategies that enable and promote creative placement and design of development that would otherwise eliminate or degrade an important view; and
  - b. provide standards for windmills that are not net-metered.

## **GOAL - PRODUCTIVE AND WORKING LANDSCAPES**

**Maintain and enhance Randolph's heritage of working farm and forest lands as part of a sustainable, environmentally sound, local, resource-based economy.**

### **Policies**

- A. Promote sustainable farms and forests in those areas of town most suitable.
- B. Consider the concerns and needs of local resource-based industries, including farmers and foresters and other stakeholders, in town policy decision-making and encourage their involvement in organizations that promote commerce and economic development in Randolph

### **Actions to implement Policy A**

- A.1. The Conservation Commission should update its agriculture survey, working with the National Agricultural Statistics Service, to include a Randolph specific questionnaire in the next Ag Census survey.
- A.2. The Orange Southwest School District is encouraged to link local farms with all local schools to improve freshness and quality of the school lunch program.
- A.3. Explore ways to promote and support sustainable farming and forestry such as:
  - a. Encouraging local agriculture-based products and outlets from Farmer's Markets to larger cooperative efforts.
  - b. Technical assistance, grants and low interest loans for new or improved farm and forest operations or practices.
  - c. Investigate ways the town can broker or facilitate the creation of cooperative facilities or systems that give producers shared access to equipment or services that they could otherwise not afford.
  - d. Assist farmers and foresters to find grants to implement conservation measures that protect water and other resources.
  - e. Produce information on the pros and cons of solar installations on more marginal land as a source of income to farmers.

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- A.4. The Randolph Land Use Regulations should continue to promote clustering, allow density bonuses and to have zones where the needs of agriculture and forestry are given precedence. Additionally, the Regulations should be amended to:
- a. allow for transfer of development rights; and
  - b. encourage, where appropriate, buffer zones where agricultural or forestry practices might otherwise adversely impact sensitive natural resources.

## **Action to implement Policy B**

- B.1. Town policies, investments, zoning, purchasing and other decision-making should identify ways to promote sustainable farm and forest practices in those areas of town most suitable and should actively solicit input from farmers and foresters in the implementation of these policies, investments, etc.



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## **Chapter 6 - Energy**

### **GOAL**

**Conserve energy, increase efficiency, and switch fuel types to renewable sources in order to meet goals of reducing overall energy use by 35% in 2050 and have 90% of the energy supplied by renewable sources by 2050.**

### **Policies**

- A. Reduce the dependency on and demand for new sources of non-renewable energy.
- B. Promote land use patterns and densities that conserve energy.
- C. Increase public awareness and use of energy conservation practices through education and examples.
- D. Reduce greenhouse gas emissions.
- E. Ensure local electrical grid capacity is maintained for the benefit of Randolph residents and businesses.

### **Actions to implement Policy A**

- A.1. Encourage small-scale commercial and residential solar, as well as commercial power generation that uses sustainably harvested biomass, run-of-river hydro, or methane from wastes.
- A.2. Study combined heat and power (CHP) facilities that generate electricity or heat to supply nearby buildings in the Village and industrial area.
- A.3. Support taxing forest lands or farmlands at use value and not at development value to promote the sustainable and renewable source of biomass production and to promote maintenance of Randolph's fields and forests at a reasonable rate of return.
- A.4. Promote the design and construction of energy efficient buildings and structures.
- A.5. Encourage innovative financing, to allow families and small businesses to implement capital intensive energy conservation and generation projects.
- A.6. Encourage the use of design principles and practices that conserve energy in the rehabilitation of existing buildings and the development of new buildings and equipment.

### **Actions to implement Policy B**

- B.1. Consider enacting provisions in subdivision regulations that encourage energy conservation and renewable energy use, and that concentrate development in locations that promote energy conservation (e.g., grant density bonuses to projects that employ advanced energy design and efficiency).

### **Actions to implement Policy C**

- C.1. Support education programs about energy efficiency and distribute recommended guidelines to builders engaged in renovations or new construction. This effort can be coordinated with the Vermont Department of Energy, Efficiency Vermont, and Vermont Technical College.

### **Actions to implement Policy D**

- D.1. Develop transportation routes or facilities to complement the recommended land use and settlement patterns set forth in this Plan and reduce the need for vehicle trips.
- D.2. Locate major public investments, such as schools, public recreational areas, and municipal facilities within or in close proximity to the downtown, or to other village centers.

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- D.3. Encourage the acquisition of land or rights in land by the Town or other qualified entities for footpaths or bikeways in the village areas or other areas of concentrated settlement as alternatives to the automobile.
- D.4. Encourage the development of energy-efficient home occupations and small-scale home business to reduce the demand for commuter transportation facilities and energy.
- D.5. Support the continued operation of active freight and passenger service to Randolph, and state and regional transportation transit programs serving Randolph.

## **Actions to implement Policy E**

- E.1. Give priority toward maintaining access to electrical grid for small-scale net-metered homes and businesses generating power to meet their needs.
- E.2. Prevent the development of market power generation facilities that could consume grid capacity leading to constraints to future access by local renewable power producers.

## **Section 248 – Certificates of Public Good**

Distributed power generation facilities, such as hydropower dams, fossil fuel plants as well as wind power or solar systems owned by utilities, are exempt from local permitting and Act 250 but subject to review and approval by the Vermont Public Utility Commission (30 VSA §248). Under this law, prior to the construction of a generation facility, the Commission must issue a Certificate of Public Good permitting the proposed project. A Section 248 review addresses environmental, economic, and social impacts associated with a particular project, similar to Act 250. In making its determination, the Commission must give due consideration to the recommendations of municipal and regional planning commissions and their respective plans, unless these plans have been written to a higher standard, in which case the plans are afforded “substantial deference”. This Plan has been updated so that now the Public Utility Commission can give clearly stated policies herein “substantial deference” in their proceedings.

Residential net-metered systems with 15kw or less in capacity go through a minimal 248 process and are assumed to not have impacts. However, ground mounted systems in residential areas can impact the neighbors, just like any other structure.

### **For all energy generation facilities, the following policies apply:**

1. **Preferred Locations:** The Town supports the placement of new generation and transmission facilities on top of existing buildings, on landfills, on brownfields outside of the village center, on reclaimed quarries or gravel pits, on a site that was previously covered by a structure or impervious cover in compliance with setbacks. Additionally, the Town, by joint letter of the Planning Commission and Selectboard, may designate a site as preferred if the total project area of panels encompasses 10 acres or less and if the project, as designed, will not be visible in the growing season from town or state highways.
2. **Prohibited Locations:** Energy facility development shall have to meet principal structure setback for the relevant area in the town zoning, and shall be prohibited in floodways, class 1 and 2 wetlands, lands within 50 feet of the top of bank of perennial streams, lands over 25% slope.
3. All energy projects will be required to meet lot coverage and screening requirements found under site plan and conditional use approval processes in the respective zoning district, except solar arrays shall not be counted as lot coverage in the Industrial District.
4. Commercial- or industrial-scale renewable energy projects shall only be permitted and approved where (a) the project will not have an adverse impact on the aesthetics, scenic and natural beauty,

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historic significance or natural resources of the areas, and (b) where the proposed project will be substantially screened from view from I-89, state highways, town roads and neighboring properties to prevent solar glare and mitigate any adverse impact to the aesthetics and scenic and natural beauty of the surrounding area and its viewsheds. Commercial- or industrial-scale solar projects are those sized greater than 500 kW. These requirements do not apply to solar arrays mounted on existing residential and commercial buildings' roofs and over existing parking lots for the benefit of the residential or commercial user.

5. Commercial- or industrial-scale solar and wind energy projects, as well as all other permitted and conditional uses shall not be constructed on greater than 10 acres of agricultural or forest lands with soils that are designated as being "prime agricultural soils" or of "statewide or local significance."

**For wind generation facilities, the following policies apply:**

1. The topic of wind generation has become divisive within Vermont. Randolph generally does not have suitable locations for the construction of commercial or industrial wind facilities due to existing development and low wind resources and therefore finds this scale of development does not conform to this Plan. For the purposes of this Plan, Randolph considers any wind facility with a tower height/hub height (excluding blades) in excess of 125 feet tall to be considered a commercial or industrial wind facility.
2. Wind towers shall not be sited where the structure will break the penultimate ridgeline silhouette as viewed westerly from Randolph Center, the VT Route 12 and 12A valley floors, Chelsea Mountain Road, Edson Road, Tunbridge Road and VT Route 14 or as viewed easterly from Randolph Center, including from Rogers, Curtis, Silloway and Denning Roads.

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## **Chapter 7 – Affordable Housing**

### **GOAL**

**Encourage the development and maintenance of safe housing to meet the needs of Randolph's residents, while at the same time ensuring that the pace and pattern of housing growth is compatible with other Town goals and does not strain the community's ability to provide adequate and affordable public services.**

### **Policies**

- A. Build on Randolph's current housing strengths, including the integration of income levels, and a mix of rental properties and owner-occupied buildings in the same neighborhoods.
- B. Continue to encourage higher-density development in areas of Town most able to support it, in order to provide convenient, efficient and affordable public services, to conserve energy and the Town's natural resources including working agriculture or forests.
- C. Support property owners and residents on fixed or limited incomes with housing issues.
- D. Support energy efficient housing.

### **Actions to Implement Policy A**

- A.1. Continue and enhance strategic partnerships with Legislators, State Agencies, Two Rivers Ottauquechee Regional Commission, RACDC, Habitat for Humanity, Realtors, and for-profit housing.
- A.2. Identify land and buildings suitable for housing development or re-development.
- A.3. Investigate ways to attract private development solutions to some of our affordable or special purpose housing needs, such as pre-approved areas, density bonuses, or incentives for development in areas with sufficient existing infrastructure, that conform to the Town Plan.

### **Actions to Implement Policy B**

- B.1. Maintain provisions in the Land Use Regulations that:
  - a. allow high density development in areas served by town services;
  - b. allow accessory apartments and other creative housing solutions where appropriate;
  - c. allow adaptive re-use of appropriate historic structures to satisfy housing needs; and
  - d. encourage clustered development of housing and roadways that do not lead to fragmentation of farm and forest landscapes in the rural areas.
- B.2. Explore options for water and sewer hook-up charges so as not to discourage housing development in areas of desired growth, such as deferred payments.

### **Actions to Implement Policy C**

- C.1. Encourage non-profits and others to help those homeowners who have limited assets or income, to perform upkeep and rehab of existing housing, particularly historic housing stock.
- C.2. Work with non-profits to educate residents about housing options, including available loan and grant programs for mortgages, rental assistance, maintenance and remodeling.

### **Actions to Implement Policy D**

- D.1. Take advantage of weatherization and energy efficiency programs.

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- D.2. Continue to require certificates of occupancy in the Land Use Regulations to support compliance with the State's energy building codes.
- D.3. Support state programs to incentivize woodstove conversions to high efficiency ones, as well as installation of electric heat pumps.

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## Chapter 8 - Economic Development

### **GOALS**

- I. Retain and enhance Randolph as an economic hub for residents and neighboring communities.**
- II. Provide residents with high quality employment opportunities close to home.**

### **Policies**

- A. Support existing businesses and foster high quality development/redevelopment that strengthens the economy, respects the environment and complements the community's larger goals. *(supports Goal I)*
- B. Enhance economic stability and resilience through a diversity of business types. *(supports Goal II)*
- C. Retain and enhance those "quality of life" assets that are major factors in attracting businesses to Randolph, including: housing; education and vocational training; cultural institutions; rural environment; health and human services; and recreation. *(supports Goal II)*
- D. Maintain pedestrian-friendly villages and economically vibrant downtown as centers of community life. *(supports Goal I)*
- E. Engage business, cultural, and recreational interests in promoting environmentally-friendly tourism. *(supports Goal I)*
- F. Provide business and citizens with convenient, up-to-date, and affordable telecommunications infrastructure. *(supports goal I)*

### **Actions to implement Policy A**

- A.1. The Randolph Economic Development Council should continue to spearhead the achievement of Randolph's economic development goals.
- A.2. Fund a position of an Economic Development Coordinator.
- A.3. The Council and Town officials, with invitations to other organizations involved with economic development, should forge stronger ties with the Vermont Technical Enterprise Center resulting in full occupancy of its facilities.
- A.4. Improve public infrastructure (water, sewer, roads, flood control, etc.), including by applying for all applicable state and federal grants and by working closely with regional planning groups.
- A.5. Continue to support agriculture and forestry as desirable businesses and consider these lands as natural, scenic, recreational, and tourism resources. Care for environmental assets increases Randolph's desirability as a place to do business and to live.

### **Actions to implement Policy B**

- B.1. Re-apply for the Downtown and the East Randolph Village Center designations to facilitate securing business development grants.
- B.2. Promote workforce development efforts by the Randolph Technical Career Center and Vermont Technical College.
- B.3. Support cultural, civic and educational organizations that benefit the Town and invigorate its economic climate.



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## **Actions to implement Policy C**

- C.1. Support the work of Vermont Technical College, Randolph Technical Career Center, the Vermont Technical Enterprise Center, and our other schools to provide training which improves the Town's workforce skill levels.
- C.2. Encourage collaboration between Vermont Technical College, Gifford Medical Center and state business development organizations to expand local job opportunities.

## **Actions to implement Policy D**

- D.1. Support actions and projects that reduce needs for private motor vehicle use, facilitate expanded public transportation and shared vehicle usage, and increase other modes of transportations such as pedestrian and bicycles.
- D.2. Support the efforts of volunteer organizations to enhance the beauty and friendliness of Randolph.

## **Actions to implement Policy E**

- E.1. Develop and implement a marketing strategy to attract low impact tourism and tourism-related businesses to Randolph.

## **Actions to implement Policy F**

- F.1. Actively participate in regional efforts to provide all of our residents with access to modern telecommunications infrastructure, including broadband Internet access and wireless communications.

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## Chapter 9 - Flood Resilience

Following the impact of Tropical Storm Irene in 2011, the Vermont Legislature added a requirement that all communities address flood resilience as part of their municipal plans. Interpreted broadly, “resilience” means that an entity—a person, neighborhood, town, state, region or society— when faced with a particular situation or event, has the ability to effectively return to its previous state or adapt to change(s) resulting from the situation or event without undue strain. As such, “resilience” is an overall preparedness for a future event. For the purposes of this chapter, flood resilience will mean the ability of Randolph to effectively understand, plan for, resist, manage and, in a timely manner, recover from flooding.

Background on flood resilience history and measures is located in Appendix G.

### **GOALS**

- I. Maintain participation in the National Flood Insurance Program.**
- II. To increase Randolph’s resiliency in the event of a severe flood.**

### **Policies**

- A. Enhance and maintain use of flood hazard areas and floodways as open space, greenways, passive recreation and/or agricultural land. *(supports Goal I)*
- B. Minimize loss of flood storage capacity in an effort to minimize potential negative impacts. These impacts include the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures that result from flood damage. *(supports Goal II)*
- C. Protect municipal infrastructure and buildings from the potential of flood damage. *(supports Goal II)*
- D. Encourage limited activities in the mapped river corridor areas to reduce the risk of erosion. *(supports Goal II)*

### **Actions to implement Policy A**

- A.1. Continue to prohibit all new fill and construction of buildings in mapped floodways *(Mapped areas, unless corrected by FEMA)*.
- A.2. Support available grants and conservation easements that support recreation and agriculture in these areas.

### **Actions to implement Policy B**

- B.1. Use sound planning practices to address flood risks to protect Randolph’s citizens, property, economy, and the quality of the town’s rivers as natural and recreational resources.
- B.2. Continue to require vegetated buffer strips along the Second and Third Branches of the White River and along Ayers Brook and consider requiring a buffer strip in riparian zones bordering other streams.
- B.3. Rock rip-rap and retaining walls should only be used to the minimum extent necessary and when bioengineering techniques may not be adequate to prevent significant loss of land or property.
- B.4. Randolph should work with VTrans and the Regional Planning Commission on advocating for and improving the flood capabilities of state or town-owned transportation infrastructure.
- B.5. Continue to require all new and substantial improvements to structures to be elevated 1 foot above base flood elevation.

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## **Actions to implement Policy C**

- C.1. Continue to design municipal culverts and bridges, at minimum, to meet VTrans Hydraulics Manual, ANR Stream Alteration Standards, VTrans Codes and Standards.
- C.2. Maintain culverts to ensure they are effective during severe weather events.
- C.3. Do not build critical facilities (i.e. emergency services, power substations, municipal buildings) in the special flood hazard or river corridor areas.
- C.4. After flood events, recovery and reconstruction within the river area should be managed according to the Vermont River Program's best practices in order to avoid negative impacts downstream.
- C.5. Maintain and update hazard mitigation plans and emergency preparedness and recovery procedures.
- C.6. Randolph's representative should regularly attend and participate in the region's Local Emergency Planning Committee (LEPC #12).

## **Actions to implement Policy D**

- D.1. Consider limiting new development in the mapped river corridor areas to non-structural outdoor recreational and agricultural uses due to the dangerous erosive risk in these areas.
- D.2. Consider allowing minor expansions to existing commercial, industrial, and residential uses within ANR's mapped river corridor areas.

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## **Chapter 10 - Relationship to Other Plans**

### **Relationship to Municipal Plans**

The Town Plan focuses primarily on development and policy within the community's boundaries. However, it is important to recognize that how a community grows and changes can be directly impacted by development that takes place outside of the community. For example, many places had large and vibrant villages that were negatively impacted by the location of a large retail area in an adjacent or another nearby town.

To analyze the potential for outside impacts on Randolph, the Planning Commission has reviewed the Municipal Plans and, if available, the land use regulations of surrounding towns for consistency with this Plan. These communities include Bethel, Braintree, Tunbridge, and Brookfield.

All of these towns have planning programs and Planning Commissions. All of these towns have plans in effect: Bethel (2014), Braintree (2017), Tunbridge (2017), and Brookfield (2016). Of these, Bethel, Braintree, and Brookfield have zoning ordinances in place. The neighboring plans have been read in the context of the proposed Randolph Town Plan. No conflicts exist in either general philosophy or specific development proposals along town borders.

### **Relationship to the Regional Plan**

Randolph is a member of the Two Rivers-Ottawaquechee Regional Commission (TRORC). It is one of thirty (30) municipalities that comprise the Region. The TRORC Region covers northern Windsor County, most of Orange County and the Towns of Pittsfield, Hancock and Granville in Addison County. TRORC was chartered in 1970 by the acts of its constituent towns. All towns are members of TRORC, and town representatives govern its affairs. One of TRORC's primary purposes is to provide technical services to town officials and to undertake a regional planning program.

TRORC adopted its Regional Plan in July 2017. It will remain in effect for a period of eight years. This Plan was developed to reflect the general planning goals and policies expressed in the local plans. It is an official policy statement on growth and development of the Region. The Regional Plan contains several hundred policies to guide future public and private development in the Region. Policies for land use settlement are identified. These areas are: Town Centers, Village Settlement Areas, Hamlet Areas, Rural Area, and Conservation and Resource Areas. Delineation of each land use area is mapped or charted.

### **GOAL**

**Address shared concerns in a regional context.**

### **Policy**

Support regional solutions to shared problems.

### **Actions to Implement the Policy**

1. Encourage continued communication and cooperation between Randolph and its neighboring towns.
2. Continue to participate in the Two Rivers-Ottawaquechee Regional Commission.
3. Exchange planning information and development data with neighboring communities.

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## **Chapter 11 - Implementation**

In order to ensure that the policies of this Plan are implemented, it is essential to identify what municipal panel, organization or citizen is most suited to act on them. Throughout this Plan, actions are identified to implement policies. Generally, responsibility for implementation of the Plan will rest with the Planning Commission in areas relating to land use such as implementing changes to land use bylaws and to the Selectboard in areas such as implementing municipal policy for town roads. However, advisory committees as well as other community organizations could also have responsibilities for implementation and, fortunately, Randolph has many of these, as listed in Appendix H.

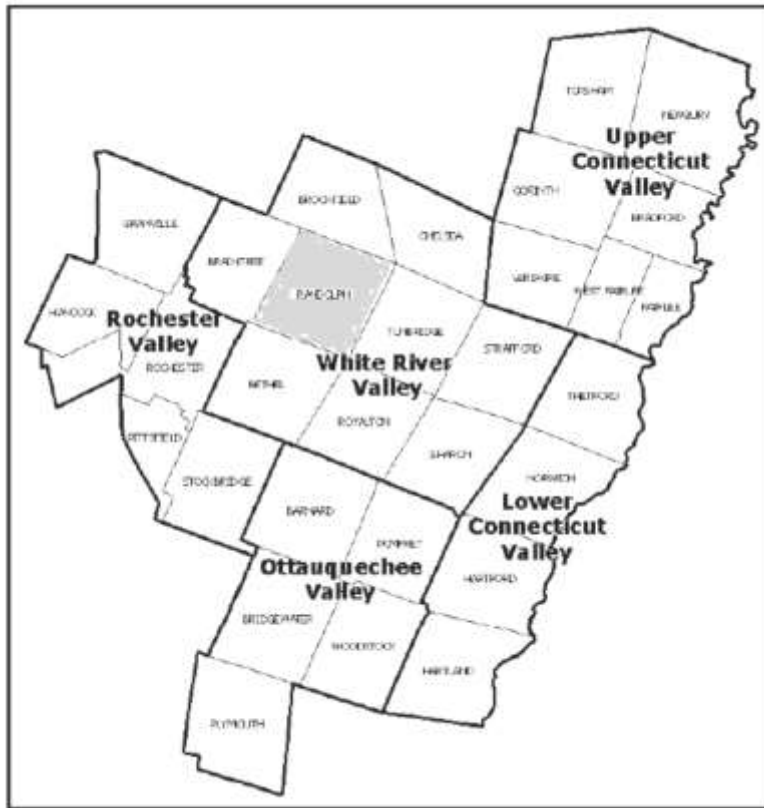
Appendix H also includes all the actions identified in this Plan and parties that are responsible for them (see above list for abbreviations for responsible parties in the Table).

In addition to assigning responsibility, the Planning Commission should also keep track of progress made toward implementing the goals, policies and actions of this Plan. This information will be useful to identify areas where additional effort needs to be applied to achieve implementation. It can also be used to describe how successful the community has been at implementation in the next iteration of this Plan, and to guide future policy.

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## Appendix A – Randolph Statistics and Demographics



*Map: The Town of Randolph within the Two Rivers – Ottawaquechee Region and its Sub-Regions*

### INTRODUCTION

The Town of Randolph, in Orange County, Vermont, was incorporated in 1781. Randolph is located at Exit 4 off I-89 midway between Montpelier and the intersection of I-89 and I-91 in White River Junction, Vermont. Vermont's largest city, Burlington, is just one hour to the north of Randolph. Randolph is home to a diverse array of businesses including agriculture, metal fabrication, services, and Internet industries. The Vermont Forum on Sprawl classifies Randolph as a “Traditional Center,” recognizing its function as a cultural and commercial center for the area, its traditional village-centric land use pattern and moderate growth rate.

### POPULATION

Over the fifty-year period from 1960-2010, the Town of Randolph experienced a 40% rate of growth in population. This was lower than the 68% rate of growth of the Two Rivers-Ottawaquechee Region or the 72% rate of growth of the Sub-Region, (the Town of Randolph is part of the White River Valley Sub-Region). Over the ten year period from 2000 to 2010, the Town of Randolph experienced population loss at a rate of 1.5% while the Sub-Region grew at a rate of 2.3% and the Region grew at a rate of 0.4%.

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Population Change 1960-2010								
	1960	1970	1980	1990	2000	2010	Population Change 1960-2010	Percent Change 1960-2010
Town of Randolph	3,414	3,882	4,689	4,764	4,853	4,778	1,364	40.0%
White River Valley Sub-Region	10,024	10,836	14,103	15,715	16,855	17,241	7,217	72.0%
Two Rivers-Ottawaquechee Region	33,400	35,106	44,960	51,539	55,784	55,996	22,596	67.7%

Source: US Census Bureau

## Age of Population

Randolph Age Groups and Change 2000-2010			
	2000	2010	% Change
Up to 19 years old	1438	1209	-15.9%
20-24 years old	464	489	5.4%
25-34 years old	472	436	-7.6%
35-44 years old	685	512	-25.3%
45-54 years old	699	705	0.9%
55-64 years old	421	668	58.7%
65-74 years old	309	390	26.2%
75-84 years old	273	234	-14.3%
85 years and over	92	135	46.7%
Total	4853	4778	-1.5%

Source: US Census Bureau

The Town of Randolph saw a decrease in the child-aged population over the decade. In 2000, the percentage of children in Randolph was 30%; in 2010 it dropped to 25%. Over the decade, the largest decrease in population happened within the age group of 35-44 years old (25% decrease); the largest increase in population appears within the age group of 55-64 years old (59% increase). The Town as a whole experienced a slight decrease of 1.5% in overall population.

### Age Trends

Children (1 month – 19 years) – the population of children shrunk, fewer births and less in-migration.

Young Adults (20 – 24 years)– this group of college students and young-adults entering the workforce had reason to stay and grow in Randolph.

Young Professionals (25 – 34 years) and Young Families (35 – 44 years) – these two groups lost population perhaps due to constraints in the job and housing markets.

Maturing Families (45 – 54 years) – this population stayed nearly the same.

Early Retirement (55 – 64 years) – this group had the largest increase in population.

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Retirement Age (65 – 74 years) - this group, along with the 85+ age group increase in size; but the 75-84 year group saw a decrease.

## Population Projections

Population estimates are made by the U.S. Census Bureau in-between decennial Census data collection. According to these data, the population in Randolph was projected to have decreased by 0.7% between the 2010 Census count and July 1, 2016. Randolph is not the only town within the White River Valley Sub-Region to experience population loss; Braintree, Sharon, and Tunbridge also lost residents over the decade. Percentage wise, Brookfield saw the most growth within the Sub-Region over this time.

White River Valley Sub-Region Population Estimates			
	2010 Population	2016 Estimate	% Change
Bethel	2,030	2,200	8.4%
Braintree	1,246	1,110	-10.9%
Brookfield	1,292	1,420	9.9%
Chelsea	1,238	1,274	2.9%
Randolph	4,778	4,743	-0.7%
Royalton	2,773	2,793	0.7%
Sharon	1,502	1,446	-3.7%
Strafford	1,098	1,161	5.7%
Tunbridge	1,284	1,171	-8.8%
Total	17,241	17,318	0.4%

Source: US Census Bureau

The Vermont Agency of Commerce and Community Development provides population projections for Randolph for 2020 and 2030. As shown in the table below, according to these projections, Randolph can expect future decreases in population at a rate of -3.6% from 2010 to 2020; and a slightly larger loss (-2%) from 2020 to 2030.

Randolph Population Projections				
Census 2010	Projection 2020	Projection 2030	% Change 2010-2020	% Change 2020-2030
4,778	4,606	4,413	-3.6%	-4.2%

Source: Vermont Agency of Commerce and Community Development

## Poverty Status of Population

The percentages of populations in Randolph living in poverty are relatively equal to the poverty numbers for the White River Valley Sub-Region, the Two Rivers – Ottauquechee Region, and the State of Vermont. Randolph's poverty percentages only exceed the State, Region, and Sub-Region in the category of female householders living in poverty, and here the numbers are only slightly higher.



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Poverty Status - 2000				
	% of Families with Children Living in Poverty	% of Female Householders Living in Poverty	% of Individuals Living in Poverty	% of Elderly Living in Poverty (65 years old & over)
Town of Randolph	5.3%	26.8%	7.9%	7.5%
White River Valley Sub-Region	5.8%	22.9%	9.9%	10.5%
Two Rivers – Ottauquechee Region	5.7%	24.1%	8.8%	8.6%
State of Vermont	6.3%	24.1%	9.4%	8.5%

Source: 2000 Census

## Income of Population

The 2000 and 2010 Censuses reported median family income for all towns. In 2010 Randolph's median family income of \$61,739 was the 16th highest income in a region of 30 towns. It was the 4th highest income in the White River Valley, after Strafford (\$63,333); Sharon (\$65,679); and Brookfield (\$72,500). Over the decade of the 2000s, Randolph's median family income grew slower than that of the State, Region, and Sub-Region. In 2000 Randolph had a higher income than the State, Region, or Sub-Region; however, by 2010 the median family income for Randolph was higher than the Sub-Region and lower than the Region and State.

Median Family Income – 2000-2010			
	2000	2010	% Change
Town of Randolph	50,756	61,739	21.6%
White River Valley Sub-Region	45,670	58,209	27.5%
Two Rivers-Ottawquechee Region	45,357	64,204	41.6%
State of Vermont	48,625	64,135	31.9%

Source: US Census Bureau

## Occupations of Residents

The 2000 Census reported numbers on Randolph's workforce, (people that live in Randolph, but may or may not work in Randolph). Compared to the Region and State, Randolph had a larger percentage of residents working in "management, professional, and related occupations" and "service occupations". For those residents who worked at two or more jobs, the occupation data they reported refers to the job at which they worked the greatest number of hours during the week they completed the Census long-form. For unemployed people, the occupation they reported referred to their last job.

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Occupations - 2000						
	Management, Professional, and Related Occupations	Service Occupations	Sales and Office Occupations	Farming, Fishing, and Forestry Occupations	Construction, Extraction, & Maintenance Occupations	Production, Transportation, & Material Moving Occupations
Town of Randolph	40%	16%	20%	1%	11%	12%
Two Rivers – Ottauquechee Region	36%	15%	23%	2%	11%	13%
State of Vermont	36%	15%	25%	1%	9%	14%

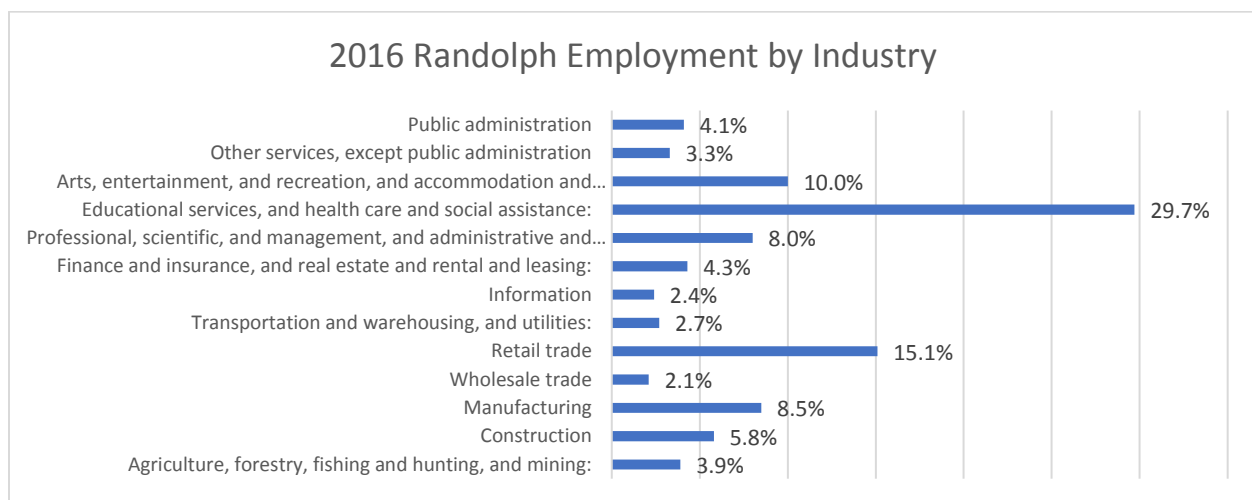
Source: 2000 Census

## Top Employers in Randolph, Vermont

As of October 2006, the Vermont Department of Labor no longer publishes lists of the largest employers. According to the Vermont Business and Manufacturer's Directory 2009/2010, published by the Vermont Business Magazine, and other sources the largest employers in Randolph are:

- 500+ employees: Gifford Medical Center and Vermont Technical College.
- 50+ employees: Applied Research Associates (a new listing since the last Town Plan), Dubois & King (employs fewer people since the last Town Plan), New England Precision, and Randolph National Bank.

It is important to note that the Directory lists only Vermont-based private employers, excluding government (town, state and federal) and national firms. For instance, the Randolph School District and Shaws are not included on the list, though they are large employers in town. In addition, employment levels may differ significantly from the information reported to the State. Data on the industries that Randolph residents are employed in is shown in the following chart.



Source: US Census Bureau

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## Mode of Travel and Travel Time to Work

Randolph's mode of transportation to work was more diversified than that of the Region or State. Randolph had larger percentages of employed residents that carpooled or walked to work, as well as a lower percentage of workers that drove alone to work. Randolph's percentage of residents that worked at home was higher than the State's and lower than the Region's, and the mean travel time to work for Randolph's employed population, (roughly twenty-two minutes), was lower than the Region's and almost identical to the statewide average.

Commuting to Work - Mode of Transportation - 2000							
	Car, Truck, Van (drove alone)	Car, Truck, Van (carpooled)	Public Transportation (and taxis)	Walked	Other Means of Transport	Worked at Home	Mean Travel Time to Work (minutes)
Town of Randolph	69.4%	14.9%	0.5%	7.4%	1.4%	6.4%	21.7
Two Rivers - Ottauquechee Region	73.2%	13.1%	0.4%	4.9%	0.9%	7.6%	24.2
State of Vermont	75.2%	11.9%	0.7%	5.6%	0.9%	5.7%	21.6

Source: 2000 Census

## Educational Attainment

The percentage of Randolph's population aged 25 years old or older who have earned a High School diploma or higher, are larger than those of Orange County and the State, and equal to Windsor County. Additionally, the percentage of Randolph's population aged 25 years old or older who earned a Bachelor's Degree or higher, are also greater than those of Orange County, Windsor County, and the State.

Educational Attainment - 2010				
	Town of Randolph	Orange County	Windsor County	State of Vermont
Less than 9th Grade	2.4%	3.0%	2.3%	3.3%
9th to 12th Grade	6.0%	6.7%	6.1%	6.2%
High School Graduate	27.7%	35.1%	33.5%	32.0%
Some College, No Degree	13.5%	15.2%	17.1%	16.8%
Associate Degree	13.0%	10.7%	8.2%	8.4%
Bachelor's Degree	20.0%	16.8%	18.3%	20.2%
Graduate or Professional Degree	17.3%	12.4%	14.5%	13.1%
% High School Graduate or Higher	91.6%	90.3%	91.6%	90.6%
% Bachelor's Degree or Higher	37.3%	29.2%	32.8%	33.3%

Source: US Census Bureau

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## Appendix B - Transportation

As a result of Federal legislation, the initiative for most transportation planning in Vermont was transferred from the state Agency of Transportation (now known as VTrans) to the towns and Regional Planning Commissions. Since that time, the federal program has undergone changes and is now known as SAFETEA-LU. The Regional Transportation Initiative put together by Randolph and the other members of the Two Rivers-Ottawaquechee Regional Commission is the result of this local/regional transportation planning and is staffed by the Regional Commission. This program relates transportation needs to service capability. The resulting Regional Transportation Plan was adopted in 2015 and integrated into the Two Rivers-Ottawaquechee Regional Plan, includes goals, policies and objectives for roads, bicycle and pedestrian transportation, transit alternatives, air travel, telecommunications, pipelines, rail, and more. A *Transportation Map* is in Appendix I, Map 5.

### **1. Highways and Streets**

In Randolph, the Town government's transportation efforts have focused on the design, construction, and maintenance of town roads. Well-maintained streets, and sidewalks in downtown areas, contribute to the quality of living. The primary focus of town transportation planning has been the automobile. All public roads, with the exception of Interstate 89, are open to bicycle and pedestrian traffic in addition to motor vehicle traffic, though few roads are designed to encourage walking, biking, or other non-motorized methods of travel.

The primary north-south roads in Randolph are Route 12A, Route 12, Interstate 89, and Route 14, respectively from west to east. East-west travel between these routes is via Route 66.

State Routes 12, 12A, 14, 66, and Chelsea Road are considered major collectors and qualify for federal funding. Ridge Road (north-south) is considered a minor collector and does not qualify. In making the Major/Minor determination, the State considers traffic data, accident occurrence, major land uses connected by the road, user profile, and overall geometry. As part of the regional transportation initiative, these roads could be reclassified by VTrans; thus qualifying for additional federal reconstruction and maintenance funds.

After school costs, maintenance of the road system is the Town's largest expense, budgeted at \$1.48 million for 2009. The Town road department has 9 full-time employees who work out of two garages, one on Rand Road in Randolph Center and the other on Hedding Drive. While the Town does not maintain a formal long-term road improvement program, the Selectmen has adopted a five-year capital plan funded annually by the capital budget.

The State distributes financial aid to towns for road repair and maintenance based on road classification. VTrans and the Board of Selectmen annually review classifications. Criteria used for the classifications include the traffic volume, road condition, and function. State aid to the Town decreases on a per mile basis from Class 1 to Class 3. No state aid is available for Class 4 roads. According to the 2007 Town Report, Randolph received \$193,000 from the State for Class 1 to Class 3 roads.

**Class 1** roads are those portions of the state highway system for which the town is responsible. **Class 2** roads are town roads that serve as main corridors between Randolph and other towns. **Class 3** roads are secondary town highways that are maintained to be passable the year-round. **Class 4** roads are all other town highways, including trails. They are seasonally functional but are not for normal vehicular traffic. Each classification has different design and maintenance requirements.

The state inspects all bridges over 20 feet in span, and rates them according to a federal sufficiency rating. The bridges are determined to be 1) Not Deficient; 2) Structurally Deficient; 3) Functionally Deficient (the bridge may be structurally sound, but it is limited in serving its intended function). The town is required to correct deficiencies if it is to receive federal monies for future bridge work.

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The Main Street Bridge, originally built in 1929, was in poor condition and in need of replacement or refurbishing. The bridge was considered by the state to be of historic significance; however VTrans and the Board of Selectman chose to replace the bridge, and work began in 2005 and finished in 2007 with a combination of funding from federal, state and local dollars. No other major transportation projects are currently in the works.

Route 12 serves as the single north/south access to the downtown, crossing the White River at the Main Street Bridge. Limited access raises public health and safety issues, for the town and region. If, for any reason, the bridge access across the river became impassable for even a short time, fire and health related services would be seriously compromised to parts of town. To reach industries south of the village, any truck or related traffic must cross the bridge and pass through downtown. (This issue was very apparent during bridge construction.) Some advocate the development of a second access around the downtown. Others consider such traffic the lifeblood of the central business district and would recommend that a bypass go into the downtown. Consideration of a by-pass needs to balance safety issues, economic considerations, and transportation needs.

RANDOLPH HIGHWAY MILEAGE: 2008	
Classification	Mileage
Class 1	2.46
Class 2	14.67
Class 3	72.62
Class 4	3.51
Legal Trail	3.46
Total State Highway	20.96
Interstate (I-89)	7.89
State Highway Maintained by Town	0.0
Total Town Maintained Mileage (Not including Class 4)	89.75
Source: Randolph Town Manager, 09/03/2002	

## 2. Parking Facilities

Parking is as necessary to most contemporary development as utilities. As a result of pre-automobile village development patterns, few commercial buildings in the central business district have private parking sufficient to serve their customer base. Outside of the central business district, virtually all parking is private. Municipal parking lots are located between Main and Summer Streets and on the corner of Summer and School Streets. Two municipal parking lots on Pleasant Street serve short and long-term parking needs with some space reserved for specific users.

Municipal parking can play a role in ensuring sufficient parking for downtown needs in a space-efficient manner, when it is impossible, or even undesirable to require each business to provide individual parking lots in a compact village environment, and when there are other public purposes in providing for public parking (i.e. for tourism, the municipal building, the library and cultural center). However, businesses without sufficient on-site parking, and new business development or expansion which creates more demand for parking not provided on-site, benefit from municipal parking, but currently do not cost-share in municipal parking costs. None of the municipal parking is metered, and there is little enforcement of the two-hour parking or other limits on the use of on-street parking within the central business district. Randolph as yet has no comprehensive parking and business development plan for the downtown Village commercial area, or a policy on the role of the town in providing parking.

The use of carpooling is increasing, and for years there was a constant informal carpooling lot at a small parcel of land at the northeast quadrant of the I-89 interchange. VTrans recommended, and the Selectboard approved,

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acquisition and development of this parcel as an official Park & Ride location. This lot was completed in 2008 and now has 89 spaces.

### **3. Interchange 4 off Interstate-89**

The presence of the Exit 4 in Randolph has and will have a profound effect on the town. Steep slopes and limited site lines affect traffic leading to and from the interchange. As part of an EPA grant-funded study of the interchange, an *Access Management Plan* was prepared for the Town by Two Rivers-Ottawaquechee Regional Commission, in cooperation with the State of Vermont and the Town Exit 4 Committee. The Access Management Plan may help assure that future traffic and access points along Route 66 in the vicinity of the Exit 4 interchange are developed in a way that is safe and efficient.

### **4. Transit Routes and Terminals**

Stagecoach, operated by Stagecoach Transportation Services, a division of Tri-Valley Transit, Inc., provides three distinct services in town: fixed commuter routes, local route service in Randolph and neighboring towns, and volunteer driver services. Stagecoach continually evaluates the performance of its routes, consulting with its riders and employers to identify their needs and how Stagecoach bus services may best meet those needs. Valuable partners in this continuous evaluation include riders, VTrans, social services agencies and employers such as Dartmouth College, Dartmouth-Hitchcock, Gifford Medical Center and the agencies and departments of the State of Vermont.

The fixed routes follow the I-89 corridor south to Lebanon, Hanover and White River Jct.; and north to Montpelier. Local bus routes serve Randolph, Randolph Center, Braintree, Royalton, Tunbridge, Chelsea and Bethel. Volunteer drivers serve the transportation needs of riders who require door-to-door service for medical appointments, grocery shopping and other activities. Volunteer drivers undergo a series of background checks and use their own vehicles.

In addition to providing vital transportation services for people who are unable to drive, Stagecoach's services enable those who can drive to become less reliant upon private automobiles saving money and reducing their impact upon the environment through reduced carbon emissions.

### **5. Paths and Trails**

There are no publicly maintained paths or trails in Randolph, although many informal trails and paths exist which are used by hikers, bikers, and horseback riders. There are trails in the Town Forests. A VAST trail network utilizes private properties in combination with discontinued roads and Class 4 roads owned but not maintained by the town. There are also trails on private land near Gifford Hospital. The town has not conducted a comprehensive inventory of path locations, ownership, trail conditions, and maintenance needs.

### **6. Airports**

The closest airport offering regularly scheduled service is approximately 35 miles away in Lebanon, New Hampshire. Burlington International Airport offers a greater choice of airlines and flights and is 62 miles away in Burlington. Many travelers also use the Manchester, New Hampshire airport, which sometimes offers greater flight selection and lower fares.

### **7. Railroads**

An active rail line runs through the southwest part of town, including Randolph Village. Amtrak passenger service stops in Randolph daily with one northbound and one southbound train. The Amtrak station in Randolph Village is not staffed. Freight trains also pass through Randolph on the same line, but local use of rail for shipping is minimal and some tracks have been removed in recent decades. Low usage and federal financial controversy threaten Amtrak service in Randolph and Vermont. Rail has the possibility of providing low-energy transport options for residents and businesses.

### **8. Pedestrians and Bicycles**

A significant but unquantified amount of transportation takes place by people simply walking and bicycling in town. These are the most energy-efficient means of transportation. Students from VTC walk along Route 66

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at least as far as the services at Exit 4. Village residents walk to jobs or services, and some children bike or walk to school. Bicyclists use roadways and road shoulders, while pedestrians can use road shoulders or sidewalks in the village. Increased walking and biking would save energy and have positive health impacts. The use of “complete streets” when planning any improvements to roadways will help increase walking and riding.

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## Appendix C - Utilities and Facilities

### MUNICIPAL PROPERTIES, SERVICES AND UTILITIES

#### **1. Background**

Any facility or utility that is fully or partially publicly funded will be evaluated in this Plan. The *Utilities, Facilities and Education Map* is attached in Appendix I, Map 6. This map shows existing and proposed educational, recreation, and other public sites, buildings and facilities. These include hospitals, libraries, power generation plants, transmission lines, water supplies, as well as sewage disposal, refuse disposal, storm drainage and other similar facilities.

The following is an outline of properties owned or funded by the Town of Randolph, which total close to 550 acres.

#### UTILITIES AND FACILITIES PROPERTIES

Ref. No.	Size	Property Name	Intended Use	Location	Tax Map Number
<b>VILLAGE AREA CENTRAL</b>					
1	(leased)	Police Station	Police Station	Salisbury St.	Part of 55-51-91
2	0.437	Prince Street Parking Lot	Road & Parking Lot	18 Pleasant St.	51-51-053
3	1.99	Pleasant St. Parking	Parking Lot	Pleasant St.	51-51-049.2
4	0.45	Municipal Bldg.	Town Offices	7 Summer St.	50-52-035
5	0.29	Village School Parking Lot	Parking Lot	Summer Street	51-52-3
6	0.56	Kimball Library	Library	67 N. Main St.	51-51-071
7	0.47	Chandler Cultural Center	Music/Cultural Center	N. Main St.	51-51-065
8	0.56	Randolph Village Fire Station	Fire Station	2 Central St.	51-50-054
9	3.2	Skating Rink	Skating Rink	Prince St.	50-51-003
10	1.972	Trails	Recreation	Off Woodhaven Dr.	50-51-10.211
11	6.4	School Street Rec. Area	Pool, B-ball & Tennis courts	School St.	50-51-013
12	8.3	Park St. Rec. Area	Ball Fields & Playground	Park St.	50-50-033
13	11.9	Trail	Recreation	Lincoln Ave.	50-51-002
14	0.25	Lincoln Ave. Common	Common land	Lincoln Ave.	50-51-033
15	.1	Gazebo	Gazebo	Main Street	51-52-16
16	2.5	Branchwood	Former factory	Pearl Street	55-51-38.1
17	0.6	Salisbury Street Parking Lot	Parking Lot	Salisbury St.	51-52-12



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VILLAGE AREA EAST					
1	2.4	Moulton Cemetery	Cemetery	TR68-Moulton Rd.	24-20-058
2	11.5	Wastewater Treatment Facility & Village Garage	WWTF & Garage	Hedding Drive	51-51-031
3	0.35	Route 66 Sewer Pump Station	Sewer Pump Station	Rt.66 West	23-20-006
4	31.7	Randolph Union High School	High & Vocational Schools	Forest St.	51-50-22
5	11.5	Randolph School District	Elementary School	Forest St.	47-50-15.2
6	38.8	North Reservoir & Ellis Donation	Reservoir & Buffering Land	Off Greenhouse Ave.	46-50-006 & 46-50-005
7	1.4	Sand Hill Lot	To Realign Intersection	1 Elm Street	51-50-046
8	0.25	Fish Hill Pump Station	Water Booster Pump Station	Rt. 66 West	24-20-013
VILLAGE AREA SOUTHEAST					
1	24.8	South View Cemetery	Cemetery	S. Pleasant St.	55-51-015
2	1	Grant Memorial Park	Vets Memorial	S. Pleasant St.	55-51-020
3	1.1	Pearl St. Lot	Wellhead Protection	Pearl St.	55-51-22.2
4	0.39	Pearl Street Well	Well	Pearl St.	55-51-029
VILLAGE AREA SOUTH					
1	73.4	John Sayward Town Forest	Town Forest	Tatro Hill Road	29-20-014
2	80.4	Pinnacle & South Reservoir	Reservoir & Wellfield	Pinnacle Mtn. Rd.	30-20-021
3	18.5	Pleasant View Cemetery	Cemetery	Beanville Rd.	30-20-035
4	1.978	Transfer Station	Transfer Station	Landfill Rd.	38-20-11.2
5	162.097	Landfill	Landfill	Landfill Rd.	38-20-2 & 4.4+10+11.3
RANDOLPH CENTER (RC) AREA					
1	0.18	RC Water District	Spring	Furnace Rd.	19-20-19
2	1.5	RC Fire Station	Fire Station	Furnace Rd.	18-20-66
3	1.9	RC School	Former School, now leased to VTC	E. Bethel Rd.	25-20-022
4	5.3	RC Cemetery	Cemetery	E. Bethel Rd.	25-20-023
5	3.5	RC Cemetery	Cemetery Ext.	S. Randolph Rd.	26-20-011
6	4.35	Town Garage	Town Garage	87 Rand Road	19-20-001
7	1.2	S. Randolph Road Recreational Fields	Leased to VTC	S. Randolph Rd.	25-20-22.1

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EAST RANDOLPH (ER) VALLEY					
1	54.6	Rabbit Tract Town Forest	Town Forest	Ferris Rd.	13-20-005
2	1	Hackett's Field	Recreation	Rt. 14 N.	21-20-017
3	0.92	ER Fire Station & Community Center	Fire Station & Community Center	Rt. 14 South	28-20-4
4	6.2	ER Cemetery	Cemetery	Rt. 14 South	28-20-049
5		East Randolph Dam	Public Power	Rt. 14	

## **2. Police District**

The Town owns the building in which the police department operates on the first floor (which is also the home of the Randolph Historical Society and Museum) and leases the land from the New England Central Railway. The facility does not have adequate space to accommodate the existing police force, which has increased over the past few years from four full-time officers to five full-time officers and several part-time officers. The facility lacks a holding cell and there is one garage for the two police vehicles. The department has seen a steady increase in the number of call responses. The department aids the state police and provides some policing of areas outside the district. The police department currently serves primarily within the Police District in the Village of Randolph, which includes Randolph's core business district, and is funded by a surtax on district properties. The Police District boundaries are roughly defined by roads that transition from a speed limit greater than 25 m.p.h. to a speed limit of 25 m.p.h. This area is statistically shown to have a higher crime rate than other areas of town. Properties outside the District are served by the State Police and may be served by the Randolph Police if available.

## **3. Fire Departments**

The Town currently has three fire departments: East Randolph, Randolph Center, and the Village Fire Department. Each department is manned by volunteers, and has its own station, equipment and personnel.

## **4. Highway Garages**

The Village Garage is an aging facility with limited space to store equipment and vehicles.

The Center Garage is larger and in better shape than the Village Garage. It has a 6 bay garage with 3 deep, double-entry capability. The facility can store sand, gravel and salt. Stored at the facility are highway and road equipment as well as buses for the Orange Southwest School District and repairs to vehicles are performed at this facility.

## **5. Cemeteries**

Randolph currently has seven cemeteries. The Vermont Veterans' Memorial Cemetery, a federal cemetery, is located in Randolph Center and was recently expanded to provide more internment options and a new visitors' center and maintenance facility were also constructed. Randolph should be well served by existing cemetery space for the next ten years.

## **6. Roads, Bridges and Sidewalks**

(See Appendix B - Transportation)

## **7. Town Forests**

The two town forests have many trails that are used for hiking, cross country skiing and snowmobiling. Timber sales have taken place on both tracts and a management plan for the Rabbit Track Forest was updated by the Conservation Commission.

# RANDOLPH TOWN PLAN

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## **8. Village Water District**

The Town of Randolph has a public water system that serves the Village and some of the surrounding area, principally along VT Route 66 to the Radio Drive/Fish Hill Road neighborhood, as shown on the *Utilities, Facilities and Education* map in Appendix I, Map 6. The water customers fund this system through water rates and capital improvements are funded, in part, from allocation fees for new connections or expansions of existing uses. Currently, there are a total of 745 metered connections, of which 111 are commercial, industrial or institutional.

The primary source of water was developed on Pinnacle Mountain Road. This new supply involves 4 bedrock wells with a total capacity of 132,000 gallons per day (gpd). Water quality has improved through the dilution of the Pearl Street well water with water from this source.

The secondary water source for the Village Water District currently is a 12-inch gravel-packed well and pump station located on a 0.35-acre parcel at the corner of Pearl and Shattuck Streets. The well was developed in 1984 and has an approved capacity of 350 gallons per minute (gpm), but averages about 145 gpm daily, for an average daily flow of 205,000 gallons. The water from this source is high in iron and manganese, which has led to complaints from some customers about odor, taste and color.

With recent changes in the State's water quality standards, the Town is in the final stages of finding a new water supply that will replace the Pearl Street well. If water of sufficient quality and quantity is found from 3 recently drilled bedrock wells, these wells will be put on-line in 2019 and the Pearl Street well will only be used in emergencies.

The village water system has two storage facilities. The North Reservoir is located off Greenhouse Avenue and has a capacity of 1.4 million gallons (MG). It is covered with a rubber membrane and bladder type system. Our second storage tank is the South Reservoir is located off Pinnacle Mountain Road and has a capacity of 1 MG. It was constructed in 1984 of concrete. The combined storage capacity of the two reservoirs is adequate for 11 days of average usage for the customers on the system.

The distribution system ranges in age from 45 years to very recent. Over the past several years, the district has made an effort to replace the older, undersized piping with cement-lined ductile iron pipe no smaller than 8 inches in diameter. While many of the major lines have been replaced (i.e. Forest, Central and Main Streets), some outlying lines are still undersized.

## **9. Village Sewer District**

The Town of Randolph has a public sewer system that serves the Village, the properties along VT Route 66, Vermont Technical College (VTC) and some of its surrounding neighborhood, as shown on the *Utilities, Facilities and Education Map* in Appendix I, Map 6. Similar to the Water District, sewer customers fund this system through sewer rates and capital improvements are funded, in part, through allocation fees. Currently, there are a total of 673 connections, of which 127 are commercial, industrial or institutional.

The sewage is treated at the wastewater treatment plant (WWTP) located on Hedding Drive, and is discharged into the Third Branch of the White River. In 2016, a new facility was constructed which utilizes a sequential batch reactor system for treatment. Although the capacity of this new facility is still 400,000 gallons per day, it has both the capacity to meet the economic development needs in the town along with future regulations associated with nitrogen or phosphorus removal.

There are several sewer pump stations in the system and, as with the water mains, the sewer lines vary in age. The District has made an effort in the past several years to replace older, undersized piping with new PVC pipe. Many main lines have been replaced.

# RANDOLPH TOWN PLAN

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## **10. Randolph Center Water District**

The Randolph Center water district serves an area as shown on the *Utilities, Facilities and Education Map* in Appendix I, Map 6, and receives its water from a spring located near the firehouse in Randolph Center, and the “Penny Brook” well located at Vermont Technical College. The reservoir is on 0.1 acres in Randolph Center. A total of 42 houses, 10 non-residential buildings in Randolph Center and the skilled nursing and independent living facilities at Morgan Orchards utilize this system. The system is adequate for the people it serves now and for the foreseeable future.

## **11. Landfill/Transfer Station**

The Town of Randolph owns 164.1-acres of closed landfills and 1.98-acre transfer station. We allow the Braintree and Brookfield to use the transfer station. The Town has a contract with a private waste management company to operate the transfer station. The town abides by the Solid Waste Implement Plan which is approved by the State of Vermont Agency of Natural Resources.

## **12. Recreation Facilities**

The School Street and Park Street recreation area contains numerous facilities, including two paved tennis courts, a basketball court, a grassed volleyball court, a sports’ shed, an outdoor pool, a barbecue/picnic area, wooded trails, a disk golf course, two ball fields with dugouts, a batting cage and a barbecue/picnic shelter.

Other Town-owned recreation facilities include the ice rink and skateboarding park on Prince Street and Gazebo Park, on Main Street

## **13. Kimball Public Library**

The library, built in 1902, sits on 0.56 acres on North Main Street. The building has a total of 4,012 square feet for public use. Parking is on the street.

Kimball Public Library offers programs for all ages; outreach to seniors, homebound patrons, and home daycares; and access to and assistance with technology. It has a collection of approximately 22,000 physical items (books, magazines, audiobooks, DVDs) and 13,400 digital items (ebooks, downloadable audiobooks), and circulates about 34,000 physical items and 3,300 digital items each year. The library has 3,400 registered patrons; community members make 26,000 visits annually.

<b>SCHOOLS</b>
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## **1. Randolph Elementary School (RES), Randolph Union High School (RUHS) and Randolph Technical Career Center (RTCC)**

The Randolph Elementary School opened in March of 2000. The student enrollment for the 2009-2010 school year is 307. The building has core facilities which include: a gymnasium with a stage, a cafeteria and full kitchen, a music room, an art room, a library, and an outdoor ball field.

Students in grade 7-12 attend RUHS, built in 1956. This school is located on 31.7 acres. It serves students from the towns of Braintree, Brookfield and Randolph. The junior high addition was added to the facility in 1967. RTCC was built in 1970 and adjoins the high school. For the 2009-2010 school year, 470 students were enrolled at RUHS.

These facilities not only serve students, but also are available to the community at large. During the past decade schools have experienced enrollment declines. In 2009-2010 enrollment remained stable and is expected to moderately increase in future years. Significant improvements have been made to our facilities; however, RUHS & RTCC require substantial repairs to their roofs and fire & safety systems.

In 2016, the voters in Randolph, Brookfield and Braintree approved a consolidated school district that include the Randolph schools as well as Brookfield Elementary School and Braintree Elementary School.

# **RANDOLPH TOWN PLAN**

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## **2. Vermont Technical College (VTC)**

Vermont Technical College (Vermont Tech) is a state college providing studies in multiple fields to include agriculture, business, engineering technology, veterinary technology, equine studies, nursing, auto technology, diesel technology, construction practices management technology, and computer technology. As of December 2009 there are thirty-four (34) structures on the Randolph Center campus which includes academic, administrative, student housing, facilities, farm buildings, 44 Water Street and the burn simulator. The campus has 823 regular parking spaces and 18 handicap parking spaces for a total of 841 spaces.

Vermont Tech employs 163 full-time employees and 91 part time employees on the Randolph Center campus. The Randolph Center student enrollment is 821 full-time and 117 part-time students with 575 currently residing in residence halls. The Randolph Center student bed count is 620 beds.

<b>COMMUNITY FACILITIES AND UTILITIES</b>
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The Town, its residents, and its economy, benefit from the work of staff and volunteers of an array of nonprofit or quasi-public organizations that contribute significantly to this community, and in many cases offset the need for Town services or staff. The value of these contributions should be acknowledged and supported.

## **1. Kimball Public Library**

The library, built in 1902, sits on 0.56 acres on North Main Street. The building has a total of 4,012 square feet for public use. Parking is on the street. Kimball Public Library currently has a collection of approximately 22,000 volumes and circulates about 47,000 items each year. The library has 3,400 registered patrons and, in addition to lending materials, offers programming for all ages; outreach to seniors, homebound patrons, and home daycares; and access to and assistance with technology.

## **2. Chandler Center for the Arts**

Chandler Center for the Arts is a not-for-profit arts organization, which under a long-term lease, operates the historic Chandler Music Hall and Gallery, a Town-owned building. The Town provides assistance to help keep Chandler in operation, as it performs an important cultural and civic role in the Town of Randolph, as well as serving Central Vermont and the Upper Valley region with a year-round series of performances, art exhibits, festivals, and educational opportunities.

## **3. Gifford Medical Center**

Non-profit Gifford Medical Center is the region's source for health care. The medical center features community health centers in Bethel, Chelsea, Rochester and Sharon, and specialty services throughout central Vermont. The main hospital in Randolph is home to a 24-hour Emergency Department, a 25-bed hospital, an award-winning 30-bed nursing home, and numerous primary and specialty care providers. The Birthing Center, established in 1977, was the first in Vermont to offer an alternative to traditional hospital-based deliveries and continues to be a leader in midwifery and family-centered care.

As a community hospital, Gifford's mission is to improve the health of the people it serves by providing and assuring access to affordable and high-quality health care, and by promoting the health and well-being of everyone in the medical center's service area. The medical center is also a major economic engine in the region, employing more than 500 people and, in 2009, marking a record 10 consecutive years of financial success – a feat achieved by no other Vermont hospital.

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## **4. White River Valley Ambulance**

White River Valley Ambulance is a regional, professionally staffed, nonprofit ambulance service serving the Randolph area. White River Ambulance operates from a building built in 1995 that is located on Route 12 in Bethel. This building houses the personnel the equipment and the ambulances. There is also one outbuilding for storage. The main building consists of 2,300 square feet of living/office space and an attached 2,320 square foot garage. The paved parking area has 23 spaces. These buildings are located on a 7-acre lot with a drilled well and an on-site septic system.

<b>PRIVATE UTILITIES</b>
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### **1. Electric Utilities**

Green Mountain Power (GMP) serves Randolph with electric distribution lines( 12.47/7.2 Kv ) radiating from four distribution substations. Three-phase power, located in portions of the Town provides additional capacity and voltage choices as compared to single-phase power..

### **2. High-Speed Communication**

A key goal is to encourage development of high-speed internet services throughout the greater Randolph area. The town currently has access to high-speed cable (via Comcast) and DSL via Sovernet or Fairpoint, as well as satellite service. High speed internet and television service is also available through the purchase or lease of satellite dishes, but usually at a higher cost. Randolph has joined many area towns in the EC Fiber project to bring fiber optic connections to every home and business. Parts of Randolph are currently served by EC Fiber.

## Appendix D - Natural Resources

### WETLANDS

Wetlands are ecologically fragile and biologically productive areas and are considered part of the interface between land and water. How these lands are managed has a direct bearing on the quality and quantity of water resources.

The Vermont Natural Resources Board estimates that wetlands comprise less than 5 percent of the surface area of Vermont. In addition to being Vermont's most productive ecosystem, wetlands serve a wide variety of functions beneficial to the health, safety and welfare of the general public, including:

- ◆ retaining storm water run-off;
- ◆ reducing flood peaks and flooding damage to upland areas;
- ◆ improving surface water quality;
- ◆ replenishing ground water;
- ◆ providing spawning, feeding and general habitat for fish and amphibians;
- ◆ providing a wide diversity of habitats and feeding grounds; and
- ◆ contributing to the overall beauty of the rural landscape.

The best means of protecting a wetland is to not allow filling it in and to retain a sufficient buffer around its edges. Maintenance of a naturally vegetated buffer strip between a wetland and land development or disturbance is desirable to reduce the risk of groundwater and surface water contamination and direct discharges into a wetland.

The Vermont Wetland Rules protect significant wetlands at the state level. The level of protection under state law is according to three classes of wetland:

1. Class 1 wetlands are wetlands determined by the Vermont Natural Resources Board as exceptional or irreplaceable.
2. Class 2 wetlands are significant and are sometimes contiguous to Class 1 wetlands.
3. Class 3 wetlands are not regulated by the Vermont Wetland Rules, but may be protected by other programs, regulations or laws.

Class 1 and Class 2 wetlands are classified "significant wetlands" and are regulated by the state. Currently, there are no wetlands designated as Class 1 in Randolph. Under the state rules, if land development can be expected to impact a Class 1 or 2 wetland, such activity cannot commence unless the Vermont Agency of Natural Resources first grants a Conditional Use Determination (CUD). In many cases, such approvals are granted with conditions to mitigate impacts and to implement the purposes of wetlands protection. Federal protection also extends to some wetlands under Section 404 of the Clean Water Act.

Although not mandated by law, towns can play a key role in wetlands protection and identification. Unfortunately, the only list of wetlands available to alert regulators to situations in which wetlands are threatened are based on aerial photographs made decades ago. At this scale, it is often not possible to reliably identify wetlands of less than a few acres, and others may have been missed because they were dry or obscured by vegetation. Further, the boundaries of wetlands are neither stable nor clearly defined. More detailed investigations of wetlands within Randolph would result in a more accurate map of our wetlands. Towns are enabled by Vermont law to propose additions and corrections to the state lists, to reclassify wetlands, and to establish additional protective measures. At the present time, Randolph has not inventoried its wetlands.

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## **FLOOD HAZARD AREAS AND FLOODPLAIN FORESTS**

### **Flood Hazard Areas**

Floodplains (low-lands adjacent to watercourses) are periodically inundated by heavy rains or during spring thaws. They are porous and can absorb considerable water before reaching flood stage. However, flooding events are exacerbated by land uses or other human activities that impede or overwhelm the natural “sponge” function of wetlands and floodplains. Flood damage also increases with channel modification or bank armoring that changes the sediment carrying capacity of a stream or river, or that restricts the natural sideways movement of a watercourse. The result can be costly in dollars and lives. It is therefore in the public interest to plan for floods, and to adhere to state and federal development guidelines that will protect these areas and minimize the risks to public health, safety, and property.

The science of stream hydrology is complex. Experts have differing opinions as to how rivers and streams can best be managed to protect and preserve natural resources and property. Although unruly floodwaters may appear to be unconstrained, the laws of nature and physics in fact govern them. While no one can predict or prevent all flood occurrences, it is not uncommon during flood events to discover that actions in one location create unintended consequences in another. The key to achieving an appropriate management strategy is to plan for those potential consequences before it is too late. This requires that we, and others that affect the floodplain, look at the function of the whole watercourse and “think like water” to avoid potential negative consequences downstream.

Under the provisions of the National Flood Insurance Act (1968), the Federal Emergency Management Agency (FEMA) has conducted a series of evaluations and hydrologic engineering studies to determine the limits of flood hazard areas along streams, rivers, lakes, and ponds. These areas are generally representative of the “100-year base flood,” meaning that the flood level has a 1% chance of being equaled or exceeded in any given year. The calculations do not take into account the impact of ice dams or debris, and may, therefore, actually underestimate the areas subject to flooding damage. FEMA has prepared a Flood Insurance Rate Map for the Town of Randolph, which includes flood hazard levels for the White River, tributaries and major streams and ponds. This map is on file at the Town Office. FEMA also administers the National Flood Insurance Program (NFIP), which provides flood hazard insurance at subsidized rates for property owners in affected areas. In order to qualify for federal insurance, towns must adopt and retain a by-law to control land development within these areas. Minimum standards must be included and approved by FEMA.

The Town of Randolph adopted a permanent Flood Protection District in 1997, and it is recognized as a participating community in the NFIP. Coverage remains available to owners of affected property (buildings and/or contents) as long as the Town continues to participate. Pursuant to the Bylaw, permits from the Town are required prior to any substantial improvement to an existing structure, and prior to any new construction within the town’s floodplains, or flood hazard areas, as defined by the FEMA maps of the “100-year floodplain.” In granting approval, the Town must find that the proposal meets or exceeds minimum development standards for flood hazard areas.

Randolph has experienced several flood events in its settled history, with the flood of 1927 that destroyed many bridges in town the greatest event. In 1998 hard rains brought flooding that destroyed portions of town roads, and as recently as 2007 the Town suffered extensive road damage. The Town’s regulation for development in a flood hazard area or a floodplain is the primary means to protect the functions of floodplains and minimize or negate damage from floods.

### **Floodplain Forests**

Within the Town of Randolph, three significant floodplain forest areas have been identified by the State (“Floodplain Forests of Vermont” – Agency of Natural Resources, July 1998). These sites are considered of special ecological significance, and have been mapped, inventoried, and described. Management recommendations have also been given for each area.



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1. The “Randolph Village Floodplain” is a riverine floodplain forest of the “Sugar Maple-Basswood-Ostrich fern type.” It is located in the Village of Randolph and covers about 30 acres. It is mostly privately owned by several different owners. Some unusual tree species, such as Black Birch and Black Ash, as well as uncommon ground cover plants grow in this area.
2. The “Golf Course Floodplain” is similar to the Village Floodplain. It covers about 25 acres of land owned by the Montague Golf Course. As with the Village floodplain, there are remnant forested areas with unusual plant species.
3. The “Randolph-Bethel Floodplain” is described in similar terms as the other two, but is listed as “A rare example of a floodplain ecosystem that features an excellent undisturbed Sugar Maple-Ostrich fern high terrace forest, as well as steep eroding bluffs, a successional low floodplain community, and low terrace floodplain forest.” The high terrace forest communities located in this area are now considered “very rare” within the state. While no specific acreage is given, it is estimated that between 50 and 60 acres of this floodplain lies within the Town of Randolph, most in private ownership.

These three areas together form a more or less continuous floodplain corridor that is “unparalleled in most areas of the state.” It is easy to see that these areas provide significant flood retention capabilities and thus protection from damage due to flooding, furnish specialized habitat for several types of plants and animals (including fish), and offer recreational opportunities.

## WATER RESOURCES

### **Background**

Water is nature’s circulatory system, carrying both nutrients and pollutants as it passes above-ground, through soils, in underground streams, and even as water vapor in the air. Plants and animals absorb these nutrients and/or pollutants when they ingest or are otherwise exposed to water. Water can be contaminated by chemicals, and even by an excess of nutrients, such as fertilizers, applied in amounts that are not easily absorbed into the system. Waste overflows from sewage or manure treatment facilities can also contaminate water. The main source of contamination of drinking supplies and other water resources varies with land use. Contamination from over-fertilization and pesticide use is a common problem in more rural areas, while in more developed areas, contaminated run-off from paved areas and chemical lawn treatments are major sources. Every building, street, driveway, parking lot, and even many lawns disrupt the absorption of water into the earth. It runs downhill, and may collect in a storm drain or flow directly to a stream or a river. On its way to the drain or river, it picks up pollutants. Contamination that does not result from a single spill or other incident, but rather from the cumulative effects of runoff or groundwater contamination is known as “non-point source pollution,” and is now thought to be responsible for roughly half the country’s water pollution. This is a major area of concern, and one that can be greatly reduced by better land use planning, and by individuals and the Town taking steps to limit their contribution to this type of pollution. Meanwhile, much of the water that would have recharged aquifers never gets to them.

### **Surface Water, Lakes and Streams**

In Randolph, numerous streams collect water from yards, fields, and forests before joining the town’s three largest streams, Ayers Brook, and the Second and Third Branches of the White River. These streams are in turn part of the Connecticut River watershed, and have been designated important ecological areas by the U. S. Fish and Wildlife Service in its study of the watershed for designation of the Silvio Conte National Wildlife Refuge. The White River and its tributaries are a significant natural feature and a major tributary of the Connecticut River Watershed. They provide exceptional habitat, water supply of high quality, fishery, recreational, and scenic values. These values are assets to the community and the region, and may easily be adversely impacted by human activities.

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The vegetation along the riverbanks of these rivers and their tributaries is necessary to maintain the health of rivers and streams, act as a transition zone between land and water uses, and to stabilize streambanks and control erosion and flooding. It also increases the likelihood that nutrients, sediments and other contaminants will be filtered out. Apart from their role as natural water quality filters, vegetated riparian (meaning along watercourses) buffers are complex ecosystems that can provide habitat and travel corridors for wildlife, as well as enhance scenic and recreational values. Additional benefits of riparian buffers include:

- ◆ maintaining shade and ensuring cooler water temperatures, which support higher levels of oxygen, and thereby result in healthier and more biologically diverse systems;
- ◆ improved wastewater assimilation;
- ◆ improved habitat for fish and other aquatic life; and
- ◆ protection of archaeological and historic sites, because land along major rivers and streams served as camp-sites and villages for early settlers and Native Americans.

Besides streams and rivers, there are many small ponds in Town that were created or improved upon by individual landowners, but no large lakes or ponds are a significant part of Randolph's natural landscape

## **Drinking Water**

Ground water storage and travel is determined by topography and the composition of soils and rocks in which it is confined. Ground water is the source of over 90% of the drinking water for rural areas in Vermont. It is replenished through rain and surface water that percolates down through the soil. Any activities that introduce contaminants directly into or onto the ground (underground storage tanks, leach fields, agricultural activities) can affect ground water quality. Since surface waters may also connect to underground sources, ground water can be contaminated by discharges made into above-ground streams and water bodies as well.

There is one major public water system that serves the Village and some of the surrounding area. There are three permitted non-municipal water systems: Randolph Center Fire District which serves the Randolph Center village and Vermont Technical College, Armstrong Trailer Park which serves an existing mobile home park on Vermont Route 66, and East Randolph Meadows which serves a subdivision on Vermont Route 14. See the Utilities and Facilities section for a more detailed description of these water supplies.

The Vermont Agency of Natural Resources, in cooperation with federal and other state agencies, has evaluated aquifer recharge areas serving systems involving 10 or more connections of 25 or more people. These recharge areas are acknowledged as important to maintain the quality and quantity of groundwater resources.

In recent years, underground fuel storage tanks (UST's) have been identified as major threats to water quality. Studies conducted by the U.S. Environmental Protection Agency show that the average fuel tank is likely to leak within 15 years from installation. To lessen the risk of contamination, the state monitors tanks with a capacity of 1,100 gallons or more and has strict standards for replacement of UST's.

<b>AIR</b>
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While many of the causes of air pollution are beyond the scope of Town government or individual action, and are regulated or controlled by state and federal governments, there are things that we, as a community, can and should do to contribute to clean air. Much of our air pollution is transported into town by far away sources, but we also cause some. Vehicle emissions and the burning of wood and fossil fuels to heat our homes and businesses are the largest source of emissions. To the extent that public and private activities in Randolph can reduce consumption of these fuels for transportation and heating it will contribute to

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cleaner air, as well as cleaner land and water, as many air contaminants later fall to earth in precipitation and contaminate ground and water resources.

Randolph has not taken significant steps to inventory or assess its plant and animal resources, or natural features. Data provided by state inventories and similar research can be used by the Town and the community to educate us, inform decision-making, conserve our natural health and diversity and attract eco-tourists.

Randolph has one known Natural Heritage Site located in the vicinity of Interstate 89. It is listed because of the presence of three vascular wetland plants. As mentioned previously, Randolph also has excellent examples of floodplain forests. Deer wintering yards in Randolph have been mapped and are monitored by the Agency of Natural Resources Department of Fish and Wildlife.

## SCENIC RESOURCES

Scenic views of important natural features from public vantage points involve both the landscape of Randolph, and, due to Randolph's ridgelines, the landscapes of other towns. The people of Randolph and the State as a whole value these views. They are also valuable to the economic development in the state.

Such views, or "viewsheds" can be lost to development that either removes or clutters the scenic quality of the landscape, or that removes the public's access to the view, but much of a development's scenic impact can be lessened through proper placement and design. With the notable exception of the Exit 4 area, no inventory has been prepared of Randolph's most significant scenic resources, but an inventory of that kind could be helpful to town officials, landowners, and developers in deciding how best to place development to maintain those landscapes and views that are most prized by the community.

Panoramas visible from the Exit 4 Interchange of I-89 have been identified as of particular significance in that they represent some of the most dramatic views in Vermont. Several local studies of the area have identified the views around Exit 4 as important to the community and deserving of protection. These studies have also recommended creative strategies that show that protection of the view can be compatible with economic development in the area.

A challenge to viewshed protection in Vermont is the placement of cellular towers and other telecommunications equipment. Under federal law, towns may not choose to eliminate towers from allowable uses, but may regulate and even prevent their placement in certain areas to protect, among other things, important scenic views. However, the effect of that regulation must not eliminate every viable location. Randolph passed an interim telecommunications bylaw, but it has since lapsed. The placement of large wind turbines also creates the potential for degradation of views, but no large towers are proposed in Randolph.

Another view that we may take for granted in rural areas such as Randolph is our view of the night sky. In many areas, the night sky is starless due to the intensity of artificial lighting that obliterates the contrast. Diffuse lighting does not focus the light where it is needed, and therefore uses more energy than needed while lighting more than it was intended to. The detrimental effect of lighting is incremental, and large development can add substantially to the effect if lighting is not designed and placed to minimize its diffusion.

## FOREST BLOCKS AND HABITAT CONNECTORS

### Forest Blocks

Trends in forest health have changed over the past decade. In the 2013 US Forest Service's National Forest Inventory and Analysis Program report, figures indicated that since 2007 there has been a continuing, though gradual, loss of about 75,000 acres of forestland in Vermont. Developed land in Vermont increased

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significantly between 1980-2010 (67%). The pattern of development growth has led to significant forest fragmentation throughout the state.

Forest fragmentation is the breaking of large, contiguous forested areas into smaller pieces of forest. For natural communities and wildlife habitat, the continued dividing of land with naturally occurring vegetation and ecological processes into smaller and smaller areas creates barriers that limit species' movement and interrupt ecological processes. Since the 1980s, Vermont has experienced "parcelization," which is the result of larger tracts of land being divided into smaller ownerships or land holdings. The more individuals that own smaller parcels of forest, the more likely that the land will ultimately be developed with infrastructure (such as roads and utilities) and buildings

There are two Town Forests. The Rabbit Track Town Forest is 54.6 acres off of Ferris Road in North Randolph. The John Sayward Town Forest is 73.4 acres on Tatro Hill Road. These two town forests have many trails that are used for hiking, cross country skiing and snowmobiling. Timber sales have taken place on both tracts and a management plan for the Rabbit Track Forest was updated by the Conservation Commission.

## **Habitat Connectors**

Wintering areas are an important habitat requirement for deer during the critical winter months when snow depth and climate are limiting factors to survival. Typically these areas consist of mature softwood stands, at low elevations or along stream beds, which provide cover and limit snow depths. Southerly facing slopes are also beneficial due to good sun exposure and may be utilized even in areas of limited softwood cover. More specific factors, such as percent canopy closure, species of softwoods, and stand age, also figure into the quality of the wintering area.

Most important when considering development and its impact on wildlife is the concept of habitat fragmentation. Forests provide habitat to a diverse population of wildlife, which are negatively impacted when forested land is fragmented through development.

## **PRODUCTIVE AND WORKING LANDSCAPES**

### **Background**

Randolph's productive farm and forest lands are a significant component of the economy, community, quality of life, and resource protection of this town. As shown in the Existing Land Use Table at the beginning of this Chapter, about 89% of the land in Randolph is currently identified as farm or forest. The percentage of Randolph in agriculture is significantly higher than the surrounding Two Rivers-Ottawaquechee Region, of which Randolph is a part (20% versus 7.6%). In particular, Randolph has more prime agricultural soils, and more land devoted to agriculture than other towns in the region. Some of this land may be more suitable for development than others, but soils that support good agriculture and forest production are often the easiest to develop. These lands, therefore, will be most subject to development pressures in the coming decades. Further, commercial scale agriculture and forestry often requires a "critical mass" of un-fragmented land to be viable; there is usually less incidence of conflict with neighbors, higher productivity, and better accessibility to necessary goods and services for farm and forest land when large tracts of farm and forest lands continue to operate in close proximity to each other.

Farms and forests provide many community benefits that are not always acknowledged and for which landowners are rarely compensated. These include:

1. **Maintenance of scenic, forested, open and hillside landscapes:** These landscapes are another of the reasons tourists love Vermont (Vermont means Green Mountains), and what many residents cherish about their homes. Open farmland with prime soils are often some of the easiest lands to develop, and are therefore at risk of conversion, particularly to second home development.

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2. Air and Water Quality: Forests (and wetlands) are natural water filtration systems, recharge sources for aquifers, consumers of carbon dioxide and producers of oxygen. Forested buffers along streams also maintain water quality by preventing erosion and siltation during storms or surges, and keep water temperatures cooler and healthier.
3. Tourism and Recreation opportunities: Most of the mapped recreational trails in Randolph are located on farms and forestland, with permission of the landowners and generally without compensation to them.
4. Along with the direct employment of farm and forest workers, farm and forest operations purchase substantial amounts of goods (such as feed and grain and equipment purchase and repair), often provided locally creating a “multiplier effect”. A good portion of Randolph’s commerce relies on a continuing farm industry.
5. Low municipal service costs: Generally, farms and forests require many fewer municipal services than other land uses relative to the amount they pay in property taxes. The old adage, “Cows don’t go to school” is apt, but neither do they drive cars, use recreational services, or require emergency services.
6. Locally produced food and fuel: The availability of fresh food from local farms, and renewable fuel and building material supplies from our forests, add to our quality of life.
7. Plant and wildlife habitat: Forests, especially softwood forests, provide essential winter cover for wildlife (deer yards, etc.). Softwood stands often follow watercourses, making them even more beneficial cover. Certain species live and hunt on the “edges” between forests and open lands, or between softwood and hardwood stands, and many large and small animals alike need large unfragmented blocks or corridors of forest and open lands to survive.

Studies which measure the relative costs and benefits to a community of various types of development and land use increasingly affirm that, properly managed, farms and forests provide a community with more benefits than costs. The Vermont League of Cities and Towns Report “The Land Use – Property Tax Connection”, December 2002, reported that, in general, Vermont towns with more development have relatively higher tax bills. Some farming and forestry activities, however, can be a significant source of water quality degradation, including:

- ◆ Removal of vegetative stream buffers or tilling too close to streambanks;
- ◆ Careless or over-harvesting of timber, particularly on steeper slopes;
- ◆ Pesticide or fertilizer overloading; and
- ◆ Insufficient manure management.

Financial and technical assistance is generally available to farmers and foresters to minimize these negative resource impacts. All farming that complies with the Accepted Agricultural Practices and all forestry that complies with the Acceptable Management Practices is presumed to not be detrimental to water quality and is exempt from local zoning rules.

## **Farming**

To truly support agriculture, a community must understand its issues, involve and consult farmers in decision-making, and create zones in which agriculture- and forest-friendly policies take precedence. The Conservation Commission has taken the first step through two studies of agriculture in Randolph, one completed in 1985, and the other in 1999. Although historically Randolph has been predominantly a farming community, the number of active farms has dropped dramatically over the last generation. The Conservation Commission’s 1999 study found that most farms in Randolph (28 of 42, or 67%) are dairy farms. The remaining fourteen non-dairy farms at that time (defined as earning at least \$1,000 annually in

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agricultural products or services) represented a diverse mix of animal (livestock/meat), fruit, vegetable, and maple production. They accounted for 1,200 acres of cropland and 2,300 acres in forest.

These statistics do not include the VTC farm, which owns 561 acres, of which 216 acres are in production and 335 in forest. This put Randolph at 11<sup>th</sup> in the state for number of dairy farms in production as of 1999. Randolph's farms at that time, including VTC, employed 52 full-time and 49 part-time people. However, between 1985 and the 1999 statistic, Randolph had experienced a 26% drop in the number of dairy farms and a corresponding 31% drop in acres of production by dairy farmers. Recent data at a town level is not available for farms, however county-level data mirrors national trends in that numbers of farms are no longer falling, but farms are getting smaller. Between 1997 and 2007, the USDA Agricultural Census reports that Orange County gained 29 farms to a total of 683, but it lost about 1,000 acres of land in farms.

In our region of Vermont, the vast majority of cropland is being used for hay and silage corn, much of which supplies the dairy industry. The remaining land is used for vegetables (a small but growing farm sector), feed corn, or orchards, and increasingly there is an interest in the use of lower quality farmland for biofuel production. Therefore, the fate of dairy farms in the short term could have a greater-than-proportional impact on land use here. The prices farmers are paid are dependent on competition from outside the region and on federal farm policies and subsidies. Prices fluctuate widely, adding to the uncertainty affecting the economic viability of dairy farms.

Farmers surveyed in the Conservation Commission report also made suggestions as to what the town could do to keep farming a viable option in Randolph. Not all suggestions were within the authority of the town to implement, and not all the comments were consistent with each other. However, suggestions in several categories were made over which the town does have some control or influence, and which more than one farmer suggested. These include: reducing taxes; public education and promotion of agricultural products; assistance with start-up costs and grants; and cluster zoning. In many areas, farming has been hampered by the hazard of crossing a heavily trafficked road with farm equipment, or by complaints about noise or smell from new residential neighbors. Land use decisions can also inadvertently fragment and frustrate farm and forest activities.

Farm diversification and conversion to specialty markets or practices, such as organic farming, is happening in Randolph, but not, it appears, at the same pace as the loss of farms. This will continue to be a factor in the success of niche, specialty, and value-added agricultural ventures, such as agri-tourism. The success of these efforts will likely determine how many others convert to new or diverse markets rather than go out of business. Factors that may affect the success of agriculture include: milk and other commodity prices; the availability of skilled and reasonably priced farm labor; land value; housing values for farm workers and value-added or agri-tourism employees; the time and cost of advertising and other marketing, and use conflicts. As to the last item, while the Conservation Commission survey reported that farmers in Randolph generally get along well with their neighbors, some conflicts arise around recreational users of farm and forest land, complaints about noise, odors or manure spills, etc. The most significant complaint from farmers, however, concerned conflicts with automobile traffic, including motorist speed and impatience.

## **Forestry**

Randolph landowners have placed roughly 6,300 forest acres, equal to roughly 30% of Randolph's total forest land, under the state's Current Use Value Program. In 1999, from these 6,300 acres, landowners harvested 341,000 board feet of softwood, 256,000 board feet of hardwood, with some additional softwood pulp and cordwood. Not all harvests are recorded, so actual forest harvest in the town is likely to be much higher, taking into account lands not under current use which don't report harvest, personal firewood and other incidental harvesting. The value of wood harvests is variable, and good sense being what it is, landowners generally harvest more when prices are high, and less when they are low. However, the numbers speak to the benefit of forest products as a renewable resource that brings significant financial,

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employment and environmental benefits to the town. The town budget also benefits from periodic harvest on the two town forests, which have been well managed under a forest management plan.

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## **Appendix E - Energy**

<b>BACKGROUND</b>
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Vermont planning law provides that municipal plans must include an energy program for the community. Such a program is intended to promote the efficient and economic utilization of energy. Energy is not just the electricity we use, but all forms of energy. Most of the energy we use right now comes from oil – to fuel our cars and trucks and to heat our homes. Burning oil largely sends dollars out of our local economy and causes pollution of course. As we shift away from fossil fuel, some of this energy can simply not be needed if we conserve it through turning down thermostats, driving less, and turning off lights. Some energy we can stretch to do more through efficient appliances and lighting. Shifting to electric vehicles results in enormous energy savings as they are much more efficient than those powered by gasoline in turning the energy used into work.

Practical energy planning and implementation results in positive environmental and economic returns to the community and to energy providers, and is important to the community’s economic and environmental health. Energy planning that is comprehensive enough and aligned with the state Comprehensive Energy Plan (CEP) and the regional Energy Implementation Plan can also enable the town to have a greater say in state review of energy projects.

Conservation of energy lessens the demand for expensive new sources, and allows utilities to defer capital investments necessary to provide for additional capacity. The widespread use of energy conservation utilization practices can significantly reduce energy use and cost. This has benefits for residents, businesses, and ratepayers.

While it is recognized that energy supply and demand are directed largely by economic forces at the state, federal, and international levels, the manner in which the Town plans for future growth does have an impact on energy usage. For example, a highly dispersed and unplanned pattern of land use uses more land and energy resources. By planning the location of jobs, public services and housing in close proximity to growth centers, the consumption of fuel and the need for additional roads is reduced. The siting and design of buildings and the selection of energy systems can also impact the efficiency and conservation of energy. Lastly, local production of energy, especially through renewable sources, lowers greenhouse gas emissions and support local businesses.

Historically, America has taken energy largely for granted because it was relatively abundant and cheap. Society at large becomes “energy conscious” only when supplies are threatened and prices are up. The Town must not be paralyzed by the belief that many of the energy related issues are beyond its control and can only be solved at the national and international levels. Local governments and individuals are in key positions to influence energy policies and use. Addressing these changes in a thoughtful and proactive way is essential, as infrastructure and land use decisions “lock in” energy choices that are built on assumptions. It is no longer a solid assumption that oil, and perhaps LP/LNG, will be affordable and available for the lifetime of new transportation structures or buildings. Steadily increasing use of energy is not sustainable and not in keeping with the state’s CEP. To meet energy targets, overall energy use has to decline, even as our economy and population continue to slightly expand.

Long-term reliance on petroleum-based fuels is not consistent with projected supplies, nor compatible with keeping climate change within manageable bounds. Americans are aware of the current impacts of potential future catastrophic threats of climate change (global warming), which is being driven by the insulative properties of increasing levels of human-caused greenhouse gases (primarily carbon dioxide and methane) Already, plant and animal species are moving their ranges northward, sea levels are rising, and severe weather is increasing. The US EPA has declared carbon dioxide to be a pollutant threatening the public health and welfare. The best available scientific data points to a need to keep global greenhouse gas (GHG)

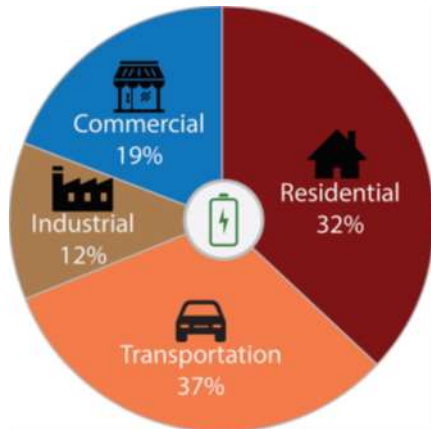


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concentrations near or below current levels and to markedly reduce further GHG emissions to avoid catastrophic climate-related damage.

## ENERGY DEMANDS



According to the US Energy Information Agency, in 2013 Vermonters used an inordinately high percentage of their energy use on transportation compared to the nation. However, Vermonters also generated very little per capita in terms of greenhouse gases, primarily due to the high percentage of energy generated from hydro and nuclear plants. We no longer have VT Yankee in our power mix, but have increased in-state commercial wind power and use a variety of out of state power sources. To move toward the end goal of 90% renewable by 2050, we will need to have a better understanding of our current energy sources and uses and some milestones along the way.

Understanding our current energy use is important to evaluate where Randolph needs to go with our energy future. This section provides the background data on existing renewable energy generation in town, and estimated energy use for transportation, home heating, commercial, and electricity.

Renewable energy generation sources include wind, solar, hydroelectric, and woody biomass. Through information from the Vermont Department of Public Service (DPS), as of June 2015 there are an estimate 11 sites in Randolph that are producing 3472 megawatt hours (MWh) of renewable energy generation. This was about 9% of the annual electrical energy consumption in town in 2015.

Existing Renewable Electric Generation	MW	MWh
Solar	1.48	1,815
Wind	0.02	61
Hydro	0.00	0
Biomass	0.39	1,595
Other	0.00	0
<b>Total Existing Generation</b>	<b>1.89</b>	<b>3,472</b>

While we generate 3,742 MWh of electricity, we use (in 2015) much more, 31,324 MWhs, with 12,926 MWhs for residential use and 18,388 for commercial use. The goal is to use electricity for much more applications in the future – primarily to power our cars and to heat and cool our homes through the use of efficient heat pumps – but at the same time not increase our total energy use much. By 2025 the goal is to ensure that 1/3 of homes are weatherized, 2/3 by 2035 and all homes have become energy efficient by 2050. (Commercial establishments are tougher to upgrade and will lag, with only 6% upgraded by 2025, 9% by 2035 and 18% by 2050.) Conservation and efficiency in appliances and other uses is projected to save 6% of power by 2035 and 10% by 2050. The target years of 2025, 2035, and 2050 were in conjunction with the 2016 Vermont Comprehensive Energy Plan benchmarks. Most of the information in this section was developed using the Long- Range Energy Alternatives Planning (LEAP) model from the Vermont Energy Investment Corporation (VEIC).

To meet the energy goals, we will need to have 255 electric vehicles by 2025, and then rocket up to 1,805 by 2035 and 3,754 by 2050. 190 heat pumps will need to be installed by 2025, 502 by 2035 and 1,052 by

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2050. The state model does not show any increase in the use of wood for heat, but we believe that we can increase the use of wood, and especially the efficiency of which we use it.

Of course, most of the energy we use is from oil, and most of that is nearly 4 million dollars in gasoline to power our cars and diesel to power our trucks and tractors.

Current Municipal Transportation Energy Use	
Transportation Data	Municipal Data
Total # of Vehicles (ACS 2011-2015)	2,750
Average Miles per Vehicle (Vtrans)	11,356
Total Miles Traveled	31,229,000
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
<b>Total Gallons Use per Year</b>	1,678,978
<b>Transportation BTUs (Billion)</b>	202
Average Cost per Gallon of Gasoline (RPC)	2.00
<b>Gasoline Cost per Year</b>	13,878,440

The table above uses data from the American Community Survey (ACS) and Vermont Agency of Transportation (VTrans) to calculate current transportation energy use and energy costs.

Fuel Source	Municipal Households (ACS 2011-2015)	Municipal % of Households	Municipal BTU's (in Millions)
Natural Gas	73	4%	5,560
Propane	353	19%	32,629
Electricity	31	2%	2,317
Fuel Oil	1026	55%	105,940
Coal	0	0%	0
Wood	353	19%	40,039
Solar	0	0.0%	0
Other	15	1%	1,329
No Fuel	14	1%	1,613
<b>Total</b>	1865	100%	189,426

This table above displays data from the ACS that estimates current municipal residential heating energy use.

Randolph residents rely on a variety of heating sources with a majority heating either through oil, wood based systems, and propane. Residents do not experience a scarcity of heating sources but the variability in costs from year to year, especially in the winter, can make picking a fuel source and a heating system that will last many years difficult for residents. To help limited income residents with the costs of weatherization upgrades and heating costs programs through Efficiency Vermont and community action agencies can provide assistance.

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Overall, if we meet the goals above for transportation and heating, we will have shifted away from fossil fuels and over to renewables as the main source for these two sectors, producing less pollution, keeping many more dollars locally, and still enjoying a good quality of life.

Renewable Energy Use			
	<u>2025</u>	<u>2035</u>	<u>2050</u>
Transportation Renewables	9.6%	23.1%	90.3%
Heating Renewables	48.7%	61.3%	93.1%

To meet this demand, we will need generation from 26,825 -32,786 MWhs of electricity each year. We currently only generate about 9% of that. This will require a massive increase in generation, primarily from solar PV arrays. While the numbers are large, the amount of land needed is comparatively small. Assuming we meet this need only with solar, we could generate only another 9% if we were able to use all of the roofs. But we have sufficient land that does not have natural resources constraints, nor is too steep, to meet the goal nearly 45 times over (1,335,856 MWhs).

Renewable Generation Potential	MW	MWh
Rooftop Solar	3	3,268
Ground-mounted Solar	1,089	1,335,856
Wind	1,007	3,086,696
Hydro	0	0
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>2,099</b>	<b>4,425,820</b>

Vermont has taken great strides to reduce energy use through the efforts of Efficiency Vermont. Total vehicle miles traveled, which had been climbing, has leveled off for the last few years. These trends need to continue and even improve if reductions in greenhouse gases and reliance on fossil fuels are to be achieved. Vehicles must switch to being powered by electricity, and that electricity has to be generated from renewable sources. One of the benefits of powering cars with electricity is that they also function as giant batteries and are able to store the intermittent surges of power created from solar arrays. Advances in grid technology also envision that cars will be able to feed this stored power back onto the grid in times of need, helping to stabilize the load against supply.

Randolph is fortunate to have access to local, regional and national Public Transportation (Stagecoach and Amtrak) and its new Park and Ride. There are, however, limited alternatives to the individual automobile for general use on a regular basis.

## RENEWABLE ENERGY

The 2015 ACS data reports that 19% of Randolph's households use wood as the primary fuel source for heating, 55% use fuel oil/kerosene, 23% use natural/LP gas, and 2% use electricity. Many households also use wood as a secondary source of heat, but there is no good data on this level of use. The Vermont Department of Public Service estimates that the average household using wood for heat burns between 3 to 4 cords of wood each year during the heating season. Given that the total number of homes in Randolph

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heating primarily with wood was 172, it is estimated that at least several hundred cords of wood are burned annually for heat.

Wood is a renewable, local resource, which contributes to the local economy. Increased reliance on wood as a heating source can offset some demand for expensive and non-renewable alternative sources. Burning wood that is sustainably harvested can cause no-net increase in greenhouse gases, as long as the carbon dioxide being created equals that being taken up by growing trees. There is a potential detrimental effect to this, however, as significant use of wood could increase particulate air pollution. Modern catalytic converters installed on wood burning stoves and improved design of wood furnaces are a partial solution.

Additional sources of renewable energy include biomass, solar, wind, hydro, methane, and geothermal. Each of these sources can play a role in our town's energy supply. Biomass fuels that are sustainably grown on existing fields can be used as stock for either ethanol or gasification systems. Solar systems can directly heat water and photovoltaic (PV) systems can create electricity. Residential and commercial PV installations can "net meter", selling surplus power back into the grid. Small and larger commercial scale wind turbines are being installed in Vermont. Hydropower sites must avoid impacts to fish passage and water quality, but small sites no doubt exist in Randolph that could be exploited. Methane, largely being generated on farms with a large supply of manure (cow power) or from old landfills, can run electric generators. Geothermal is a possible source of heat and cooling, though this has limited applications. RACDC, VTC, and the Biomass Energy Resource Center are studying the feasibility of a biomass district heating system to serve an area in Randolph Village from the bridge to the industrial zone. Such a system, known as combined heat and power (CHP), would use wood or grass fiber to produce heat and electricity for local consumption. Such systems are widely used in Europe as efficient ways to reduce local dependence on foreign heating fuels and to reduce energy cost.

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## Appendix F - Housing

### Affordable Housing Costs

Affordable housing is defined as that which a household making the County median income could afford if no more than 30% of its income were spent on housing costs. For homeowners, housing costs include payments for principal and interest on mortgage, taxes, etc. For renters, housing costs include rent and utilities.

Income Category	Annual Income Range	Affordable Monthly Housing Costs*
Moderate	\$74,805	\$1,870
Low	\$63,750	\$1,593
Very Low	\$39,850	\$996
Extremely Low	\$23,900	\$597
*Based on family of four, HUD 2018 VT Median Income Figures		

### Affordable Housing Options

Randolph had one of the highest percentages of owner and renter-occupied households that paid more than 30% of their income on housing. This was higher than the State, Region, and Sub-Region.

Housing Affordability – 2016		
	30% or more for Owners Costs	30% or more for Renters Costs
Town of Randolph	39.03%	52.16%
White River Valley Sub-Region	31.71%	3.5%
Two Rivers - Ottauquechee Region	31.86%	43.37%
State of Vermont	31.71%	43.5%

Source: 2011-2016 American Community Survey 5-Year Estimate

To help meet the needs of its elderly, low income and at-risk residents, Randolph has at least 181 affordable housing units. Some of these units have rent subsidies, the majority of which are for elderly or disabled residents; other units use tax credit or other techniques to allow eligible individuals access to affordable rental rates. The Randolph Area Community Development Corporation (RACDC) is a major developer and manager of affordable housing in the region, having renovated or built 116 of the apartment units listed below, and Jacobs Mobile Home Park. RACDC has worked successfully with the Town and others to address housing issues. Recent projects include the Red Lion Inn senior apartments and the Branchwood Family Housing units.

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RACDC's current housing activities include the redevelopment of the former Ethan Allen Plant #1 into a mixed-income residential neighborhood. Other providers include: private individuals (20+); Capstone (20); Clara Martin Center (6); and Habitat for Humanity (a largely privately-funded, volunteer organization) has built two homes in the Randolph community. Private landlords also rent to low and moderate households through rental assistance vouchers provided to individual renters.

Randolph Affordable Housing Developments		
Name of Facility	Number of Units	Purpose/ Type of Housing Provided
Highland Ave. Safe Haven	6	Temporary safe housing/ shared
Highland Ave./So. Pleasant	3	Residential care home for physically and mentally handicapped/ shared
Jacobs Mobile Court	19	Mobile home lots (most of the homes owner-occupied)
Joslyn House	20	Affordable shared supportive elder housing
Prospect-Forest Homes	9	Low and moderate income apartments
Randolph Circle	20	Low and moderate income/ duplexes
Randolph House	48	Affordable elder housing/apartments
Red Lion Inn	20	Affordable elder housing apartments/ apartments
Sass Apartments	16	Affordable family apartments
South Pleasant	8	Low and moderate income/ apartments
Branchwood Family Housing Partnership	12	Low and moderate income/ apartments
<b>Total</b>	<b>172</b>	

## Homelessness

Homelessness, at this time, does not appear to be a significant issue in Randolph. There are currently no known cases of chronic homelessness in Randolph. To the extent there is a temporary need for shelter, it is provided by the Clara Martin Center and St. John's Church.

## Number of Housing Units

The U.S. Census defines a "housing unit" to include: conventional houses, apartments, mobile homes, and rooms for occupancy. Randolph is a traditional center of housing and commerce. Randolph's housing supply experienced steady growth over the past two decades.

Growth in the Number of Housing Units from 1990 - 2010							
	No. of Housing Units			Change in Units			
	1990	2000	2010	1990-2000		2000-2010	
				No.	%	No.	%
Town of Randolph	1,830	1,905	2,076	75	4.1%	171	8.9%
Two Rivers – Ottauquechee Region	19,220	20,442		2	1	1	6
State of Vermont	271,214	294,382	329,525	23,168	8.5%	35,143	11.9%

Source: 2010 Census

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## Types of Housing Units

The profile of the types of units in the Randolph housing stock is most akin to the statewide housing stock. Randolph has seen an increase in the number of single family units, just like the TRO Region, and a slow decline in the number of other types of housing.

Occupied Housing Unit Types present in Housing Stocks - 2016								
	Single-family Units		Two-family Units		Multi-family Units		Mobile Homes	
	No.	%	No.	%	No.	%	No.	%
Town of Randolph	1,425	76%	113	6%	248	13%	95	5%
White River Valley Sub-Region	5,470	77%	307	4%	786	8%	772	11%
Two Rivers -Ottauquechee Region	19,132	80%	954	4%	1,741	7%	2,188	9%
State of Vermont	178,175	69%	15,684	6%	44,480	17%	218,769	77%

Source: 2011-2016 American Community Survey 5-Year Estimates

## Age of Housing

The majority of Randolph's housing stock was built before 1980. Randolph has seen a relatively consistent percentage of increase in the size of its housing stock over the past fifty years.

Age of Construction of the Randolph Occupied Housing Stock		
Year	# of Units	Percentage
2000-2009	166	8.8%
1980 - 1999	310	16.4%
1960 - 1979	460	24.3%
1940 - 1959	146	7.7%
1939 or earlier	719	38.0%

Source: 2011-2016 American Community Survey 5-Year Estimates

The percentage of housing units added to Randolph's housing stock was slightly lower than the percentages added to Regional and Statewide housing stocks.

Percentage of Occupied Housing Built in the 1990s			
	Housing Units Built in the 1980s and 90s		Total of Occupied Housing Units in 2016
	No.	%	
Town of Randolph	310	16%	1,891
White River Valley Sub-Region	1,890	29%	7,335
Two Rivers - Ottauquechee Region	7,160	30%	24,020
State of Vermont	69,162	27%	257,107

Source: 2011-2016 American Community Survey 5-Year Estimates

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## Housing Occupancy

A vacancy rate at or below 5% is considered to be a “functional zero”; at that percentage the units that are vacant have limitations like sub-standard conditions that make them uninhabitable. The Town of Randolph had a primary-residence vacancy rate of 3.7% in 2000, and increased to 4.6% in 2010. The vacancy rate for “total units” includes seasonal residences, “camps”, and second-homes. The proportion of vacant seasonal units also increased.

Housing Occupancy Status 1990 - 2000						
	2010			2000		
	Vacancy Rate for Primary Residences	Vacancy Rate for Total Units	# of Vacant Seasonal Units	Vacancy Rate for Primary Residences	Vacancy Rate for Total Units	# of Vacant Seasonal Units
Town of Randolph	4.6%	13.2%	101	3.7%	7.1%	65
White River Valley Sub-Region	4.9%	20.5%	986	3.8%	14.9%	876
Two Rivers – Ottawaquechee Region	14.7%	31.2%	5,685	4.3%	24.0%	4,014

Source: 2010 & 2000 Census

## Housing Tenure

A larger portion of the Randolph housing supply is occupied by owners, but that percentage was still lower than in the White River Valley Sub-Region or the Two Rivers – Ottawaquechee Region as a whole. The construction of rental units has not kept pace with the construction of home-ownership units in the Region in general, and it is especially true in Randolph. The growth of rental units in Randolph is slow, just between the years 2000 and 2010 the number of renters has grown only 0.1%. Property rental in a community is often the step before homeownership in that community. High percentages of owner-occupied units and decreasing supplies of rental units make transition from rental to ownership difficult. The Housing Tenure by Age table below shows the percentage of housing units that are owned or rented by selected age groups.

Housing Tenure (Ownership and Rental) 2000 – 2010						
	2010		2000		Change	
	% Owner Occupied	% Renter Occupied	% Owner Occupied	% Renter Occupied	% Growth in Units Owned	% Growth in Units Rented
Town of Randolph	70%	30%	70%	29.6%	+0.1%	+0.1%
White River Valley Sub-Region	74%	26%	73%	27.4%	+1.4%	-1%
Two Rivers - Ottawaquechee Region	74%	26%	75%	25.5%	-0.2%	+0.1%

Source: 2010 Census



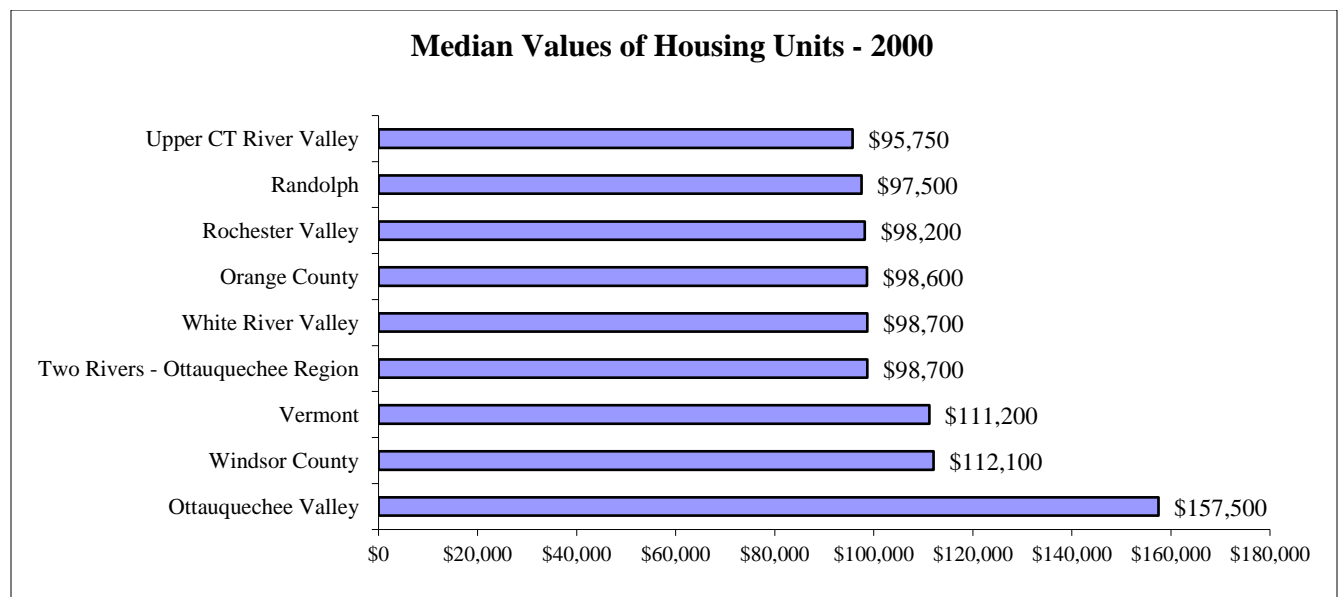
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## Housing Values

The median value of owner-occupied housing units in Randolph grew by 10.7% over the 1990s while the Region's median value grew by 11.7%. The White River Valley Sub-Region and the State both experienced growth rates topping 16%: 16.1% for the sub-region and 16.6% for the State. In comparing sub-regional appreciation rates, the White River Valley was second to the Ottauquechee Valley, which experienced a 21.1% rate of growth over the decade.

Housing Tenure by Age – 2010		
	% Owner Occupied	% Renter Occupied
Householder 55 - 64 years old	25.9%	13.4%
Householder 65 - 74 years old	15.2%	9.4%
Householder 75 - 84 years old	9.3%	4.8%
Householder 85 years old and over	4.4%	3.3%
Householder 55 years old and over	54.8%	30.9%



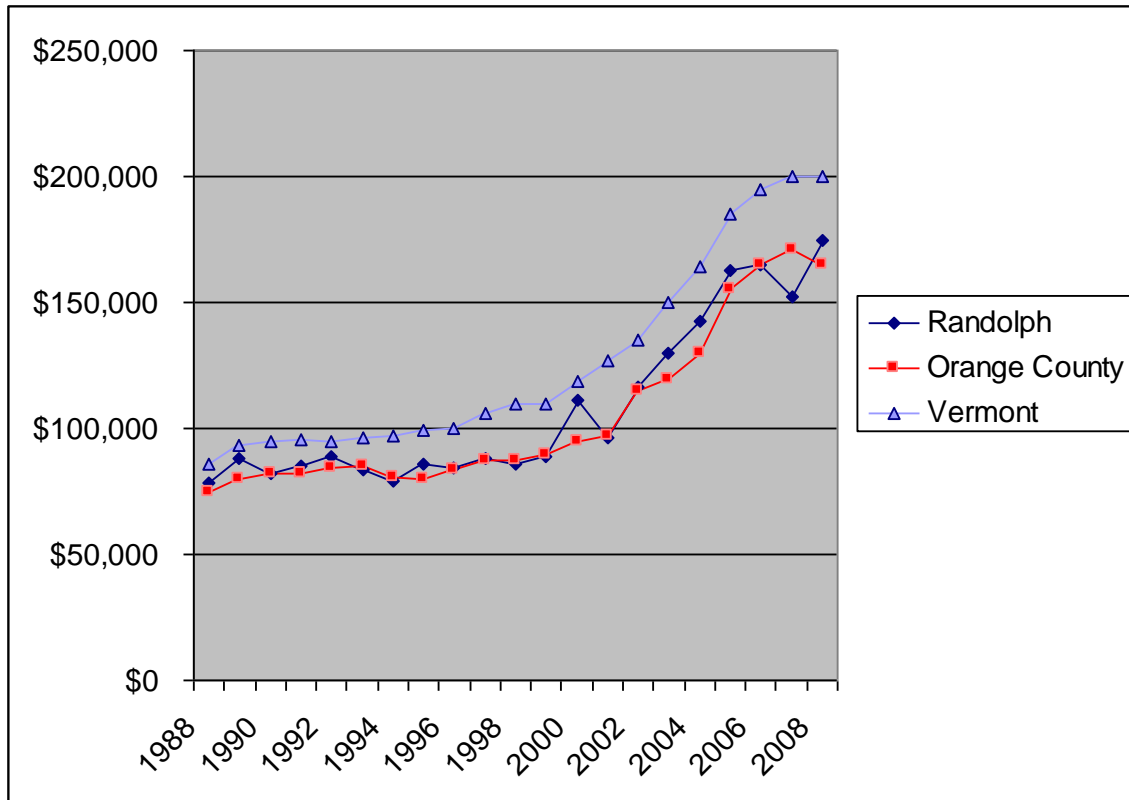
Source: 2000 Census

The following figure shows that although the Town's median home sale prices have been relatively consistent over the last 20 years with the sale prices in Orange County, the County's median home sale prices are lower than those at the state level. Median home sale prices were somewhat stable in the first half of this period, and all have trended upward more sharply since the turn of the Century, leveling out again since 2006.

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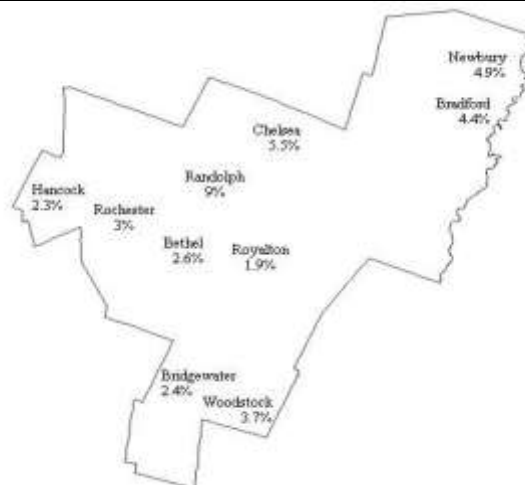
## Median price of primary residences sold



Source: Vermont Department of Taxes

The percentages shown in the map represent the percentage of total housing units in that town that are either publicly subsidized units or mobile homes.

## Geographic Distribution of Public Housing and Mobile Home Parks in the Region – 2003



Source: Vermont State Housing Authority, [www.housingdata.org/doarh/](http://www.housingdata.org/doarh/)

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According to VHFA data, there were 273 public housing units in the Region in 1992; ten years later there were 493 units of publicly assisted housing in this Region. The number of units nearly doubled in the decade. The growth in public housing units did not come from existing developments becoming larger and adding units. Instead, the growth came from rehabilitation, or the siting and construction of new housing units in the Region, especially in Randolph, the Village of Wells River in Newbury, Rochester, and Bradford.

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## **Appendix G - Flood Resilience**

### **Types of Flooding**

Generally speaking, there are two types of flooding that impact communities in the state of Vermont—inundation and flash flooding. Inundation flooding occurs when rainfall over an extended period of time and over an extended area of the river’s basin leads to flooding along major rivers, inundating previously dry areas. This type of flooding occurs slowly, but flood waters can cover a large area. Inundation flooding is slow and allows for emergency management planning if necessary. However, unlike during a flash flood, it may take days or weeks for inundation flood waters to subside from low areas, which may severely damage property.

Flash flooding occurs when heavy precipitation falls on the land over a short period of time. Precipitation falls so quickly that the soil is unable to absorb it, leading to surface runoff. The quick-moving runoff collects in the lowest channel in an area—upland streams, in small tributaries, and in ditches—and the water level rises quickly and moves further downstream. Flash flooding typically does not cover a large area, but the water moves at a very high velocity and the flooding manifests quickly, making flash floods particularly dangerous. Due to the velocity of the water, a flash flood can move large boulders, trees, cars, or even houses.

The collecting of water in channels in steep areas also causes fluvial channel erosion, which can severely damage roads and public and private property. Fast moving water in the stream channel may undermine roads and structures and change the river channel itself, predisposing other roads and structures to future flooding damage. Flash floods can also mobilize large amounts of debris, plugging culverts and leading to even greater damage. In Vermont, most flood-related damage is caused by flash flooding and fluvial erosion (erosion of stream banks). Due to its topography, Randolph is vulnerable to flash flooding and fluvial erosion.

### **Causes of Flooding**

Severe storms with particularly heavy precipitation have the ability to create flash flood conditions. However, over an extended period of time, severe storms may cause inundation flooding due to the cumulative effects of continuous rain, saturated soils, and a high water table/high aquifer levels.

Floodplains and river corridors fill an important need, as flood waters and erosive energy must go somewhere. Development in the floodplain can lead to property damage and risks to health and safety. Development in one area of the floodplain or river corridor can also cause increased risks to other areas by diverting flood flows or flood energy. Debris carried by the floodwater from one place to another also poses a danger. Flooding is worsened by land uses that create impervious surfaces that lead to faster runoff, and past stream modifications that have straightened or dredged channels, creating channel instability.

### **Historic Flood Events**

One of the worst flood disasters to hit the Town of Randolph, as well as the overarching region and the State of Vermont, occurred on November 3, 1927. This event was caused by up to 10 inches of heavy rain from the remnants of a tropical storm that fell on frozen ground. The flooding of the White River was particularly violent, with an estimated 120,000 to 140,000 cubic feet per second.

Another significant flooding event that devastated the region and the state was the result of Tropical Storm Irene, which occurred on August 28, 2011. Record flooding was reported across the state and was responsible for several deaths, as well as hundreds of millions of dollars of home, road, and infrastructure

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damage. Due to the strong winds, some in an excess of 60 mph, 50,000 Vermont residents were initially without power, and many did not have electricity restored to their homes and businesses for over a week.

Tropical Storm Irene caused damage to property and infrastructure in the Town of Randolph due to an estimated 5.53-7.28 inches of rain that fell during the storm. Damage to roads and culverts affected many town roads, including Thayer Brook Road, Brook Street, Beanville Road, Prince Street, Howard Hill Road, West Street, Hillside Lane, Menard Road, Harlow Hill Road, Tatro Hill Road, Seymour Road, as well as state highways such as VT Routes 12A, 14, and 66.

Another significant flooding event in Randolph occurred from July of 2007, when Randolph received over 6 inches of rainfall. Randolph was one of the hardest hit towns in the area, and Mason Road, Howard Hill Road, West Street, Tatro Hill Road, Seymour Road, Peth Road, North Randolph Road, Fish Hill Road, Hebard Hill Road, Scenic Drive, Jackson Road, and Pinnacle Road were all damaged.

A more recent flooding event occurred from June 25, 2013 through July 11, 2013 when thunderstorms across the region brought consistently heavy rainfall from the end of June through the beginning of July that caused local flash flooding. Damage in Randolph totaled \$15,000 and occurred on Howard Hill Road, Stock Farm Road, Fish Hill Road, Braley Road, Tunbridge Road, North Randolph Road, and Hollyhock Hill

## **Flood Hazard and River Corridor Areas in Randolph**

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRMs) are the official maps that govern development in floodplains. These maps show the floodplain that FEMA has calculated would be covered by water in a 1% chance annual inundation event, also referred to as the "100 year flood" or base flood. In Randolph, there are FIRMs only for the Second and Third Branches of the White River and for Ayers Brook. The area of inundation during the 100-year flood is called the Special Flood Hazard Area (SFHA), also referred to as the floodplain, and the maps also show expected base flood elevations (BFEs) of the SFHA.

The SFHA itself consists of two parts: the floodway is the normal stream channel and areas alongside the channel that where water flows at a higher velocity during a flood, and the fringe floodway is the area on either or both sides of the floodway where inundation but little velocity is expected during a flood. Randolph contains 1,239 acres of mapped floodplain, which is approximately 3.9% of the total Town. Of these 1,239 acres, 502 acres are mapped floodway and 737 acres are in the fringe floodway and may be in the developable portion of the floodplain.

The Town of Randolph contains 34 total buildings within a SFHA, including 26 residences and 8 commercial buildings. Commercial businesses in the floodplain area include Foundry Park on Prince Street and The Middle Branch Market & Deli and the East Randolph Garage in East Randolph.

Randolph does have provisions in its Land Use Regulations that regulate development in the SFHAs. These provisions meet the minimum requirements needed for Randolph to participate in the National Flood Insurance Program. This programs enables property owners to purchase flood insurance.

Vermont ANR's river corridor maps show the areas that may be prone to flash flooding or erosion, which may be inside of FEMA-mapped areas, or extend outside of these areas. In these areas, the lateral movement of the river and the associated erosion is a greater threat than inundation by floodwaters. Elevation or flood proofing alone may not be protective in these areas as erosion can undermine structures. Currently, the river corridor area is not subject to regulation in the Randolph Land Use Regulations.

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## **Appendix H - Implementation**

### **Putting the Plan into Action**

The character of Randolph, its people, and landscape has been created over the years through the individual and collective decisions of its citizens and public officials. The efficiency, attractiveness, and well-being of the community is determined, in part, by the ability of the Town to plan for its needs and to find a mechanism to put planning goals into action.

Previous elements of this Plan have been centered on existing conditions, probable trends and policy development which, when combined, represent a vision for the kind of town Randolph desires for the future. One thing is certain – the community will change. The opportunity is that citizens and town officials together can direct this change consistent with their desires, using a variety of mechanisms.

The following sections describe the tools and techniques that could be used to implement the Randolph Town Plan.

### **Adoption of the Plan**

Adoption of the Randolph Town Plan by the Selectboard, in accordance with the procedures outlined in the Vermont Planning and Development Act [24 V.S.A., Chapter 117], is the first step in putting this Plan into action. Through its adoption, the Town accepts the principles and policies as set forth in this Plan as in the public interest and as a guide for the future growth and development decisions affecting Randolph.

### **Ongoing Planning**

Planning for change is a continual process for Randolph and will require the involvement of the Planning Commission, the Selectboard and the public to ensure that the goals and policies of the Plan are integrated into the decisions affecting land use, taxation, and public investments in Randolph.

The quality of a town plan is reflected in the amount of public involvement in its creation. Regular community meetings, held by the Planning Commission, that discuss important issues relevant to the Town Plan will ensure that the document truly reflects the vision of the residents of Randolph.

The Randolph Town Plan is a dynamic document reflecting the community's visions and values. By statute [24 V.S.A., Section 4387], the plan must be revisited at least every eight years to be kept relevant. The Planning Commission is responsible for the maintenance and amendment of the plan. Within the next eight years following adoption of the Plan, the Planning Commission will need to evaluate it in light of new conditions and needs. Adopting an updated plan will require notice to the townspeople and action by the Selectboard.

At any time following adoption of the Plan, the Selectboard may request the Regional Commission to approve it. Before approving a plan, the Regional Commission shall find that the plan meets four basic tests as outlined in 24 V.S.A., Section 4350(b).

### **Implementation Tools**

Vermont law enables Randolph to implement its adopted Town Plan through a variety of ways. Potential tools to implement the Town Plan can be both regulatory (revising existing regulations or adopting new ones) or non-regulatory (e.g. creating and assigning actions listed in the Plan to advisory committees).

### **Implementation Table Notes**

If there is nothing listed under "Responsible Parties," it is because the responsible party is self-evident from the description of the task. The other abbreviations listed in that column are:

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<b><u>Abbreviation</u></b>	<b><u>Name</u></b>
CC	Conservation Commission
CCA	Chandler Center for the Arts (Board)
EC	Energy Committee
EDC	Economic Development Council
EMD	Emergency Management Director (Town Manager)
FM	Facilities Manager
FSAC	Fire Services Advisory Committee
HWY	Highway Superintendent and/or Dept.
KL	Kimball Library Board of Trustees
LIST	Board of Listers
OSSD	Orange Southwest School District
PAC	Police Advisory Committee
PC	Planning Commission
RACDC	Randolph Area Community Development Corp.
REC	Randolph Director and/or Randolph Community Recreation Advisory Committee
RPC	Two Rivers-Ottawaquechee Regional Commission
SB	Selectboard
STC	Stagecoach Transportation
TM	Town Manager
WWAC	Water/Wastewater Advisory Committee
WWS	Water/Wastewater Superintendent
ZA	Zoning Administrator

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## Implementation

TASK		RES. PARTIES
<b>LAND USE</b>		
Update Land Use Regulations		PC, SB
<b>TRANSPORTATION</b>		
<b>A.1</b>	Work with VTrans to conduct a multimodal corridor study for the Route 66/Central Street corridor from Randolph Center into Randolph village and adopt an Access Management Plan.	SB, RPC
<b>A.2</b>	Though there have been studies of the junction in the past, the intersection of VT Route 66/Central Street, VT Route 12N (Forest Street) and Elm Street should still be reviewed to evaluate ways to improve traffic flow and safety at this intersection.	SB, RPC
<b>A.3</b>	Consider additional provisions for access management in the Randolph Curb Cut and Excavation Ordinance.	TM, HWY, SB
<b>B.1</b>	The Town should work with Stagecoach to encourage larger employers to increase the use of existing public transit routes as well as explore alternative transit options such as carpools.	EDC, SCT
<b>B.2</b>	Transit providers should review individual rider needs to see if busses make more sense than individual rides	SCT
<b>C.1</b>	Replace unsafe sidewalks or repair them so they have smooth surfaces.	HWY
<b>C.2</b>	Adopt a policy or ordinance that clearly defines who is responsible for clearing snow from the sidewalks in the downtown.	TM, SB
<b>D.1</b>	Develop complete street design standards for town roadways (including access standards, bicycle access/pathways, bus stops and expansion of road shoulders where feasible) sidewalks, utilities, plantings, parking, handicap accessibility, etc.	TM, SB
<b>D.2</b>	On streets that currently have sidewalks, they should be replaced – at least on one side – as needed and in compliance with the ADA. A policy should be developed with objective criteria for choosing whether or not to have sidewalks on streets that currently do not have any.	TM, SB
<b>E.1</b>	Inventory, maintenance and replacement programs should be developed for road/traffic signs and for guardrails.	HWY, RPC
<b>E.2</b>	Existing inventories of culverts and bridges should be kept up-to-date.	HWY, RPC
<b>F.1</b>	Maintain State Downtown Designation to provide access to the Downtown Transportation Fund grants as well as access to other grants and incentives for property owners.	SB, RACDC



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TASK		RES. PARTIES
<b>G.1</b>	Promote the availability of public transportation within Town and between Randolph and regional employment markets such as Montpelier and the Upper Valley, and consider adding routes or lengthening hours of service.	SCT
<b>G.2</b>	Support public transportation infrastructure needs such as dedicated bus stop spaces, signage and shelters.	SB, HWY
<b>G.2</b>	Promote the use of Amtrak and Stagecoach as not only amenities but as energy-efficient modes of transportation and participate in any regional rail projects.	WRVCC, RACDC
<b>H.1</b>	Work with VAST and other recreational organizations to maintain and install trails.	REC
<b>UTILITIES AND FACILITIES</b>		
<b>Municipal Properties, Services and Utilities</b>		
<b>A.1</b>	Investigate and implement a plan to provide adequate space for the Police Department's needs.	PAC
<b>A.2 .a</b>	Continue to replace and upgrade undersized and older water mains.	WWS, TM, SB
<b>.b</b>	Continue pursuing development of an alternate public water supply that would allow the Pearl Street well to be used only in emergencies.	WWS, TM, SB
<b>.c</b>	Replace the North Reservoir.	WWS, TM, SB
<b>A.3 .a</b>	Continue to replace and upgrade undersized and older sewer lines and replace and repair leaking manholes.	WWS, TM, SB
<b>.a</b>	Consider installing a solar array at the wastewater treatment plant, if safe from flood damage, to offset the cost of electricity to operate the plant.	WWS, TM, SB
<b>.c</b>	Map the wastewater system and develop an asset management plan.	WWS, TM, SB
<b>A.4 .a</b>	Reduce the waste stream by encouraging reuse and repair and by encouraging recycling of as many items as feasible at the transfer station at no charge, or minimal charge, to residents.	TM, FM
<b>.b</b>	Investigate possible methane recovery and power generation at the landfill from both PV solar and methane.	EC
<b>A.5 .a</b>	Coordinate recreational activities offered by the Town with other recreation providers in the town and surrounding area, and work with surrounding communities to develop a cost-sharing formula for shared recreational facilities.	REC
<b>.b</b>	Improve and expand Town recreational trails within the region, including in the Town Forests, in cooperation with the Conservation Commission and other interested organizations.	REC, CC
<b>.c</b>	Consider the creation of additional small parks within the villages.	REC

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TASK		RES. PARTIES
<b>A.5</b>	<b>.d</b> Create or improve playgrounds/parks in Randolph Center and East Randolph.	REC
	<b>.e</b> The Town-owned lot on Pearl Street should be reviewed as a potential green space for recreational activities.	REC
	<b>.f</b> Improve the pool facilities on School Street.	REC, SB, FM
<b>B.1</b>	Purchase new vehicles to replace high-maintenance or inadequate vehicles.	HWY, PD, FD, WWS, TM, SB
<b>B.2</b>	Seek cost-sharing opportunities when specialized equipment and training are needed for special circumstances or facilities.	HWY, WWS, TM, SB
<b>B.3</b>	Encourage participation in the Local Emergency Planning Commission to ensure that the Fire Department is aware of grant opportunities and to facilitate regular communication with neighboring fire departments and other emergency disciplines.	EMD
<b>B.4</b>	Create a Task Force to study the impact of an accident or other emergency that severs the use of roads through Randolph's downtown, and that address the need for alternate access means or location of facilities to ensure emergency responders are not blocked in the village or along VT 12, including the possible relocation or additional location of emergency services.	SB
<b>B.5</b>	Expand or upgrade fire stations when needed to provide sufficient space for today's vehicles and to make them more energy efficient.	FSAC, TM, SB
<b>B.6</b>	Require the installation of "Knox boxes" for seasonal residences and commercial businesses so that fire departments can more easily access structures without forcible entry.	FSAC, TM, SB
<b>C.1</b>	Continue to manage the forests sustainably.	CC
<b>C.2</b>	Keep management plans updated, including with regard to forest management, recreation, and habitat protection.	CC, REC
<b>C.3</b>	Expand recreational trails, in conjunction with forest management activities in the Town system of forests and recreation areas..	CC, REC
<b>C.4</b>	Inform the public of the recreational and non-recreational uses of these lands.	CC, REC
<b>C.5</b>	Add all timber sale proceeds to the Town's Conservation Fund, administered by the Conservation Commission.	CC
<b>C.6</b>	Provide public parking and informational signage at each Town Forest.	CC
<b>C.7</b>	Investigate the extent of invasive plant species on Town forests and other town-owned properties, and the options for removal or control.	CC

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TASK		RES. PARTIES
<b>Kimball Library</b>		
<b>1</b>	Continue to upgrade the existing building while maintaining its historic character and include any recommended improvement or expansion in capital improvement plan.	KL, FM, TM, SB
<b>2</b>	Conduct an energy audit.	KL, FM
<b>3</b>	Foster cooperative relationships between the Library and area organizations to expand services, particularly outreach.	KL
<b>Chandler Center for the Arts</b>		
<b>A.1</b>	Encourage and assist other charitable, non-profit organizations in their pursuit of cultural and artistic expression and, where desired, provide a home for such organizations.	CCA
<b>B.1</b>	The Chandler Center for the Arts Board of Directors shall report annually to the Selectboard on its state of affairs, including financial health and programming.	CCA, SB
<b>Schools</b>		
<b>1</b>	Encourage community-wide use of school facilities to attain a "Community Campus."	OSSD
<b>2</b>	Work with area farms to use local foods in school meal programs.	OSSD
<b>3</b>	Conduct an energy audit of school buildings.	OSSD
<b>NATURAL RESOURCES</b>		
<b>Wetlands</b>		
<b>A.1</b>	Amend the Land Use Regulations.	PC, SB
<b>B.1</b>	Keep abreast of changes to and updates of the State's wetland delineations and encourage compliance with the State's wetland rules.	ZA, PC
<b>C.1</b>	Landowners and Town Officials should work together to find voluntary solutions to reduce wetland loss or degradation, especially for wetlands that are not regulated by the state or federal government.	CC
<b>Flood Hazard Areas and Floodplain Forests</b>		
<b>A.1</b>	Amend the Land Use Regulations.	PC, SB
<b>B.1</b>	Identify and map Randolph's significant floodplain forest communities.	CC
<b>B.2</b>	Encourage landowners of floodplain forests to sustainably manage or protect them.	CC

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TASK		RES. PARTIES
<b>B.3</b>	Educate landowners and the general public regarding the importance of the floodplain forests on their lands, and assist in identifying, valuing, maintaining, or even restoring these resources.	CC
<b>Water Resources</b>		
<b>A.1</b>	Educate businesses and the public about water quality and conservation issues.	CC
<b>A.2</b>	Support the emergency management efforts of the town and state to limit potential adverse impacts on water resources from spills and other activities.	EMD
<b>B.1</b>	In its decision making, at a minimum, the Town should support state and federal standards for the protection of both the quality and quantity of surface and groundwater supplies that pass through Randolph, including the water management typing at the highest applicable level.	PC, SB
<b>B.2</b>	Amend the Land Use Regulations.	PC, SB
<b>Flora and Fauna</b>		
<b>A.1</b>	The Town Forests' management plans should consider address invasive species and control thereof.	CC
<b>A.2</b>	The Town Highway Department should revise its roadside mowing operations to consider measures to reduce the spread of invasive species.	HWY
<b>B.1</b>	Identify the necessary corridors or connections that wildlife require to travel within and between Randolph and neighboring towns.	PC, CC, RPC
<b>C.1</b>	Educate landowners and the public on policies and practices that provide for long-term protection of wildlife habitat in Randolph.	CC
<b>Forest Blocks and Habitat Connectors</b>		
<b>A.1</b>	Encourage owners of necessary habitat for threatened species to contact the State for assistance in developing a management plan for these sites.	CC
<b>A.2</b>	Forestry management plans shall be kept up-to-date in order to properly manage Randolph's town forests and floodplain forests.	CC
<b>A.3</b>	Encourage landowners to maintain or improve the natural diversity, population, and migratory routes of wildlife habitat areas.	CC
<b>B.1</b>	Encourage sport and subsistence hunting of ecologically-sound intensities to provide continued success of the species and endangered or threatened wildlife.	CC
<b>B.2</b>	When possible, minimize fragmentation of deer habitat.	PC, SB
<b>C.1</b>	Maintain provisions for conservation subdivisions in the Land Use Regulations.	PC, SB

# RANDOLPH TOWN PLAN

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TASK		RES. PARTIES
<b>C.2</b>	Encourage landowners with larger forestland parcels to reduce the fragmentation of their forestlands.	CC
<b>D.1</b>	Consider implementing buffer strips on streambanks and shorelines for forestry activities to prevent erosion.	PC, SB
<b>D.2</b>	Consider creating a forest land conservation program to encourage more forest products.	CC
<b>Scenic Resources</b>		
<b>1</b>	The Town should have a public discussion to determine what constitutes a scenic resource important to the Town, including lands unsuitable for development, and how they should be selected.	PC
<b>2</b>	Educate the public on mechanisms to preserve viewsheds.	PC
<b>3</b>	Amend the Land Use Regulations.	PC, SB
<b>Productive and Working Landscapes</b>		
<b>A.1</b>	The Conservation Commission should update its agriculture survey, working with the National Agricultural Statistics Service, to include a Randolph specific questionnaire in the next Ag Census survey.	CC
<b>A.2</b>	The Orange Southwest School District is encouraged to link local farms with all local schools to improve freshness and quality of the school lunch program.	OSSD
<b>A.3</b>	Explore ways to promote and support sustainable farming and forestry	CC, PC
<b>A.4</b>	Amend the Land Use Regulations.	PC, SB
<b>B.1</b>	Town policies, investments, zoning, purchasing and other decision-making should identify ways to promote sustainable farm and forest practices in those areas of town most suitable and should actively solicit input from farmers and foresters in the implementation of these policies, investments, etc.	TM, SB
<b>ENERGY</b>		
<b>A.1</b>	Encourage commercial and residential-scale solar, as well as commercial power generation that uses sustainably harvested biomass, run-of-river hydro, or methane from wastes.	EC
<b>A.2</b>	Study combined heat and power (CHP) facilities that generate electricity or heat to supply nearby buildings in the Village and industrial area.	EC

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TASK		RES. PARTIES
<b>A.3</b>	Support taxing forest lands or farmlands at use value and not at development value to promote the sustainable and renewable source of biomass production and to promote maintenance of Randolph's fields and forests at a reasonable rate of return.	LIST
<b>A.4</b>	Promote the design and construction of energy efficient buildings and structures.	EC, ZA
<b>A.5</b>	Encourage innovative financing, to allow families and small businesses to implement capital intensive energy conservation and generation projects.	EC
<b>A.6</b>	Encourage the use of design principles and practices that conserve energy in the rehabilitation of existing buildings and the development of new buildings and equipment.	EC, ZA
<b>B.1</b>	Consider enacting provisions in subdivision regulations that encourage energy conservation and renewable energy use, and that concentrate development in locations that promote energy conservation (e.g., grant density bonuses to projects that employ advanced energy design and efficiency).	PC, SB
<b>C.1</b>	Support education programs about energy efficiency and distribute recommended guidelines to builders engaged in renovations or new construction. This effort can be coordinated with the Vermont Department of Energy, Efficiency Vermont, and Vermont Technical College.	EC
<b>D.1</b>	Develop transportation routes or facilities to complement the recommended land use and settlement patterns set forth in this Plan and reduce the need for vehicle trips.	SCT, PC
<b>D.2</b>	Locate major public investments, such as schools, public recreational areas, and municipal facilities within or in close proximity to the downtown, or to other village centers.	OSSD, REC, SB
<b>D.3</b>	Encourage the acquisition of land or rights in land by the Town or other qualified entities for footpaths or bikeways in the village areas or other areas of concentrated settlement as alternatives to the automobile.	REC, SB
<b>D.4</b>	Encourage the development of energy-efficient home occupations and small-scale home business to reduce the demand for commuter transportation facilities and energy.	EC, ZA
<b>D.5</b>	Support the continued operation of active freight and passenger service to Randolph, and state and regional transportation transit programs serving Randolph.	EC, SB
<b>E.1</b>	Give priority toward maintaining access to electrical grid for small-scale net-metered homes and businesses generating power to meet their needs.	PC, EC, SB

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TASK		RES. PARTIES
<b>E.2</b>	Prevent the development of market power generation facilities that would consume grid capacity leading to constraints to future access by local renewable power producers where power is utilized within the Town and towns immediately neighboring Randolph.	PC, EC, SB
<b>AFFORDABLE HOUSING</b>		
<b>A.1</b>	Continue and enhance strategic partnerships with Legislators, State Agencies, Two Rivers Ottauquechee Regional Commission, RACDC, Habitat for Humanity, Realtors, and for-profit housing.	TM, SB
<b>A.2</b>	Identify land and buildings suitable for housing development or re-development.	PC
<b>A.3</b>	Investigate ways to attract private development solutions to some of our affordable or special purpose housing needs, such as pre-approved areas, density bonuses, or incentives for development in areas with sufficient existing infrastructure, that conform to the Town Plan.	EDC, PC
<b>B.1</b>	Maintain provisions in the Land Use Regulations.	PC
<b>B.2</b>	Explore options for water and sewer hook-up charges so as not to discourage housing development in areas of desired growth, such as deferred payments.	WWAC
<b>C.1</b>	Encourage non-profits and others to help those homeowners who have limited assets or income, to perform upkeep and rehab of existing housing, particularly historic housing stock.	EDC
<b>C.2</b>	Work with non-profits to educate residents about housing options, including available loan and grant programs for mortgages, rental assistance, maintenance and remodeling.	EDC
<b>D.1</b>	Take advantage of weatherization and energy efficiency programs.	EC
<b>D.2</b>	Continue to require certificates of occupancy in the Land Use Regulations to support compliance with the State's energy building codes.	PC
<b>D.3</b>	Support state programs to incentivize woodstove conversions to high efficiency ones, as well as installation of electric heat pumps.	ED
<b>ECONOMIC DEVELOPMENT</b>		
<b>A.1</b>	The Randolph Economic Development Council should continue to spearhead the achievement of Randolph's economic development goals.	EDC
<b>A.2</b>	Fund a position of an Economic Development Coordinator.	EDC, SB
<b>A.3</b>	The Council and Town officials, with invitations to other organizations involved with economic development, should forge stronger ties with the Vermont Technical Enterprise Center resulting in full occupancy of its facilities.	EDC, TM

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TASK		RES. PARTIES
<b>A.4</b>	Improve public infrastructure (water, sewer, roads, flood control, etc.), including by applying for all applicable state and federal grants and by working closely with regional planning groups.	WWS, TM, SB
<b>A.5</b>	Continue to support agriculture and forestry as desirable businesses and consider these lands as natural, scenic, recreational, and tourism resources. Care for environmental assets increases Randolph's desirability as a place to do business and to live.	EDC
<b>B.1</b>	Re-apply for the Downtown and the East Randolph Village Center designations to facilitate securing business development grants.	SB
<b>B.2</b>	Promote workforce development efforts by the Randolph Technical Career Center and Vermont Technical College.	EDC
<b>B.3</b>	Support cultural, civic and educational organizations that benefit the Town and invigorate its economic climate.	EDC, WRVCC
<b>C.1</b>	Support the work of Vermont Technical College, Randolph Technical Career Center, the Vermont Technical Enterprise Center, and our other schools to provide training which improves the Town's workforce skill levels.	EDC
<b>C.2</b>	Encourage collaboration between Vermont Technical College, Gifford Medical Center and state business development organizations to expand local job opportunities.	EDC
<b>D.1</b>	Support actions and projects that reduce needs for private motor vehicle use, facilitate expanded public transportation and shared vehicle usage, and increase other modes of transportations such as pedestrian and bicycles.	EDC
<b>D.2</b>	Support the efforts of volunteer organizations to enhance the beauty and friendliness of Randolph.	EDC
<b>E.1</b>	Develop and implement a marketing strategy to attract low impact tourism and tourism-related businesses to Randolph	EDC
<b>F.1</b>	Actively participate in regional efforts to provide all of our residents with access to modern telecommunications infrastructure, including broadband Internet access and wireless communications.	EDC
<b>FLOOD RESILIENCE</b>		
<b>A.1</b>	Continue to prohibit all new fill and construction of buildings in mapped floodways (Mapped areas, unless corrected by FEMA).	PC
<b>A.2</b>	Support available grants and conservation easements that support recreation and agriculture in these areas.	CC, REC
<b>B.1</b>	Use sound planning practices to address flood risks to protect Randolph's citizens, property, economy, and the quality of the town's rivers as natural and recreational resources.	PC



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TASK		RES. PARTIES
<b>B.2</b>	Continue to require vegetated buffer strips along the Second and Third Branches of the White River and along Ayers Brook and consider requiring a buffer strip in riparian zones bordering other streams.	PC
<b>B.3</b>	Rock rip-rap and retaining walls should only be used to the minimum extent necessary and when bioengineering techniques may not be adequate to prevent significant loss of land or property.	CC
<b>B.4</b>	Randolph should work with VTrans and the Regional Planning Commission on advocating for and improving the flood capabilities of state or town-owned transportation infrastructure.	HWY, WWS, TM, SB
<b>B.5</b>	Continue to require all new and substantial improvements to structures to be elevated 1 foot above base flood elevation.	PC
<b>C.1</b>	Continue to design municipal culverts and bridges, at minimum, to meet VTrans Hydraulics Manual, ANR Stream Alteration Standards, VTrans Codes and Standards.	HWY
<b>C.2</b>	Maintain culverts to ensure they are effective during severe weather events.	HWY
<b>C.3</b>	Do not build critical facilities (i.e. emergency services, power substations, municipal buildings) in the special flood hazard or river corridor areas.	SB
<b>C.4</b>	After flood events, recovery and reconstruction within the river area should be managed according to the Vermont River Program's best practices in order to avoid negative impacts downstream.	HWY, WWS, EMD
<b>C.5</b>	Maintain and update hazard mitigation plans and emergency preparedness and recovery procedures.	EMD
<b>C.6</b>	Randolph's representative should regularly attend and participate in the region's Local Emergency Planning Committee (LEPC #12).	TM
<b>D.1</b>	Consider limiting new development in the mapped river corridor areas to non-structural outdoor recreational and agricultural uses due to the dangerous erosive risk in these areas.	PC
<b>D.2</b>	Consider allowing minor expansions to existing commercial, industrial, and residential uses within ANR's mapped river corridor areas.	PC
<b>RELATIONSHIP TO OTHER PLANS</b>		
<b>1</b>	Encourage continued communication and cooperation between Randolph and its neighboring towns.	TM
<b>2</b>	Continue to participate in the Two Rivers-Ottawaquechee Regional Commission.	SB
<b>3</b>	Exchange planning information and development data with neighboring communities.	TM, PC

# **RANDOLPH TOWN PLAN**

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## **Appendix I – Maps**

Map 1	Current Land Use (Town)
Map 2	Current Land Use (Downtown area)
Map 3	Future Land Use (Town)
Map 4	Future Land Use (Downtown area)
Map 5	Transportation
Map 6	Utilities, Facilities and Education
Map 7	Steep Slopes and Agricultural & Hydric Soils