Dover Trails & Recreation Master Plan

Dover, Vermont

Master Plan

August 2020

Weston & Sampson℠

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home of mount snow

In conjunction with:

MORTON TRAILS

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I. Background and Vision

Vision and Purpose

The Town of Dover Trails and Recreation Master Plan is intended to help meet the needs of current and future residents by positioning Dover to build on the community's unique trails and recreational assets. The citizen-driven plan establishes a clear direction to guide town staff, elected officials, and stakeholders in their efforts to enhance the community's expansive trail network and unique recreational facilities. This document is meant to create a roadmap of strategic planning processes for the Town of Dover over the next 3, 10, and 25-year horizons.

Objectives of the Plan:

1. Develop a Vision: Preparing for the future, while retaining the values of the community.
2. Develop implementable goals and priorities: Focusing efforts on transforming conceptual goals into achievable priorities.
3. Provide convenient recreational opportunities for residents and create facilities that can provide year-round outdoor tourism attractions to promote investment in the region.
4. Develop an implementation strategy for trail expansions and improvements.
5. Develop a financially sustainable and innovative recreational venue system.

The master planning process can be understood as a weaving of many different threads: What do people want? What already exists in one form or another? What might be possible that townspeople may not currently be aware of? And finally, how do we weave all this together in a way that best fulfills the expectations of as many folks (and special interest groups) as possible?

Background

Located in the center of southern Vermont, the Town of Dover encompasses 35.8 square miles of beautifully forested mountains. Dover is located approximately 130 miles south of the capital, Montpelier, and has been known as a tourism destination since the early 1900's, when summer residences were first built on Handle Road and Cooper Hill.[1] These agricultural enclaves made extra money by taking on boarders during the summer, who traveled by train to the area from neighboring urban centers. Traditional agricultural exports included maple syrup, dairy, apples and cheese.

The economy of Dover changed radically in the 1950's, when the Ruben Snow farm was purchased and transformed into what is known today as the Mount Snow ski area. Most of the development across Dover has occurred since 1950 as a result of Mount Snow. Ski lodges, motels, stores, ski shops, restaurants, and numerous second homes were built to accommodate winter sport enthusiasts. In the off-season, Mount Snow offers outdoor recreation including golf and mountain biking. Mount Snow also hosts several musical, food, and cultural events over the course of the year, and provides an outdoor exploration camp for kids to learn about the great outdoors. Mount Snow is now owned by Vail Resorts, Inc., an international premier mountain resort company.

Dover is ideally located just 200 miles from New York City, 130 miles from Boston, and 100 miles from Hartford, Connecticut. The region's winter recreational amenities are cited as the closest destination for people living in the northeast's major metropolitan centers.

[1] *Town of Dover, Vermont, 2020*

Today, much of the agricultural and summertime cultural heritage of the region has been lost to time. One notable exception includes the Blueberry Festival, which is held each year throughout the valley. Dover is home to several events throughout the festival. This multi-day festival draws thousands of visitors and hosts an array of events ranging from blueberry picking on nearby farms to splashing around in blueberry jello-filled kiddie pools.

Trail System Challenges and Opportunities

Thanks to regulation and an appreciation of natural scenery, Dover is still relatively undeveloped and has ample open space for nature-based activities. The presence of large tracts of Green Mountain National Forest lands to the north and west of the town guarantee the residents of Dover will enjoy proximity to this natural, outdoor recreational haven. In terms of topography and vegetation, Dover has an abundance of interesting examples, which create engaging and enjoyable outdoor, recreational trail experiences in this type of terrain.

The current trail network in Dover evolved over time, its development driven by outdoor enthusiasts. Many trails were constructed opportunistically along old logging roads and footpaths. Because a comprehensive vision was not established for the trails in the town, many trails are not designed to accommodate the types of users that would foster economic development.

Finally, though there exists great support for trail development between the existing residential nodes and the commercial corridor, the nature of the terrain across Dover and property ownership make this a challenge. Various access roads and driveways also make this proposition onerous, though not impossible. In conclusion, while there is ample opportunity for significant improvement to Dover's recreational trail possibilities, much of what currently exists is not up to widely accepted standards and may need to be overhauled and in some cases, abandoned.

Recreation Venue Challenges and Opportunities

Recreational offerings in Dover are largely limited to trail-based recreation, skiing, snowboarding, snowshoeing and biking of all types. Community feedback frequently revolved around the need for expanded offerings for different age groups and skill levels, as well as facilities for multi-season use are also desired. Climate change makes consistent, adequate snowfall increasingly rare and unpredictable. Dover recognizes the need to diversify its offerings to make their economy more resilient. Finally, Dover lacks an indoor recreational venue, which limits peoples' ability to exercise and practice skills when conditions are unsuitable for outdoor activities.

Dover has a rich agricultural history and many bucolic architectural features. Opportunities abound to showcase historic sites across the town, and to provide self-guided and directed tours. Additionally, informational kiosks, markers, and monuments can be utilized to educate visitors about the design vernacular and landscapes across the region. Funding to provide these amenities must be considered, and the maintenance of such installations must be planned for at the outset.

The Dover Town Park is ideally located on Route 100 close to commercial and lodging amenities. The popular paved Valley Trail segment is immediately behind the park, park amenities (bike racks and informational signage) facilitate use of the facility. The park was designed with care and can accommodate a variety of passive recreational uses. The approximately 1-acre park limits its usefulness for large festivals and cultural events, but it is appropriate for smaller attractions. Parking is a concern – just a few spots exist along Country Club Road. Local businesses may accommodate overflow parking.

While the Dover School does have sport fields and playgrounds, it is not close to the economic hub of the town and is not readily advertised as an option for recreational use. Potential conflicts exist between use of the property during school hours and associated safety risks of permitting the public to have unrestricted access to the school without monitoring. When school is not in session, parents have the opportunity to bring their children to play games and utilize the playground facilities.

The Horace Hill property was purchased in the course of development of this master plan. The property is situated on Route 100 between Crosstown Road and Windy Hill Road, close to many commercial venues and lodging amenities. This central location makes the property ideal for the development of an outdoor recreation venue to accommodate a wide range of visitors. The terrain at Horace Hill is quite steep, and exposed bedrock was noted during field work. Several trails already exist; however, these trails were developed without careful consideration of the users Dover is looking to attract. It may therefore be wise to abandon the existing trails and redesign the system to accommodate specified recreational goals.

Community Support and Concurrent Initiatives

The existence of extensive recreational trail networks is evidence of enthusiastic, proactive trail advocate groups in the region. Administrators and decision-makers are supportive of trail development and opening the area to a wider array of tourism possibilities. Furthermore, local businesses are open to establish partnerships with the town to site recreational facilities at or near their properties. Throughout the development of this master plan, community members volunteered their time and knowledge of the region to provide the project team with detailed maps, venue recommendations, budgeting considerations, and partnership recommendations. Even real-estate experts chimed in with known gaps between residential and commercial cores, providing opinions about how a multi-use path system might best serve year-round and seasonal residents. Even more unique, citizens from nearby towns came forward with ideas and data to support regional connections.

Concurrent initiatives in the area abound. The Dover Area Recreational Trails (DART) group made up of representatives from the Catamount Backcountry Chapter, The Vermont Mountain Bike Association Chapter, and others are actively developing trails and connections within the community. Noteworthy initiatives include proposals for the construction of new trails around Dover and a comprehensive signage system from the Southern Vermont Trails Association (SoVTA). The Catamount Trail spans the western side of Haystack Mountain just south of Dover and continues along the western border north toward the popular Somerset Reservoir. The Catamount Trail Association maintains this public-access trail which spans the entire length of Vermont. These longer trail systems connect users to link trails that eventually connect to hubs in the community; therefore, partnership with these organizations is useful to draw visitors and to generate ideas for novel recreation opportunities.

A yet to be organized but highly passionate group of disc golfers is present in Dover as well. The proximity of the town to several major metropolitan areas has piqued the interest in investors of this sport. The terrain provides for interesting course alignments, and other disc golf venues in Vermont are located much farther north. Professional designers have offered their services to examine various properties around the town to determine which sites might be best suited for a competition-level course.

The Living History Association has been actively developing a plan for a self-driving tour to guide visitors to a sampling of historic sites across the Deerfield Valley. This initiative complements the existing 40-mile scenic byway driving tour between Bennington & Brattleboro. Where possible, this master plan will seek to complement the admirable efforts of the community to self-organize and advance the region's interests.

Finally, Mount Snow continues to be the economic engine and anchor of the community. Representatives from the organization are involved in community events and actively promote and facilitate place-making festivals and cultural events. Mount Snow has expressed interest in expanding their multi-season offerings and are willing to work with the town toward a common goal of increased investment and recreational development.

A sampling of interested volunteer, business, and government groups follows:

- Catamount Trail Association
- Dover Historical Society
- Living History Association
- RASTA – Rochester/Randolph Area Sports Trail Alliance
- SOVTA – Southern Vermont Trails Association
- VAST – Vermont Association of Snow Travelers
- Vail Resorts, Inc.
- Vermont Huts Association
- VMBA – Vermont Mountain Bike Association
- Windham Regional Commission

II. Demographics and Public Engagement

Master Planning Process

The project team and town staff guided this project through the planning process, which fully utilized the consultants' expertise and incorporates the local knowledge and institutional history that only town staff and community members can provide. In order to achieve goals through understanding community needs and resources, the following key components were evaluated:

- Where are the gaps in service?
    - Projecting recreational and programming needs
    - Balancing environmental and recreational needs
- What is needed to fill the gaps?
- Effectively engaging / listening / interpreting needs of community
- How will a sustainable master plan be ensured?
    - What are our priorities?
        - Action Plan & Timeframe
    - What if circumstances change?
        - Developing a strategic, flexible approach
    - How will the plan recommendations be funded?
    - What performance measures will be used to meaningfully establish success?

Informed by this framework the project was broken down into the following phases:

- Inventory and Analysis
- Needs Assessment and Public Engagement
- Visioning/Draft Master Plan
- Financial Plan/Master Plan

Inventory and Analysis

An initial kickoff meeting with staff and key stakeholders to review goals and objectives was conducted. The following process was shared with participants:

1. Conduct inventory / assessment
    - Recreational Programming (Town + Alternative Service Providers)
    - Recreational Facilities
    - Parks/Open Spaces
    - Environmental Resources
2. Review existing data from site visits, inventory, desktop review and mapping
    - Existing site features
    - Existing natural resources
    - Existing conditions/patterns
3. Create database for analysis and needs assessment
4. Develop maps for planning and communication

Needs Assessment/Public Engagement

1. Review and discuss comments/concerns
2. Make necessary refinements and prepare for public meetings
3. Schedule
    - Public Meeting #1 - Project Kickoff (May 2, 2019)
    - Stakeholder meetings and Public Meeting #2 - Stakeholder Findings (July 16, 2019)
    - Online and paper survey (open August 7, 2019 to November 20, 2019)
    - Public Meeting #3 - Draft Findings and Recommendations (December 3, 2019)
    - Final presentation

Visioning/Draft Master Plan

1. Complete gaps/level of service analysis
2. Develop schematic designs for each park, trail, and recreation space
3. Assess each schematic alternative
4. Select preferred concepts

Financial Plan/Master Plan

1. Visioning strategies workshop and analysis
2. Recommendations
3. Cost estimates
4. Alternative funding and partnerships
5. Capital improvements
6. Implementation strategies and draft master plan
7. Final plan and presentations

Demographics & Trends Analysis

Gaining a clear understanding of the existing and projected demographic character of the town is an important component of the planning process. By analyzing population data, trends emerge that can inform decision making and resource allocation strategies for the provision of trails, recreation amenities and open spaces. For example, if the population of young children was on the rise and existing public recreation facilities for young children, such as playgrounds, were barely meeting user demand, the town may want to consider targeting investments to meet the needs of this growing segment of the population.

Key areas were analyzed to identify current demographic statistics and trends that can impact the planning and provision of public trails and recreation services in the Town of Dover. Community characteristics analyzed and discussed consist of:

- Population Trends
- Age Distribution
- Ethnic/Racial diversity
- Household Information
- Household Income
- Employment
- State and County Health Ranking

This demographic profile was completed using the most updated information available (as of January 2020) from the U.S. Census Bureau's 2018 American Community Survey, the U.S. Census Data, Windham Regional Commission, and the Town of Dover. In several categories studied the most current data available is from 2010. A summary of demographic highlights is noted in *Table 2.1* below, followed by a more detailed demographic analysis.

Table 2.1: 2018 Town of Dover General Demographic Profile

	West Dover	East Dover	Total
Population	864	388	1,252
Median Age	52.8	39.5	48.8
Average Household Size	1.88	2.09	1.94
Households	460	186	646
Median Household Income	$45,250	$53,750	$47,000

Source: U.S. Census Bureau, 2018 American Community Survey 5-Year Estimates [2] [3]

Key general demographic comparisons – Local, State and National:

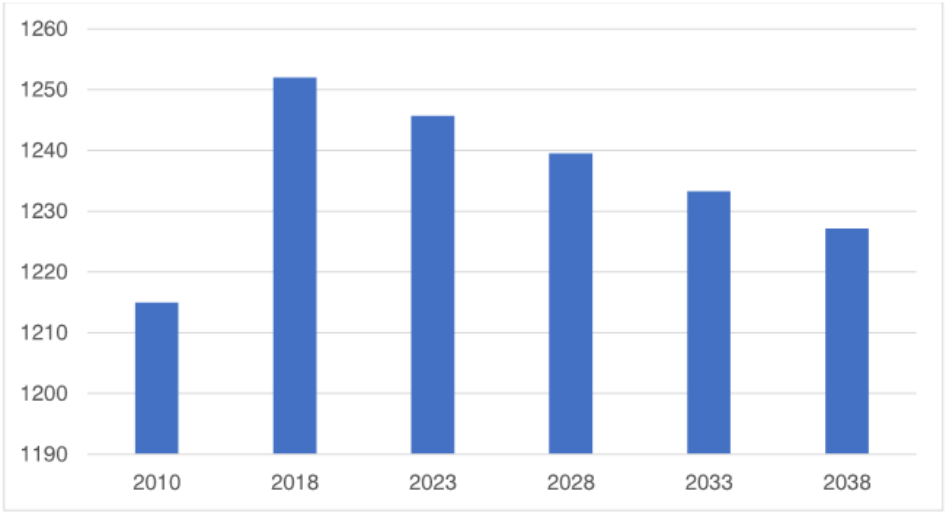
- The median age of the Dover residents was 48.8 years, higher than the median age for Vermont (42.9) and higher than the United States (37.9).
- Out of the 3,474 properties listed in Dover, 637 (18.3%) parcels are owned by full-time/year-round residents and 2,837 (81.7%) parcels are owned by part-time/seasonal residents.[4]
- The median household income for the Town of Dover residents in 2018 was estimated to be $47,000. This was lower than statewide ($60,076) and national ($60,293) median household incomes.
- Dover's population was almost evenly split between male (46.2%) and female (53.8%) residents. The populations of Vermont, and the United States, are also roughly evenly divided between the sexes.
- More deaths than births have occurred each year in Vermont since 2016. This trend may continue statewide as the baby boomer generation continues to age and the number of women in their prime child-bearing years continues to decrease.[5]

[2] *Unless otherwise noted, data collected by zip code for West Dover (05356) and East Dover (05341), U.S. Census Bureau.*
[3] *Data from U.S. Census Bureau for Census Tract 9679. Note: Census Tract data varies slightly from data by zip code.*
[4] *Values provided by the Town of Dover.*
[5] *VT Digger: Vermont's Population Drops Again in Latest Census Data Report: https://vtdigger.org/2019/12/31/woolf-vermonts-population-drops-again-in-latest-census-report/, 2019*

Population Trends

Although future population growth cannot be predicted with certainty, it is helpful to make growth projections for planning purposes. The state of Vermont was predicted to shrink by a rate of -0.79 percent from 2020 to 2030; the United States was projected to grow at a higher rate (7.65%) during the same time period[6]. *Figure 2.1* contains actual population figures based on the 2010 U.S. Census for Dover. Recent demographic data for the Dover area estimates that the year-round population is expected to decrease at a rate of approximately 0.5% over the next five years.[7] This rate of -0.5 percent was used in *Figure 2.1* to project population growth until 2038, although this growth rate could differ depending on several factors. Chronologically, the following population growth rates have been projected for the town, except for the period between 2010 and 2018, for which the growth rate has been estimated by the U.S. Census:

Figure 2.1: Town of Dover, Vermont Population Growth Trend



Source: U.S. Census Bureau, future populations projected using 2010 – 2038 annual growth rate (-0.5%)

Population Age Distribution

The existing population of different age groups or cohorts, within the Town of Dover is shown in *Figure 2.2.* 2010 Census recorded population, 2014 estimated population and 2018 estimated populations are illustrated in this figure.

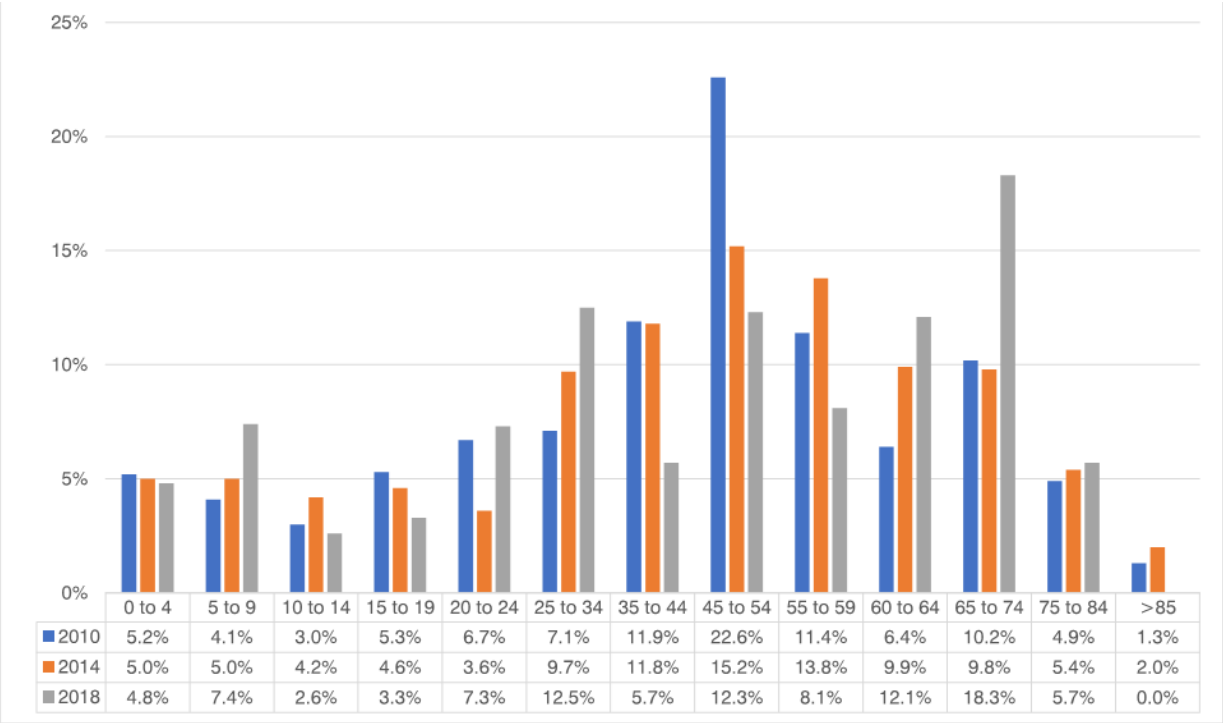
Several key age characteristics of the existing and projected town population include:

- The median age of town residents appears to be slowly increasing.
- According to data from the U.S. Census Bureau, the median age rose slightly from 49.1 in 2010, to 50.3 in 2014, and decreased to 48.8 in 2018.
- Projections suggest that the age cohort expected to see the most growth is those older than 65 in the Town of Dover. The age cohort of 20 to 44 is anticipated to decrease.

[6] *University of Virginia Weldon Cooper Center for Public Service: Demographics Research Group Projections for the 50 States and D.C.: Total Population, 2018*

[7] *Appraisal Report of the Real Property of Irving Samuel, LLC & the Shirley Basso Trust. Rutland: Sargeant Appraisal Service, 2019*

Figure 2.2: Population Age Distribution in Dover, 2010 to 2018



	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 34	35 to 44	45 to 54	55 to 59	60 to 64	65 to 74	75 to 84	>85
2010	5.2%	4.1%	3.0%	5.3%	6.7%	7.1%	11.9%	22.6%	11.4%	6.4%	10.2%	4.9%	1.3%
2014	5.0%	5.0%	4.2%	4.6%	3.6%	9.7%	11.8%	15.2%	13.8%	9.9%	9.8%	5.4%	2.0%
2018	4.8%	7.4%	2.6%	3.3%	7.3%	12.5%	5.7%	12.3%	8.1%	12.1%	18.3%	5.7%	0.0%

Source: U.S. Census Bureau

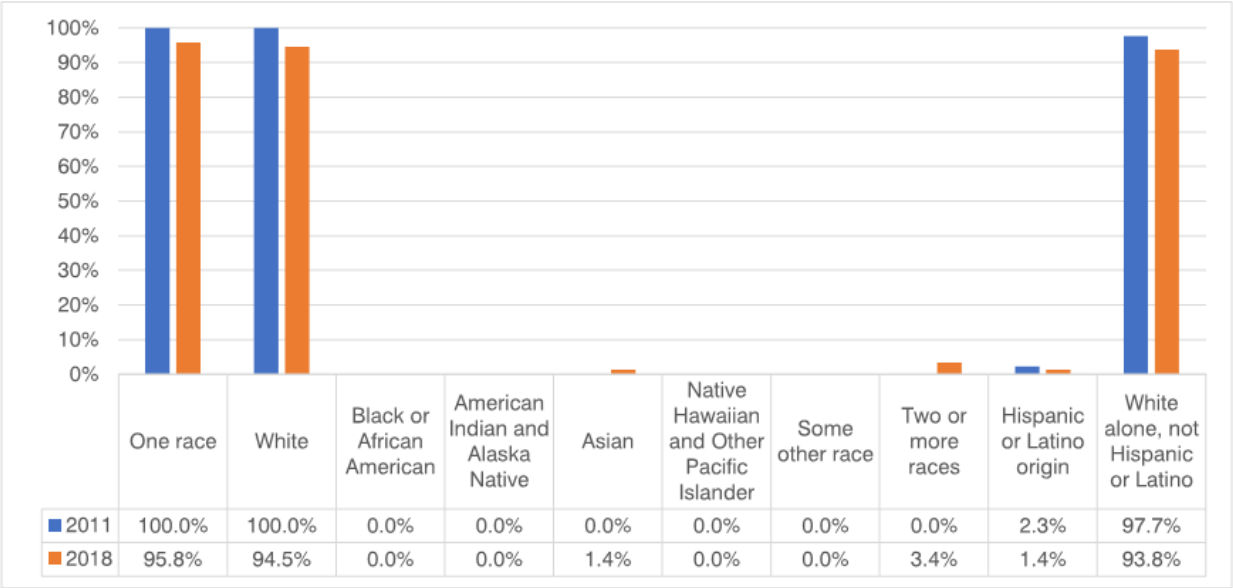
In 2018, the most populous age cohorts were 45 to 64 years old (32%), 20 to 44 years old (26%), and those over 65 years old (24%).

Ethnic/Racial Diversity

Prior to reviewing demographic data pertaining to a population's racial and ethnic character, it is important to note how the U.S. Census classifies and counts individuals who identify as Hispanic. The Census notes that Hispanic origin can be viewed as the heritage, nationality, lineage, or country of birth of the person or the person's parents or ancestors before arrival in the United States. In the U.S. Census, people who identify as Hispanic, Latino, or Spanish may be any race and are included in all the race categories. All race categories add up to 100 percent of the population, the indication of Hispanic origin is a different view of the population and is not considered a race.

Figure 2.3 reflects the approximate racial/ethnic population distribution for the Town of Dover based on the U.S. Census and 2018 American Community Survey.

Figure 2.3: Town of Dover Racial and Ethnic Character 2011 and 2018



	One race	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more races	Hispanic or Latino origin	White alone, not Hispanic or Latino
2011	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	97.7%
2018	95.8%	94.5%	0.0%	0.0%	1.4%	0.0%	0.0%	3.4%	1.4%	93.8%

Source: U.S. Census Bureau

Although the ethnic and racial composition of the town did not drastically change between 2011 and 2018, several issues of note include:

- Caucasians were the majority group in the town by a wide margin. Nearly 94 percent of the population in 2018 identified as White alone, as projected by the U.S. Census Bureau. This number decreased just 4 percent since 2011.
- The town was projected to see a 1.6 percent decrease in individuals who consider themselves of Hispanic origin within the 7-year time span (from 2.3 percent in 2011 to 1.4 percent in 2018).

Household Information

As reflected in *Table 2.2,* the total number of housing units in the town decreased by 20 units between 2011 and 2018. Renter occupied and vacant housing increased slightly. The high number of vacant housing units can be attributed to the fact that most of these units are used as seasonal, recreational, and occasional homes.

Table 2.2: Town of Dover Housing Inventory

	2011[8]	2018[9]
Total housing units	3,097	3,077
Owner Occupied units	17.1%	15.1%
Renter Occupied Units	4.1%	5.9%
Vacant housing units	78.8%	79.0%

Source: U.S. Census Bureau

[8] *United States Census Bureau: Selected Housing Characteristics (Table ID: DP04): American Community Survey 5-Year Estimates Data Profiles, 2011*

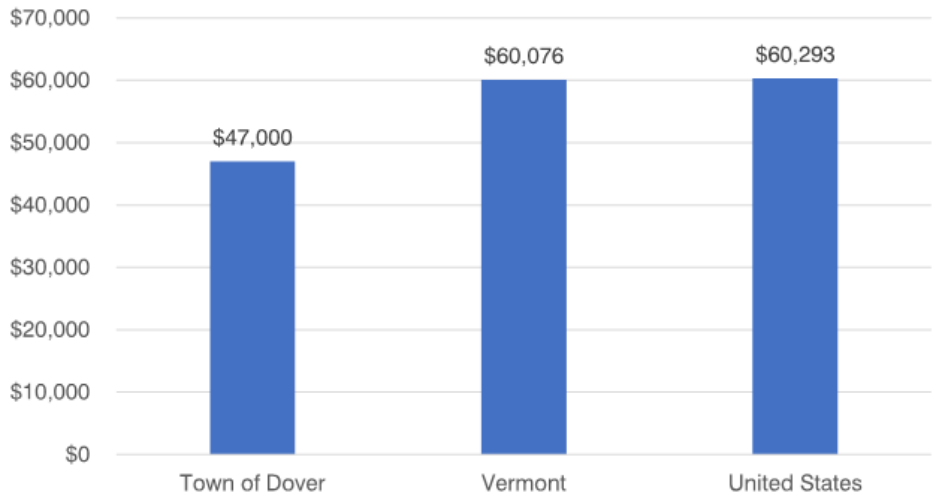
[9] *United States Census Bureau: Selected Housing Characteristics (Table ID: DP04). American Community Survey 5-Year Estimates Data Profiles, 2018*

Household Income

The most current data (2018) from the U.S. Census Bureau and the American Community Survey, illustrated in *Figure 2.4*, indicates that the median household income in the Town of Dover was slightly lower than that of the average household in Vermont and the United States.

The median household income in the town averaged $47,000 almost $13,076 less than the state median income level, and $13,293 less than the United States median household income.

Figure 2.4: 2018 Median Household Income Comparison

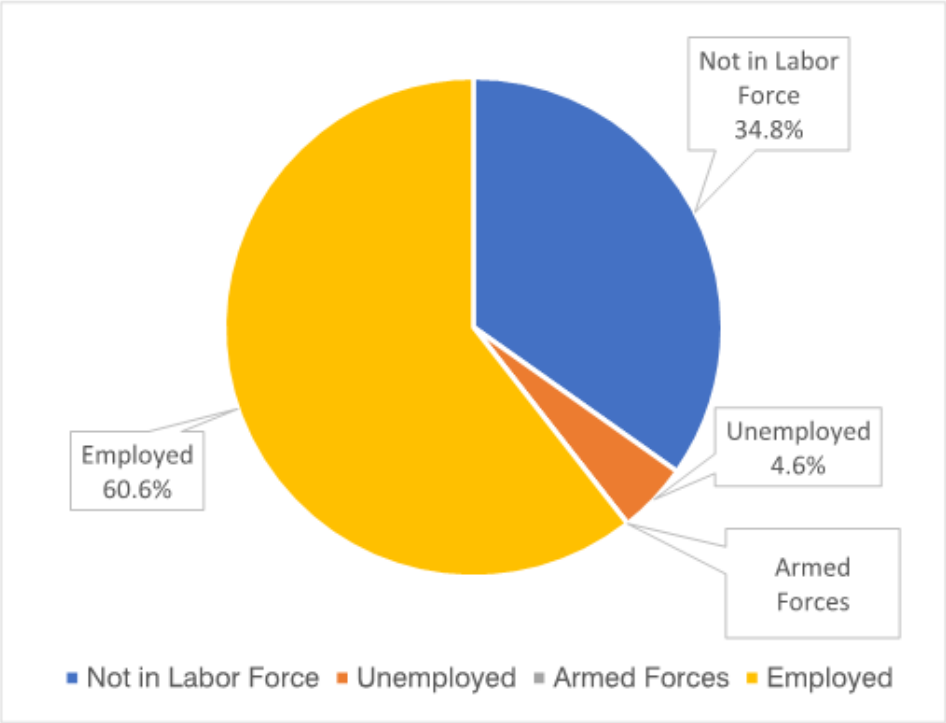


Source: U.S. Census Bureau

Employment

The U.S. Census Bureau's American Community Survey (2018) estimated that the eligible working population of the Town of Dover residents (those ages 16+) to be 1,067. Of these potential workers, 696 were in the labor force, all within the civilian labor force, none employed in military careers. Nearly 34.8 percent of residents over the age of 16 were not in the labor force (retired, disabled, etc.) and 4.6 percent of town residents were unemployed. *Figure 2.5* represents the distribution of employed individuals in the town.

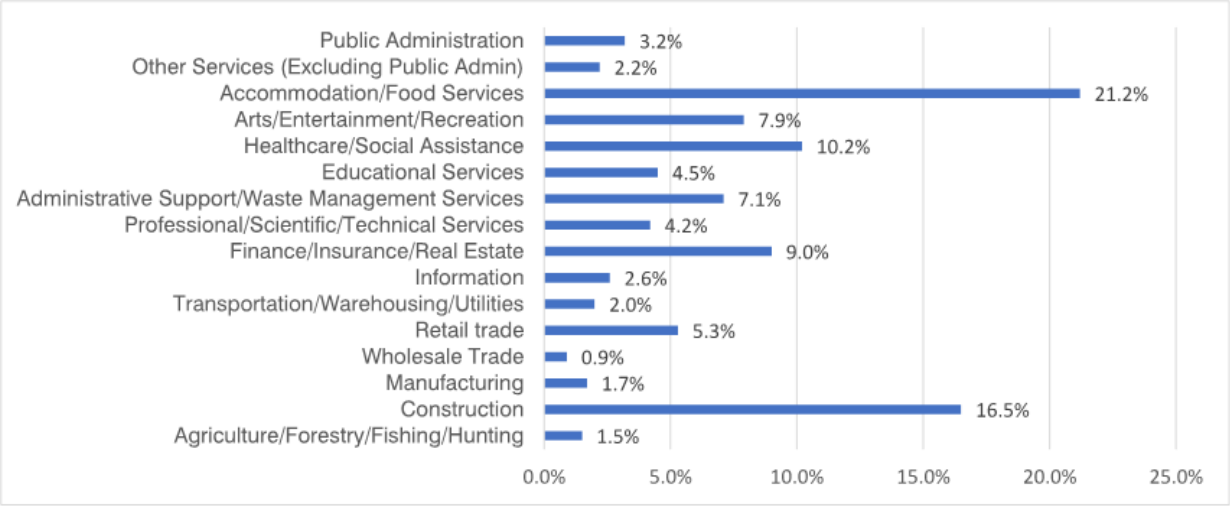
Figure 2.5: Employment of Town Residents Ages 16+ (2018)



Source: U.S. Census Bureau

In 2018, most working residents (age 16+) in Dover were overwhelmingly employed in the Accommodations and Food Services industry (21.2%) and Construction industry (16.5%). The Healthcare and Social Services industry (10.2%) and Finance, Insurance, Real Estate industry (9.0%) were other highly ranked industries. These four industries make up 56.9% of the working population as illustrated in *Figure 2.6*. Based on these findings it can be assumed that many of the town's working residents were employed in industries directly and indirectly related to the operation of Mount Snow.

Figure 2.6: Employment by Industry in Dover (2018)



Source: U.S. Census Bureau

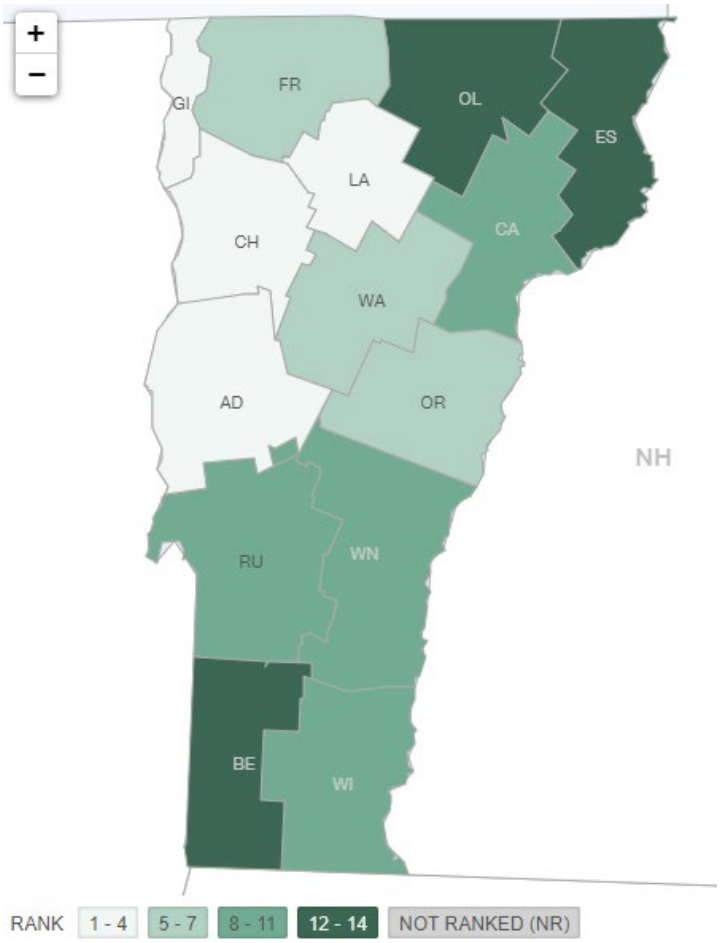
Employment by occupation in 2018 of working residents of the town is illustrated in *Figure 2.6*. At the time, the majority (56%) of working residents were in service occupations, while only 16 percent of residents work in white collar occupations (financial, insurance, real estate, professional/ scientific/technical services, and information). An additional 28 percent were employed in blue collar occupations (construction, transportation, warehouse, utilities, manufacturing, and agriculture/forestry/fishing/hunting). Based on these findings it can be assumed that many of the town's working residents were employed in accommodations/food services, healthcare/social services, arts/entertainment/recreation, and administrative/waste services industries.

State and County Health Ranking

Specific health ranking data for the Town of Dover is not readily available. However, the 2019 County Health Rankings[10] for Windham County, Vermont, does provide a comparison of the county to others in Vermont. As seen in *Figure 2.7*, Windham County ranked 11 out of the 14 counties in Vermont in terms of health outcomes, a measure that weighs the length and quality of life of residents, and 7th for health factors, a measure that considers the population's health behaviors, clinical care, social and economic factors and physical environment. In terms of length of life, Windham County ranked low in comparison to other Vermont Counties.

[10] *Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute, 2020*

Figure 2.7: County Health Rankings for Health Outcomes, Vermont (2019)



US County Health Rankings

The United Health Foundation's America's Health Rankings and Robert Wood Johnson Foundation's County Health Rankings provide annual data on the general health of national, state, and county populations. The health rankings generally represent how healthy the population of a defined area is perceived to be based on "how long people live and how healthy people feel while alive," coupled with ranking factors including healthy behaviors, clinical care, social and economic, and physical environment factors.[11]

In 2019, the United Health Foundation's America's Health Rankings ranked Vermont as the healthiest state nationally. According to the Foundation, Vermont's health ranking strengths include low percentage of smoking adults, low percentage of adults with obesity, low levels of air pollution and low percentage of physical inactivity. Health challenges faced by the State include a high prevalence of excessive drinking, high levels of occupational fatalities, and high cancer death rate.

[11] *United Health Foundation: America's Health Rankings, 2020*

Other highlights from America's Health Rankings for Vermont include:

- In the past three years, drug deaths increased 52% from 13.1 to 19.9 deaths per 100,000 population
- In the past 15 years, air pollution decreased 47% from 9.7 to 5.1 micrograms of fine particles per cubic meter
- Despite decreasing since 2016, chlamydia increased 10% from 269.9 to 297.9 cases per 100,000 population in the past year
- In the past three years, violent crime increased 46% from 118 to 172 offenses per 100,000 population
- In the past year, disparity in health status decreased 49% from 33.8% to 17.4%
- In the past year, diabetes increased 12% from 8.2% to 9.2% of adults

Public Engagement Summary

Public input occurred multiple times from spring to winter 2019 with the Town of Dover, Vermont. Strategies for input included staff and community focus groups, stakeholder meetings, a community survey, and public engagement meetings.

Focus Group/Stakeholder Meetings

Focus group public engagement meetings were held on July 16th, 2019. Focus group sessions were by invitation extended by town staff with the goal of bringing together stakeholders with differing points of view to solicit broad based perspectives on their experiences, challenges, and ideas for enhancing the town's trails and recreation facilities. The stakeholder meetings included representatives from local organizations, elected officials, and town departments. Each focus group meeting lasted approximately 45 minutes. All meetings were facilitated by the project team. A series of questions were used to ensure adequate input was received by all attendees. A total of 4 focus groups with 17 stakeholders participated. These findings were presented to the general public later that evening.

Questions were asked of the focus group participants, ranging from strengths and weaknesses; needed improvements to recreation facilities, trails and amenities; and what the participants saw as the priorities for the future of the plan. A list of the most repeated comments follows:

Strengths of existing trail system and recreational facilities

- Wide variety of trail types
- Beautiful landscapes
- Adjacent to USFS lands
- Multi-ability trail systems
- Proximity to New York and other large cities
- Mount Snow relationships
- Existing tourism/residential infrastructure
- Invested community
- Town Forest
- High usership of Town Park
- Great potential for varied recreation
- Great potential for venues and economic opportunities

Areas for improvement – Weaknesses

- Maintenance of existing trails
- Wayfinding
- Accessibility of trails for all users (Ages, Abilities, Interests)
- Connectivity to/within:
    - Recreational facilities
    - Commercial facilities
    - Residential areas
- Partnerships with private landowners
- Economic diversity
- Four season use
- Identity
- Marketing strategy
- Food/drink/fuel

Improvements to existing facilities

- Area improvements to accessibility and stability of trails (Washouts/Wet Areas)
- Surface durability
- Rerouting of trails away from wet and steep areas
- Wayfinding
- Informational signage
- Create vistas
- Education to inform visitors of resources in the area
- Expansion of sidewalk facilities
- Apply skill levels to existing trail systems

New facilities and trail amenities

- Facilities for four seasons
- Accessible trails
- Loop trails designed to accommodate different user types
- Connected trails
- Activities for families/ small children
- Teens
- Older generations
- Town Green
- Amphitheater venue
- Recreational complex
- Historic interpretation
- Skateboard facility
- Disc Golf
- Gravel Biking

Key issues and top priorities

- Multi-purpose trails
- Accessibility
- Family friendly
- Economic drivers – diversity
- Dover identity
- Marketing strategy
- Venues
- Scalability
- Nodes of interest
- Add recreational opportunities
- Openness to different types of recreation
- Four season use
- Multi-generational programs and facilities
- Improve existing trails
- Wayfinding
- Connectivity
- Visitor outreach

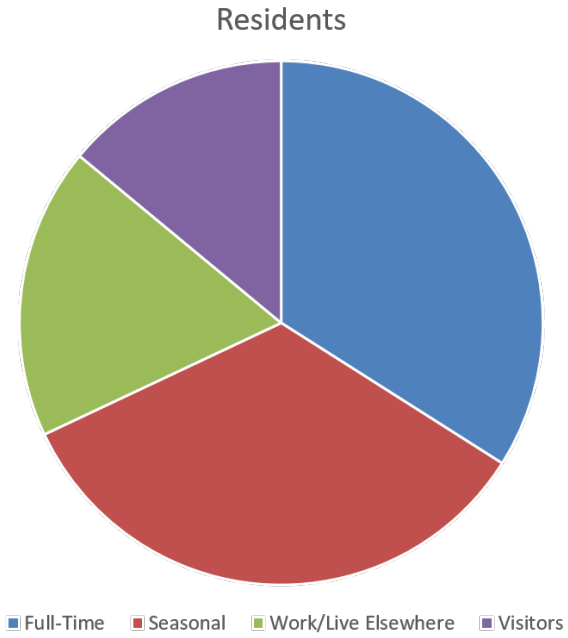
The Town of Dover Trails and Recreation Master Plan addresses top priorities as identified by focus group participants, online survey, and public meetings.

In addition to the formal stakeholder meetings mentioned above, Weston & Sampson's team met with members of the Southern Vermont Trails Association (SoVTA) and Berkley & Veller Greenwood Country Realtors to discuss local priorities and concerns. These interviews provided insight from a trails-based interest group's perspective into the complexities of property ownership in the region.

Community Survey

In order to understand the needs, opportunities, and constraints of Dover's recreation facilities, trails and amenities, a brief online survey was developed with questions ranging from current usage of trail system to desired programs and activities.

The survey was conducted from August 7th, 2019 to November 20th, 2019. Paper and online surveys were made available by the Town of Dover Department of Economic Development. Over the 1 ½ month period, a total of 317 responses were received. Of these responses, 34% identified as full-time or year-round residents and 34% identified as seasonal or second homeowners. The remaining 32% of the respondents were either visitors or people who work in Dover but live elsewhere. Overall findings are summarized below:



What makes Dover unique?

- People/Culture
- No distinct downtown
- Small Businesses
- Hometown feel in a resort community
- Walking trails downtown
- USFS
- Blank canvas

Which trails do you use, and how do you use them?

Valley Trail

- Walking
- Family/Dog Walks
- Running
- Snowshoeing
- Snowmobile connection
- Biking
- X-country skiing
- Frequent use
- Fat tire biking

Ridge Trail

- Hiking
- Training
- Skinning
- Splitboarding
- X-country skiing
- Running
- Snowshoeing
- Mountain biking
- Swampy areas
- Poor maintenance
- Closed for sledding

Crosstown Trails

- Hiking
- Walking
- Dog walking
- Biking
- X-country skiing
- Fat tire biking
- Snow shoeing
- Snowmobiling
- Running
- Well-maintained
- Mountain biking
- Icy
- Not maintained for bicycling

Vast Trails

- Hiking
- Snowmobiling
- X-country skiing
- Snowshoeing
- Fat tire biking
- Hiking around reservoir
- Not aware of the trails

Overview of Parks & Recreation Visitation and Usage Type

Dover Town Park

- Playground/kids
- Concerts
- Picnicking
- Very young age group
- Snowmobile connection
- Parking issues
- Next to major road
- No bathrooms
- Lack of shade over playground
- Poor accessibility

Dover Town Forest

- Hiking
- Solitude
- Waterfall
- Splitboarding
- Backcountry skiing
- Snowmobiling
- Snowshoeing
- Deer hunting
- Not aware of the resource
- Poor accessibility

The Dover School

- Playground/kids
- Safe area
- Ballfield
- Scouts activities
- Zipline?
- Not aware of recreation activities
- Not used for those who don't have children

Dover Recreational Opportunities

Strengths

- Groundskeeping
- Excellent proximity to State/National Forest Resources
- Free or low cost
- Not commercialized
- Mount Snow
- Dover Town Park
- Wilderness/Wildlife
- Bicycling opportunities
- Skiing
- Backcountry skiing opportunities
- Clean/well-maintained
- Continue trail efforts

Weaknesses

- Not a lot of activities for different age groups/skill levels
- Not much diversity of recreational offerings
    - Disc golf
    - Pickleball
    - Dog park
    - 4-Season Use
- No indoor rec center or amphitheater
- Public transit doesn't connect West to East Dover
- Not enough mountain biking
- Valley Trail segmented
- Communication lacking
- Little access to water
- Restrooms

What additional programs or activities do you feel Dover should offer that are not currently available?

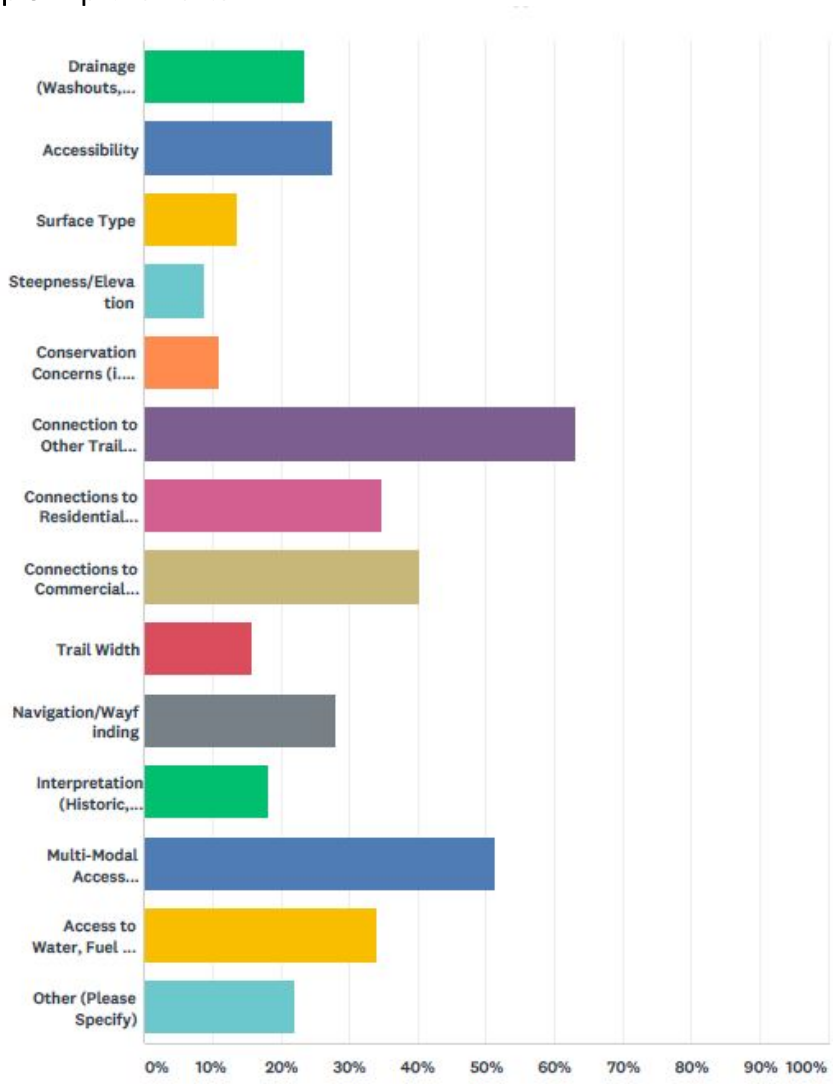
- Splash Pad
- Tennis Courts
- Playgrounds
- Outdoor Shopping Town Fairs
- Equestrian
- Camping
- Pool

What type of trail improvements are needed in Dover?

New Trails

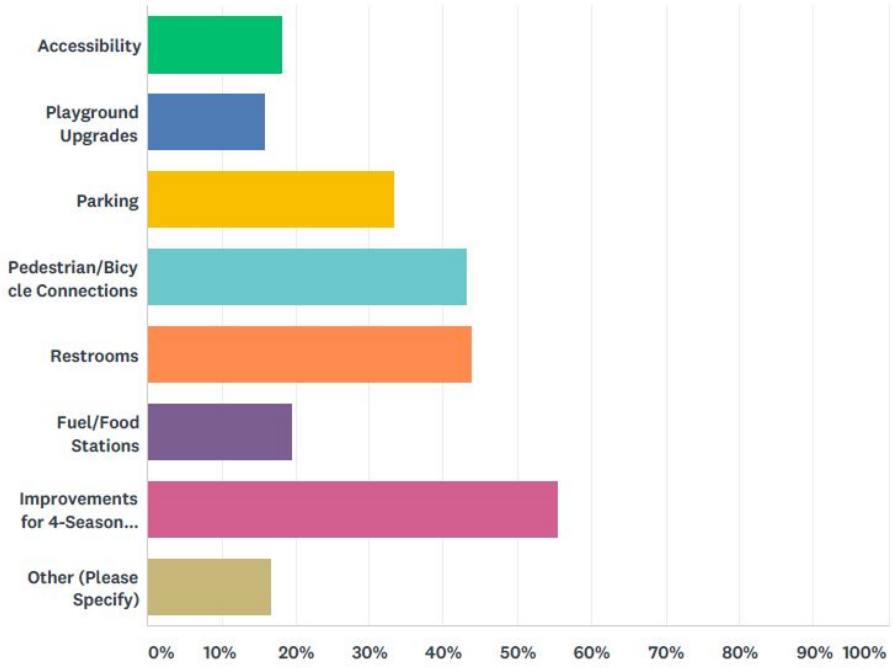
- Connections between trails
    - Mount Snow to Haystack
    - Rt 100 to Mount Snow
    - Dover to Wilmington
    - Mount Snow to Somerset
    - Subdivision connections
- Expand into East Dover
- Private land access
- Parking at trail heads

Top 3 Improvements



1. Connections to other Trail Networks – 63%
2. Multi-modal Access – 51%
    - Walking, biking, snowmobiling, skiing
3. Connections to Commercial Areas – 40%

What types of improvements to existing recreational facilities are needed in Dover?



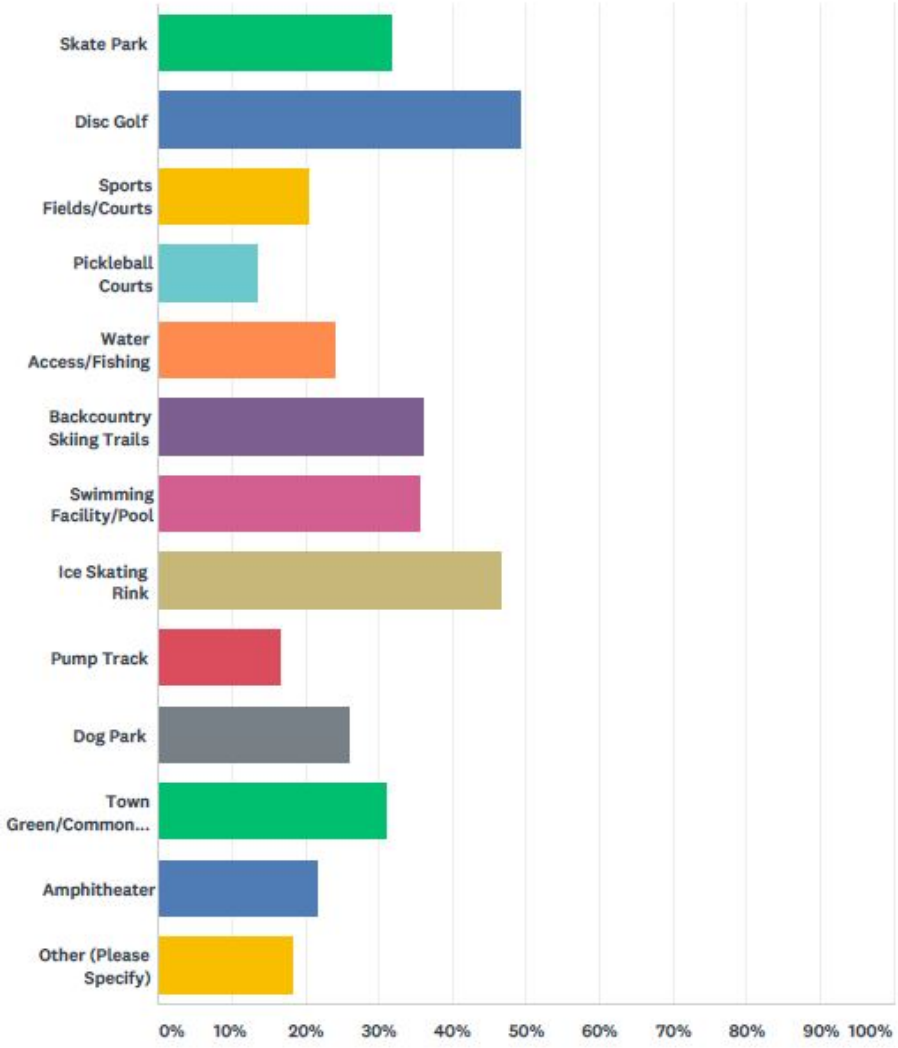
Top 3 Improvements

1. 4-Season Use – 55%
2. Restrooms – 44%
3. Pedestrian/Bicycle Connections – 43%

Top 3 Areas of Focus

1. Develop existing parcels - 61%
2. Establish partnerships with nearby municipalities – 58%
3. Develop diverse recreational opportunities – 53%

What type of facilities are needed for Dover?



Top 3 New Facilities

1. Disc Golf – 49%
2. Ice Skating Rink – 46%
3. Backcountry Skiing Trails – 46%
   *Advertising/communication is critical

Conflicts/Eliminations

- Snowmobiling vs. muscle-powered sports
- Eliminate unsafe facilities

A copy of the community survey can be found in Appendix B.

Public Meetings – Findings & Recommendations

In addition to the stakeholder meeting previously discussed, two other public engagement meetings were held throughout the planning process. Overall feedback was limited at the general public engagement meetings.

- Stakeholder Engagement Presentation (July 16, 2019)

- Draft Findings and Recommendations Meeting (December 3, 2019)
  This presentation started with reviewing the master planning process and highlighting project progress. Results of the community survey and feedback from stakeholders were summarized. From this information, key issues and top priorities were developed. Field assessments, observations and preliminary recommendations of the Horace Hill, Town Forest, Town Park, Dover School, Valley Trail, Crosstown Trail, and Sherwood Forest were discussed. The presentation was then opened to the public for questions and answers at the end to the meeting.

- Final Presentation
  A copy of the final presentation is included in Appendix D.

III. Existing Conditions

The purpose of this section is to identify existing conditions which may influence the development of recreational facilities and trails in the project area.

The project team conducted a desktop review and field reconnaissance of the project corridor and surrounding areas to verify existing resources. The existing conditions review further informed potential opportunities and constraints with the project corridor. Existing resources reviewed include property ownership, topography, soils, floodplains, wetlands, streams, ponds, wildlife/threatened & endangered species, and historic/cultural resources.

Ultimately, development of a multi-use trail network will need to avoid, minimize, and mitigate impacts of existing natural resources. An environmental analysis should be completed prior to design to review project sites and proposed improvements adjacent to existing environmental resources.

Additional information can be found in Appendix A.

Terrain & Soils

A majority of the study area is comprised of undulating mountainous terrain of varied steepness. Soils are generally thin; field reconnaissance along existing trails and recreational areas revealed several instances of limited depth to bedrock and erosional concerns. Exceptions include the relatively flat valley corridor of Route 100, which has been developed somewhat intensively for commercial purposes. Terrain elevation ranges from 1,000 feet to 2,500 feet in most of the project area.

Areas of highest elevation include the Dover Town Forest south of Wardsboro in the mid-north section of the town and, unsurprisingly, Mount Snow to the west. South of Mount Snow a ridgeline of steep terrain descends into Wilmington. The areas listed above ascend to over 2,500 feet.

As a part of the desktop study, existing soils were reviewed to determine if project areas contain unique or challenging soil conditions. Copies of these maps are included in Appendix A.

Surface Waters and Floodplains

The study area is located within the North Branch watershed. Smaller tributaries originate on the slopes of Mount Snow before flowing downward into lower terrain. The North Branch of the Deerfield River flows through the village of West Dover as it passes south into the Town of Wilmington. Blue Brook, a major tributary of the Deerfield River, begins its journey north from Stratton and meets the Deerfield near the intersection of Blue Brook road along Route 100. This route follows the path of the Deerfield on its journey to Wilmington. The Deerfield is primarily located to the east of Route 100 but does cross under the road for a span between Windy Hill and Dorr Fitch Road. This span abuts the eastern edge of the Horace Hill property purchased by the town in the summer of 2019. Due to the location of the river in what is considered the most level terrain of the project area, available land for the construction of trail and recreation facilities is somewhat restricted.

Significant residential and commercial development is situated within the floodplain of the Deerfield River. Much of this building took place before current regulations were enacted, and this development now contributes to increased volumes of stormwater, subsequent flooding, and

bacterial loads in the watershed (VDEC, 2016). This is particularly true of the Deerfield Valley between West Dover and Wilmington where much of the commercial and recreational development is located. Several smaller tributaries and streams exist across the project area, which feed a collection of ponds at different elevations across the Town of Dover. Sherwood Forest east of Handle Road has a plentitude of streams and ponds, and the Dover Town Forest is bisected by the Rock River tributary.

Wetlands

The study area consists of potential Federal and State wetlands. These wetlands are scattered throughout the project area, with a dense cluster found in what is locally referred to as Sherwood Forest, just west of the Mount Snow Golf Club. While not every wetland area is mapped, several wetlands are found adjacent to the existing VAST trail system and within the valley corridor along Route 100. Since wetlands exist within the project area, proper permitting through the Army Corps of Engineers and Vermont Agency of Natural Resources is required. Recreational venues and trails should be designed to avoid wetlands and adjacent buffers, to protect water quality and to ensure improvements meet longevity standards.

Critical Habitats

Within the project area, a habitat and wildlife species of conservation concern map/database review was completed. A habitat is a place where a biological community occurs and is defined according to both its biological and non-biological components, e.g., the vegetation, the climate or microclimate, the kind of rock, soil, or water substrate, and the hydrology.

According to the Vermont Agency of Natural Resources (ANR) a majority of the project extends through mid-high (8-9) priority habitat blocks, with the highest priority in the western quarter of the town and the lowest priority in the agricultural areas found in East Dover. Many sections of the project area extend through densely forested uplands (terestrial) and adjacent to wetlands, ponds, lakes, and streams. Deer overwintering sites are found in the southern and easternmost portion of the town.

Wildlife species of greatest conservation need include threatened and endangered species but also apply more broadly to species at-risk, those vulnerable to habitat loss, and species threatened by exotic species encroachment (VT Fish & Wildlife, 2015). These species may be found in some of the sites proposed for trail development and recreation. A rare and threatened species review should be completed prior to further development within the design process.

Depending on the funding source and necessary permits, additional analysis may be required. Further identification of habitats and wildlife species of conservation concern may be found in the 2015 Vermont Natural Heritage Inventory (VT Fish & Wildlife , 2015). A copy of preliminary Environmental Resources Mapping is included in Appendix A.

Historic Context

The Town of Dover was incorporated on October 30, 1810, after being considered a part of the Township of Wardsboro since the late 1700s. The Deerfield River became a powerhouse for mills and the region processed wool and traded in agricultural goods throughout the century. West Dover Village was built over the span of the 19th century; the entire corridor has been listed on the National Register of Historic Places (Southern Deerfield Valley Chamber of Commerce, 2020). Dover became a popular tourism destination in the early 1900s with primarily summer vacationers who came from the towns of Wilmington and Brattleboro to board at the farms of the region. In 1953 Mount Snow

was purchased and developed as a ski resort. To this day Dover, is known primarily for its skiing and associated tourism amenities throughout the town.

Additional research is recommended to determine if any particular areas could be sites of pre-contact and/or historic activity. Features within the project area worth considering for protection from impact during construction include (but are not limited to) cemeteries, stone walls, historic architectural structures, and potential pre-contact sites contributing to the archaeological record. Structures listed on the National Register are included below (VT Agency of Commerce and Community Development, 2020):

- West Dover Village Historic District – Route 100, Valley View Road, Cross Town Road, Dorr Fitch Road, and Bogle Road. Uses include commercial, government, residential, and religious.
- Dover Town Hall
- Corse-Shippee House

Other properties of interest that may advance tourism in the area include (Dover Historical Society, 2020):

- The Benjamin Caryl House
- The Fisher Barn
- The Sawin Memorial Building

Property Ownership

Understanding land ownership is important to developing a trail network. Within the study area, land ownership is distributed between private residential properties (year-round and second homeowners), VTrans right-of-way, utility easements, town-owned property, and commercial properties. Further investigation of exact property limits is recommended as a part of further design phases to properly identify potential property impacts, if any. Private ownership of lands, particularly where trail connections are desired between town-owned properties, poses a challenge for the development of extensive trail networks. Landowners are at liberty to decide whether they are interested in transferring land or granting rights-of-way for trail construction. It is critical to approach potential landowners with agreements that will benefit both parties long-term.

Dover faces an additional challenge because the town wishes to purchase property to develop recreational resources along an existing commercial corridor. Unfortunately, property owners have been known to raise the price on properties in which the town has expressed interest. It is therefore important to practice discretion when considering the purchase of any property in the project area.

A sizeable portion of the land in Dover is a part of the National Forest System. These tracts are primarily located within the center of the town and in a large section to the north. Additional parcels exist to along the western border, continuing into neighboring Somerset. Fortunately, Dover has developed a working relationship with the Forest Service; recreational facilities are being developed that replicate USFS trail standards and work in tandem with existing projects on public lands.

Utility Easements

Throughout the project area, utilities are typically located within rights-of-way or easements, including sanitary sewer, storm sewer, water, gas, electric and communications. During the site analysis phase, no utilities were identified as significant considerations for the project; however, careful site analysis and coordination with local utility agencies is recommended to avoid any potential conflicts.

Hazardous Materials

A hazardous materials database search and field reconnaissance review of the project corridor was completed using the Vermont Agency of Natural Resources "Natural Resource Atlas". This preliminary review was performed to identify properties in close proximity to the corridor that may have impacts related to hazardous waste or contaminated materials.

It should be noted, that although there may be potential contamination near the project corridor, contamination does not usually prevent the development of pathways as long as the necessary steps are taken to ensure safety to pathway users. In addition, there are generally two categories of contamination: residual contamination that may be found along any stretch of the corridor, and contamination associated with former industrial uses. During the field reconnaissance, there was no visual evidence of contamination or hazardous materials on-site.

A hazardous material reconnaissance review should be performed as a part of the next phase of design. Any existing hazardous materials should be capped, removed or transported in accordance with local, regional, state, or federal requirements.

For additional information pertaining to hazardous materials and the sites refer to the Vermont Natural Resource Atlas at http://anrmaps.vermont.gov/websites/anra/.

Existing Recreational Venues

Few existing publicly managed recreational venues exist in Dover. Mount Snow is a major player in the winter sports arena and provides a great deal of organized activities year-round. The Town of Dover currently operates two facilities – the Dover Town Park and the Dover School. These venues provide a basic range of passive and active recreational opportunities to residents and visitors.

The Dover Town Park is conveniently situated along Route 100 to the east of the Valley Trail. The 1.2 acre park has limited on street parking at Country Club Road and is a short walk to the 7-Eleven. The park houses a gazebo, a variety of picnic tables, a modest playground, and a storage building. A lovely sign welcomes visitors and a kiosk orients people to the area and trail opportunities nearby. Several trees have been strategically planted across the park, which will one day provide visitors with shade and beauty. Bike racks are appropriately situated near the Valley Trail entrance, and at the time of the field inventory, an Adirondack chair art installation was located near Route 100. The park is situated on level terrain, but currently lacks accessible sidewalks and amenity provisions.

The Dover School is located to the north of Dover Hill Road, approximately half-way between East and West Dover Villages. The school is situated in the midst of a large expanse of forested terrain and a cluster of residential areas. It appears the road north of the school (Woodsman Road) will be developed in the future for residential purposes. A large solar field is just behind the school, providing power and educational opportunities for the children. To the west of the school two playgrounds are installed for children 3-5 years and 5-12 years. The play areas are separated to protect the younger

children from roughhousing and accidental injury. A multi-use grassed athletic field is located just north of the playgrounds. Downhill and east of the school a baseball field with striping for additional multi-use sports is nestled within the woodlands. Accessibility is a current challenge at the site. A woodland path was mentioned by school administrators during field work, but staff was not able to locate the trail. Potential conflicts over use of the recreational facilities exists during school hours. Some members of the public were unaware that these resources were available for public use.

Existing Trail Facilities

Like many other locations across the state of Vermont, the current trail networks in Dover evolved over time. These systems were likely developed by enthusiastic, energetic special interest groups without the careful consideration for how the trails might be used by a wider range of users. Additionally, some trails are remnants of logging and skid roads from former forestry operations. Often, these roads get utilized as trails to avoid the expense and labor involved in creating carefully planned alignments.

Within the study area there are existing sidewalks located intermittently along Route 100 near the center of town. The Valley Trail provides locals and visitors with an off-road bike/ped connection on the southern side of Route 100 from the Mount Snow Marketplace to the Mountain Park Plaza. Other segments of the Valley Trail include a north-south connection from South Access Road to Crosstown Road. The middle section of this connection is an on-road facility on Kingswood Road.

The Valley Trail continues south from Gatehouse Trail (Wilmington residential street) approximately 5 miles. The current terminus of the Valley Trail is West Main Street just west of The Wilmington Inn.

The Crosstown Trails begin at a trailhead/parking lot on Handle Road approximately 1 mile south of Tannery Road. The trail spans west to east, terminating at the intersection of Crosstown Road and Country Club Road, descending roughly 300 feet. Visitors can then travel on-road along Crosstown Road to reach Route 100 and the Village of West Dover. The Valley Trail creates a north-south connection from the Crosstown Trail up to Kingswood Road at a distance of approximately 1 mile.

A series of footpath/single track trails exist to the south of the Crosstown Trail, looping around densely wooded terrain in the open space tucked between Handle Road and the Mount Snow Golf Course. Trail appellations harken to the iconic tale of Robin Hood and his band of outlaws, and include the Friar Tuck, Lionheart, and Sherwood Forest Trail. These trails connect to a longer path known as the Little John Trail, which begins at Village East Road and loops south before returning north to connect with a shared road path along Airport Road. Sensibly, this trail makes a perpendicular intersection at Crosstown Road, where users can head east to descend into the Village of West Dover.

The Crosstown and Robin Hood trails are sited on property owned by Mount Snow, and maintained by the Town of Dover Trails and Recreation subcommittee and the Southern Vermont Trails Association (SoVTA, 2019). Current user groups include hikers, snowshoers, fat-tire biking, and bikers. These trails can be very steep and pass through problematic low-lying areas susceptible standing water and muddy conditions. Bridges are in varied states of repair and signage is inconsistent. Field work revealed an abundance of exposed roots, rocks, and uneven terrain. This type of surface may be appropriate for users of advanced skill but may be hazardous for less athletic and technically savvy visitors.

Further west along the highest terrain, a network of trails and backcountry ski areas known as the Ridge exist. These trails are integrated with the more extensive network of Velomont Trails

(sometimes referred to as the Somerset Trails). These trails lack signage and aren't as heavily used as some of the more centralized and well-known networks. Users include hikers and back-country skiers.

The trails at Dover Town Forest serve an eclectic mix of users, ranging from hunters to snowmobilers. It is a popular destination for hikers, snowshoers, backcountry skiers, and folks looking to enjoy the quietude of nature. The trails are a mix of single-track footpaths and old logging roads. These paths are long and often do not follow the contours of the terrain, which results in long descents and climbs and a propensity for washouts. Signage is sparse and the backcountry ski zones are not readily recognized by most users.

Blue Brook basin is found just over a mile from the center of West Dover on the eastern ridge along Blue Brook Road. Backcountry skiing, hiking, snowmobiling, and snowshoeing enthusiasts currently utilize the area, despite limited trail connections and distance.

Trail Counts were provided over the course of the master plan by the Windham Regional Commission. The following sites were selected for bike and pedestrian tallies:

- Handle Road/Dover Road (on-road trail counts)
- Crosstown Trails (near Handle Road and near Crosstown Road)
- Sherwood Forest Trail
- Valley Trail (Handle Road and Deerfield Lane)
- Deerfield Ridge Trail
- Dover Town Forest

The two most popular trails with the highest daily averages were the Crosstown Trail and Valley Trail. The commission provided data not only for 2019 but from previous counts in 2017, 2016, 2014, and 2013. Counts were performed during the months of February, May, June, July, August, and October. Count durations ranged from one to 4 weeks. Detailed Bike/Ped Trail data provided by the Windham Regional Commission are provided as a staff document. Existing trail alignment mapping can be found in Appendix A.

Maintenance of Recreation & Trail Facilities

The Town of Dover currently employs a single maintenance person to take care of the 9 town-owned buildings and town-owned parks, trails, and associated facilities. During the winter season, approximately 100 hours are spent clearing the Valley Trail. Fortunately, snowmobile trails are maintained by the VAST association. The Dover Town Park requires mowing and basic repair and installation of amenities. The Dover School requires plowing, while all other operations (mowing & facility repair) are performed by a school employee. In the summer, Town Forest trails are cleared by a town employee, with the help of volunteers. Though the single town employee has been successful thus far at providing a high standard of maintenance across the town, prioritization of repairs and operations can become tricky when more facilities are added to his responsibilities.

Maintenance of most trail facilities is performed by volunteers (individual and group associations). When needed, these groups request funding from the town to purchase equipment. There are no formal recreation staff, and most recreational facility operations are performed by maintenance staff employed by the Highway and Transfer Station Department. The town is looking to formalize the Dover Area Recreational Trails Group, which will be made up of members from the various volunteer groups across the region.

Transportation Network

The project area predominately consists of Route 100, Crosstown Road, Handle Road, Dover Hill Road, and Rice Hill Road. Though extensive, Dover's existing trail system is not designed to connect visitors and residents to the commercial corridor. Most businesses and town resources must be accessed with a vehicle. This not only puts strain on existing infrastructure but requires businesses to utilize valuable level real estate to build and expand parking lots. One notable exception is the Southeastern Vermont Transit System's MOOver buses that provide year round, free transportation along the following fixed routes: (Deerfield Valley Vermont Bus Transportation, 2020):

- Wilmington to West Dover
- West Dover to the Dover School
- Wilmington to Readsboro
- Wilmington to Brattleboro
- Wilmington to Bennington

Residents and stakeholders recognize the importance of providing multi-use trail facilities between year-round and second-home developments to the commercial core of the community. The following chapter will review potential alignments and will discuss the opportunities and challenges associated with these connections.

IV. RECOMMENDATIONS

The Dover Trails & Recreation Master Plan has been a process of weaving together a matrix of the economic, cultural, and recreational needs of the community with what is already a robust existing system of trails and outdoor activities in the region. This complex process has sought to balance the expectations of an array of special interest groups, part-time residents, and long-time community members. The town is home to a larger than typical percentage of outdoor recreational enthusiasts. Broadly speaking, the recommendations below seek not only to enhance and expand existing recreational resources, but to provide human-powered connections and recreational opportunities at key locations and destinations in town to facilitate economic development.

Trails

In the context of this master plan, trail improvement and expansion recommendations are focused on designs that can accommodate the greatest variety of uses to the widest possible demographic. The project team sought to create a plan that would not only improve facilities for the existing community in Dover but would stimulate economic growth in the region and diversify the town's recreational offerings. Where possible, trails have been conceptually designed for accessibility (5% gradient or less where appropriate) with exceptions made where necessary and climbs to summits are desirable.

Well-designed trails can be made suitable for a number of activities (snow shoeing, hiking, trail running, cross country skiing, mountain biking, fat-tire biking, nature walks, etc.), however trail users tend to have particular preferences. A perfectly enjoyable hiking trail may be too narrow and abrupt for any other activity. While hikers often use an out-and-back route to reach a summit or a scenic vista, cross-country skiers, trail runners, and mountain bikers typically prefer a loop or a series of stacked loops. In trail-based activities where significant speed can be involved (cross-country skiing, mountain biking, fat-tire biking) one-way traffic on the loop is recommended.

To accommodate winter trail use, as well as to open the forest canopy so that the snow actually reaches the trail surface, modern, groomed, trails are usually 12'-16' wide. While snow-shoers, mountain bikers and fat tire bikers enjoy the flow and varied terrain of ski trails, many of them prefer the intimacy and technical challenge of narrow, single track trails. Another suitable compromise is to create a "core loop" wide enough for cross-country skiing and walking side-by-side in the summer, with a number of single-track loops of various lengths and technical challenges off the core loop for mountain bikers and snow-shoers. Trails designed for multiple uses are often built with small excavators.

Although there are exceptions, in general, if possible, it is preferable to separate motorized and non-motorized forms of recreation. Non-motorized recreational trails vary significantly depending upon their intended use, although many trail-based activities are compatible. Due to limited level terrain in Dover, it may be necessary to combine these uses in some instances to accommodate the widest variety of users.

Signage

Signage across town-managed trails is inconsistent, missing critical elements to guide users effectively across the landscape. Southern Vermont Trails Association (SoVTA) developed a signage system in their 2019 report that utilizes USFS/USDA guidelines. This is a practical solution to create a cohesive trail post, kiosk, and reassurance marker network that works seamlessly between town-owned lands and USFS property found within the project area.

Directional wayfinding signs help users navigate along the trail and provide additional information of the corridor. Reference location signs, GPS coordinates, and mile markers allow trail users to estimate their progress and are beneficial during maintenance activities. Location signs should be provided at all trailheads, intersections and amenity areas. Location signage also provides a means for emergency personnel to find users in the event of an accident. Trail intersection numbering systems should work in tandem with the U.S. National Grid Emergency Location Marking System.

Standard trail posts are wood 4”x4”’s Placards are constructed from weather-resistant material and measure 3”x3”. Information on posts must include the trail name, and may also include information like distance, difficulty, and designated activities. These posts should be placed at intersections, trail heads, and termini. Between these posts, a consistent blazing system should be applied to trees at regular intervals with adequate sightlines to reassure users they are on the right track.

A cohesive cultural, historical and environmental interpretive signage system provides learning opportunities for locals and visitors alike. Interpretive and information signage should be placed along the trail at key decision-making points, scenic views, and at site-specific locations for information or interpretation.

Trailheads and waysides offer an opportunity to define spaces that draw potential trail users to the trail and create additional interests along the trail. Trail heads are amenity areas at the beginning or end points of a trail, while waysides are amenity areas along the trail corridor. These may be locations where scenic views, environmental features or historical sites can be highlighted or interpreted. Utilizing the same materials and basic design character of the trailhead, trail amenities may include seating, interpretation, information, and bicycle parking. It is recommended that the themes of cultural history and art be included in the design of trailhead and wayside treatments.

Potential site-specific public history interpretation themes could include:

- Local Native American presence and activity
- Former landowners and estates/institutions
- Railroad construction and transportation
- Agricultural History
- Important landmarks and historical structures
- Other topics that may emerge through additional research and/or public process input

Guardrails & Fencing

Fencing and handrails are recommended in locations to protect users from potential hazards such as steep slopes or restricted areas. In general, the greater the height of the drop-off, the greater the need for fencing protection.

Per American Association of State Highway Transportation Officials (AASHTO) guidelines, fencing should be set at a height of 3.5 feet (42 inches). Rub-rails are recommended in locations where the fence is immediately adjacent to bicycle trails at a height of approximately 3 feet from grade to prevent snagging of handlebars. All fences should be smooth and free of protruding objects such as bolts, nails, etc. and materials should reflect the character of the trail corridor. Depending on the site conditions, fencing can be either black coated chain-link or split rail wood. These barriers should be utilized judiciously - inappropriate fencing can degrade the experience of trail users, obscure views, and create a "tunnel" effect that makes users feel trapped.

Recreational Facilities

Disc Golf

Disc golf emerged in the survey and through stakeholder engagement as a highly desirable venue for the Town of Dover. The benefits of disc golf are plentiful: the sport provides outdoor recreation for a spectrum of ages and abilities, the courses can be designed in tandem with other trail and recreation projects, and the courses are relatively low impact and inexpensive to construct. Disc golf is rapidly gaining in popularity across the United States and membership in the Professional Disc Golf Association (PDGA) has tripled since 2009. Construction of courses in the US has also doubled since 2012.[12] The sport is inexpensive and encourages people to cooperate so teams can enjoy games without conflict on the course. Dover's proximity to major municipalities and the lack of other disc golf venues nearby would make the facility a unique draw for visitors from surrounding areas.

When developing a disc golf course, site selection is important. Beyond selecting a site with the appropriate topography and density of vegetation, access and parking for users is an important consideration. It is recommended that a disc golf consultant be hired to assess potential sites. Finally, ski resorts across Vermont are beginning to install disc golf courses to attract year-round visitors, and a public-private partnership with Mount Snow may be a viable option for the community.

Skate Park

A gap in recreational activities for the teenage population of Dover was identified during the public engagement and survey process. Skate parks are a popular venue for teenagers across the country; in fact, the global skateboard market size was valued at 1.9 billion in 2018 with teens occupying 44.1% of overall revenue (Grandview Research, 2020).The sport requires a great deal of athleticism, creativity, and is typically promotes camaraderie amongst users sharing the park. Skate parks are often also used by scooter and BMX biking enthusiasts. A skate park would make an outstanding addition to the Route 100 corridor in West Dover and could increase revenue in local shops and restaurants.

Opportunities for public-private partnerships exist for the development of such a facility. Ideally, the park would be constructed indoors or outdoors with a removable cover similar to those used on pools to make the park usable year-round. It is critically important that any public-private partnership

[12] *Ski Area Management Magazine: Disc Golf Done Right, 2019*

be reviewed by appropriate legal authorities to determine a mutually beneficial outcome for both parties.

Pump Track

Pump tracks provide a closed course for a plentitude of wheeled sport enthusiasts. They can be used by skateboarders, mountain bikers, scooters, and BMX bikers. A good pump track is designed to teach the basics of momentum and balance to beginners while providing a challenging course of jumps and turns to more experienced riders. The track is constructed for continuous riding without pedaling. Users pump at the right terrain transitions on the course – propelling themselves forward and around the loop. Tarmac surfacing (rather than concrete) opens the track to a wider user group. Recreators of all ages and abilities are welcome at pump tracks, making them highly attractive for communities looking to expand their recreational offerings and increase tourism potential.

Pump tracks can be built on relatively small parcels of land (approximately 50'x50'), with terrain that is relatively flat. If the town pursues the purchase of additional lands along Route 100, a parcel could be used to construct a pump track if adjacent parking and/or non-motorized connections are available.

Amphitheater

Many survey respondents and meeting attendees voiced the need for a communal gathering space for events, concerts, and festivals. The Dover Town Park is a great location for many of these activities, but lacks the acreage, seating, and venue space for larger attractions. Investment in an amphitheater is tied to the likelihood of attracting the types of events that would warrant a significant upfront expenditure. If it is determined a venue will likely only be used for periodic gatherings limited in size, a mobile stage might be an economically sound decision.

Possible locations for the construction of an amphitheater include lands along Route 100 and the Dover Common near the Town Library and Town Hall. Though the common has steep areas of terrain, amphitheater seating could be constructed into the hillside overlooking a stage. This type of construction could blend with the site and incorporate the serene quality of the surrounding landscape. Additionally, construction of a venue like this in East Dover would draw more visitors to the area, which receives significantly less investment than West Dover.

Ice Rink

Ice rinks come in all shapes and sizes. Indoor ice rinks provide space for people to skate and play hockey year-round. In contrast, outdoor rinks are subject to the whims of weather and require consistent below freezing temperatures for quality, safe surfaces. Even natural rinks, created on open water systems like lakes and ponds, can be delightful community resources. In some towns, the local volunteer fire department will construct a rink for the community. These rinks can be a great way to foster a productive relationship with the public and to fundraise for equipment and clothing.

Modern rinks (approximately 60-80 ft. x. 80-100 ft) provide an alternative to the laborious, intensive upkeep and cost associated with traditional ice rinks. These rinks are composed of solid polymer material that requires minimal maintenance and no refrigeration. As the climate warms and winter temperatures grow increasingly unpredictable, these manufactured rinks are expected to become more widely installed. Since full facilities are expensive to construct and require staff to maintain, Weston & Sampson recommends starting with a natural or community-sourced outdoor alternative to determine whether the demand for this type of venue warrants significant investment.

Gaga Ball/Play

A survey conducted by the Dover Town School in partnership with town Staff of school-age children revealed strong support for the construction of a Gaga ball pit. Similar to dodge ball, this kid's sport is played in an octagonal pit approximately 15 ft in diameter (for 6-8 players). The pit can be installed at an indoor facility with foam flooring or outdoors with a bedding of sand. The walls of the pit are only 3-high. The rules are fairly simple, a foam ball is thrown into the pit with the players and may be hit with an open or closed hand at the other players. When a player is hit below the knees, he or she is then out. Games rarely last more than 5 minutes but provide a high intensity workout for the kids. Since these facilities are inexpensive, easy to construct, and small in stature, it is recommended the town consider installing them at the Dover School and the Dover Town Park.

Like most towns, Dover's playgrounds reflect changing attitudes toward play and safety over the years. The current play facilities are adequate for younger children. More advanced play systems could be considered for older kids (middle and high school) and adults. As the equipment ages, play structures will show evidence of wear and weathering. Playgrounds should be continually maintained and evaluated to ensure they do not pose a safety risk to users. As demographics change, playgrounds should be assessed to determine if they meet the needs of the community and if they could be improved to attract wider age ranges and abilities.

Community Center

Though not formally recommended for development at this time, the town should look to conduct a feasibility study for the construction of a community center that could accommodate recreational programming and indoor facilities. Survey respondents mentioned a desire for year-round recreation opportunities, and for those who would prefer to exercise indoors a community center could provide residents with the equipment and resources to maintain their health. This is particularly important for aging populations. The younger generation in Dover also expressed a desire for a pool, which could be developed indoors or on the property of such a facility.

Since these types of recreational facilities tend to be very expensive to construct and require a great deal of staffing and maintenance, it is important the town conduct a study to determine if the financial and employment resources are feasible given existing and projected budgets.

Parking

As multi-season use expands across Dover, an inevitable demand for parking will arise. Wherever possible, development of multi-modal trails and public transportation is highly recommended. Parking lots must be located on relatively flat surfaces, and since Dover does not have much flat land, what is available should be utilized for venues recommended in this Master Plan. Public-private partnerships may also be possible at businesses seeking to attract customers using recreational facilities. Where parking lots must be built, utilization of green infrastructure (bioswales, rain gardens, permeable pavements) is recommended to reduce stormwater runoff and pollution.

Environmental Considerations

Much of the Deerfield River floodplain has already been developed along Route 100. Further encroachment on the floodplain should be avoided to minimize future risks of flood damage. Land can be purchased for conservation purposes and developed for outdoor recreation activities in a way that or which protects and educates the public about the unique natural amenities of the region. From a landscape/watershed scale perspective, it is recommended to restrict development in the north branch section of the Deerfield River. This includes recreation venue development that may negatively impact aquatic resources through increased stormwater volumes and wetland/stream

encroachment. Contiguous forests, floodplains, and wetlands should be protected through landowner incentives to place conservation easements on sensitive resource areas.

Several existing and proposed trails abut, cross, or otherwise impact aquatic resources. In some cases, these trails require compaction, paving, or stone dust applications to create surfaces conducive to desired recreational uses.

While it is paramount to keep the trail surface as dry as possible for safety reasons and for recreational enjoyment, runoff can negatively affect drainage and resources adjacent to the trail. Proper cross slopes enable surface runoff to exit the trail surface, after which, it must be conveyed to existing drainage features or allowed to infiltrate into the granular subgrade in order to avoid damage to the surrounding terrain. Low impact development (LID) measures should be utilized to allow the runoff to be collected and detained until it can percolate into the existing groundwater or overflow into an existing storm sewer system after the peak of the storm. These measures can also be utilized to ameliorate alterations to drainage as a result of construction of facilities and venues recommended in this master plan.

Low Impact Development (LID) is the treatment of stormwater using bio-infiltration techniques such as bioswales, rain gardens, and permeable surfaces. These systems increase infiltration, improve water quality, reduce stormwater runoff, and in turn reduces pressures on existing stormwater infrastructure systems. Each LID technique should be considered on a specific location basis. Below is a list of possible techniques to be considered:

Bioswales - Bioswales are vegetated drainage channels that convey, infiltrate, and treat stormwater runoff water with vegetation and natural biological processes. These systems can be installed in areas that receive runoff laden with oil and other waste washed from roadways. Bioswales may also serve as overflow conveyance systems for other bioretention facilities.

Rain Gardens - Rain gardens are shallow depressions that infiltrate and treat stormwater with deep-rooted native plants and grasses. These systems can be located near a runoff source with drainage areas up to 5 acres in size. These features provide an aesthetically pleasing areas while treating stormwater and are compatible within park settings and educational interpretative area.

Permeable Surfaces - Permeable surfaces would be used to provide additional areas for water infiltration into the underlying soil, to reduce stormwater runoff. These measures are recommended at trailhead and wayside areas, where feasible.

Site Specific Recommendations

Horace Hill

Horace Hill is a 50-acre piece of property purchased soon after the Master Plan was initiated. This property is situated on Route 100, close to local businesses and residential connections. The location of Horace Hill makes it ideal for the establishment of multiple uses to accommodate the needs of tourists and locals alike. Challenges include steep terrain (side hill), limited access from Route 100, wet conditions, and limited depth to bedrock.

1. Purchase additional property to provide connection to Route 100 and Crosstown Road is recommended to provide means of access and to expand the potential for activities such as skateboarding, pump track, and cultural events.
2. Purchase additional property on Route 100 will also provide room for parking. A careful balance between parking and open space is recommended to ensure aesthetics and environmental integrity are preserved. Provision of sidewalks and other forms of alternate transportation should be considered to reduce traffic and vehicular accommodation impacts.
3. Construct a serpentine loop to ascended/descended to connect users back to Route 100, which is considered the primary point of access. This loop also provides access to Crosstown Road. Refer to Appendix C for concept mapping.
4. Construct a disc golf course across the property to provide multi-season use and a unique recreational venue for all ages close to the center of town.

Potential recreational uses include:

- Disc golf
- Mountain bike pump track (additional property acquisition required)
- Cross-country skiing
- Hiking Trails
- Tubing Hill

Note: It is critically important to obtain consensus between user groups before designing and constructing any trail or other recreational amenities at Horace Hill. It is much more difficult to retrofit a trail to accommodate disc golf than to build both facilities in harmony at the outset.

Valley Trail

Aside from the Valley Trail, the Town of Dover is burdened by significant distance and arduous elevation change, making it difficult to provide connections between the town's recreational resources. Only the most vigorous enthusiasts are likely to be capable of traversing such terrain. It is therefore recommended that the town make investments to make the trail a welcoming for off-road route for cyclists, walkers, and cross-country skiers.

1. Rehabilitate existing portions of the trail that are wet, rough terrain, or otherwise un-navigable by the average user.
2. Create connections where gaps exist along the trail to provide a complete multi-use trail connection between West Dover and Wilmington.
3. Adopt consistent markings, trail surfaces, and naming conventions along the Valley Trail.

The project team received feedback that the naming and orientation of the Valley Trail and Crosstown Trail is confusing for users. It is recommended where possible to designate the Valley trail as a north-south alignment and the Crosstown Trail to provide east to west connections.

Crosstown Trail

The Crosstown Trail is widely used by pedestrians and provides an excellent east-west connection from Crosstown Road and Handle Road. Many more specialized recreational trails tie into the Crosstown Trail, making this trail a gateway to the larger network in the Mount Snow area. The trail is wide, well groomed, and surfaced with gravel. The trail is in good condition and facilitates the types of uses, demographics, and skill levels recommended in this master plan.

1. Install a kiosk at the primary entrance on Handle Road to inform users about the varied trail connections possible from the Crosstown Trail.
2. Expand parking at Handle Road intersection to accommodate increased use as improvements are made to trail networks within Sherwood Forest.

Mount Snow Golf Course

Many communities offer Nordic skiing on their golf courses in the winter. This would provide the golf course with year-round visitor potential and would make use of the club house, parking and other facilities. The varied terrain of the Mount Snow golf course would make for enjoyable skiing. The abundant water often found at golf courses make snowmaking a good possibility. Maximizing Nordic skiing potential on a golf course requires the support and cooperation of managerial staff and the head greenskeeper. In general, ski trails restricted to existing cart paths tend to be uninspiring and boring for users. Trails that cross the fairways (avoiding greens and tees) typically make better use of the terrain and make for better skiing.

If the Mount Snow Golf Course would be amenable, trail connections from Horace Hill to the East Handle Road properties could be made, which would increase the overall distance and recreational potential of the system.

Handle Road Property/Sherwood Forest

The Sherwood Forest trail network east of Handle Road is conveniently situated between Mount Snow and the Mount Snow Golf Club. This network is also a short jaunt away from the commercial corridor of Route 100. Mount Snow owns the property but has agreed to grant trail development rights to the town. This represents an attractive private-public partnership for both parties. In the existing configuration, the trails at this property are not constructed for a wide range of users. Many segments suffer from exposed rocks and roots and can be very slippery after snowfall. Redevelopment of the system would be required in order to maximize usership at this location.

1. Property North of Crosstown Road and East of Handle Road: From the existing parking lot at the corner of Crosstown and Handle Roads, this parcel could accommodate a loop of at least a kilometer (0.6 miles). This trail would provide a loop over varied terrain with potential connections along the northern edge of the Mount Snow golf course over to Horace Hill. The existing VAST trail spans the eastern portion of the property via a north south alignment. The VAST trail appears to traverse a wetland – if this portion of the trail is wet and undesirable re-routing is recommended.
2. Property South of Crosstown Road and East of Handle Road: An extensive series of loop trails could be developed on this property, with careful attention paid to avoid extensive wetlands. Where necessary, boardwalks or bridges could be incorporated to cross the wetlands; however, where possible, this can be avoided to reduce expense and impacts to sensitive natural resources. Entrance to this property would come from Crosstown Road. A parking lot was not proposed in this parcel.
3. The conceptual trail alignments proposed for the properties east of Handle Road would build upon an existing system of trails, providing multi-use opportunities and expanding the network for enhanced all-season use of properties close to the commercial corridor of Dover. Refer to Appendix C for concept mapping of these parcels.

Dover Town Forest

Dover Town Forest's relatively high elevation (+2,500 feet) suggests it might hold promise as a Nordic skiing and snowshoeing venue, with the possibility of early and late season natural snow cover. Additionally, steep slopes make it an excellent venue for backcountry and glade skiing. Though there is tremendous potential for an extensive, enjoyable trail network in the Town Forest, these steep slopes present a challenge for creating trails to safely and sustainably cross the terrain. Existing trails are prone to erosion and degradation and the climbs and descents cover long distances without break in slope.

If the trails are properly built for these activities, they will also be excellent trails for the mountain biking, hiking, running, and leisure hiking communities. The property is already highly valued by a range of users, and thus presents a challenge to maintain a peaceful atmosphere while increasing the variety of recreational activities in the landscape. Residents utilize the forest to relax and appreciate the diversity and beauty of the natural world. Other stakeholders would like to see the area developed for more intensive uses and consider its potential untapped.

The primary challenge regarding trail configuration is the abundant elevation change across the site. To accommodate the steep terrain, three stacked loop trails of increasing length and technical challenge are proposed. Spur trails to nearby summits for view potential are recommended to provide users with a destination and sense of accomplishment. These loop trails have been conceptually designed to span and connect backcountry ski zones obtained from previous mapping.

1. The proposed 12-16 ft wide stacked loop trails should be suitable for year-round, non-motorized use. Potential recreational activities include:
    a. Groomed cross-country skiing
    b. Mountain biking & fat-tire biking
    c. Trail running, hiking, and snow shoeing
2. Single track extensions could be created to provide hikers, mountain bikers, and snow-shoers with more technically challenging experiences.
3. Linkage trails could also be created to connect trails north to the Green Mountain National Forest and west toward Mount Snow.
4. Parking at Town Forest will need to be expanded as usership increases. A gravel lot with ample informational signage and a trail kiosk explaining difficulty level of trails and distance is recommended.

Residential to Commercial Core and Town Property Connections

The project team explored a selection of potential alignments between residential neighborhoods, commercial nodes, and town-owned properties across Dover. These connections are challenging because of the significant terrain and often distance required to make the connection. Other challenges include property ownership, driveway crossings, road crossings, and sensitive environmental resources.

One possibility is for the trail to remain separate from roadways also supporting automotive traffic. Since some of these roads were constructed along the most even topography in the region, unnecessary elevation gain and loss can be minimized. In addition, trails supporting motorized recreation (snowmobiles and perhaps, eventually e-bikes) could be enhanced to create linkages within Dover (to popular destinations) and beyond. Analysis of existing roadways potentially suitable

for sharrows and/or marked bikeways is recommended. Safety, rather than convenience, must be at the forefront of all shared-use path development along roads.

A map of potential trail corridors with general information about existing development patterns was created to provide a starting point for the town to further explore which connections could be prioritized for future implementation. Additional analysis of site constraints is recommended to advance these concepts and acquire the rights and funding necessary to construct the trails. Exploration of desired neighborhood connections revealed most already had some form of trail system. It is therefore recommended to work with the groups responsible for these trails to determine if they can be improved to provide access for a wider variety of users. Proposed residential/commercial and town property connections are examined in Appendix C.

V. GOALS & ACTION PLAN

The following goals, objectives, and action items for the Master Plan recommendations are drawn from the public input, inventory, facility analysis, findings feedback, and all the information gathered during the master planning process, with a primary focus on maintaining, sustaining, and improving the Town of Dover's Trails and Recreation offerings.

Goal 1: Improve Operational Efficiencies

Dover is in a unique position to be able to develop an operational system based on careful, phased planning for future recreational endeavors. Decisions made now have the potential to impact budgets and staffing levels in the future; therefore, it is critical to determine an approach to install facilities and make improvements gradually so maintenance and programming staff can be brought on to care for the facilities and provide users with a high standard of service.

Objective 1.1 – Develop Trails & Recreation Department

As recommendations in the Master Plan for programs, services, and facility upgrades are implemented, it is important to maintain staffing levels to meet accepted standards. This will require the creation of a formal Trails & Recreation Department with relevant staff. The project team recommends the following approach:

1.1.1 Establish a committee to review the feasibility of a Trails & Recreation Department. Assess costs associated with hiring of requisite staff, equipment, technology, and offices for the Department. Determine a short and long-term plan for expanding the department over time to meet increased demand.

1.1.2 Develop a formal Trails & Recreation Department. The Town of Dover does not currently have a designated Trails & Recreation Department. The creation of this department will aid in a streamlined, consistent approach to the implementation of trails and recreation improvement recommended in this master plan. Define roles and responsibilities within the Department. Employment descriptions and expectations will give the town a better understanding of where resources should be allocated to best meet current and projected labor demands.

1.1.3 Hire a Trails & Recreation superintendent to maintain current and proposed facilities. A superintendent will not only be able to assist with daily operations in the beginning of his or her tenure but will be able to begin developing strategies for programming and maintenance for proposed recreation opportunities. Hire a Programming Coordinator to meet future recreation programming and facility usage demands. This position will be phased in as recreational sites come online and require structuring of activities. Hire additional maintenance and programming/marketing staff as facilities and recreational activities become more numerous and complex. A phased approach to supporting additional staff persons over the next 1 to 5 years will give the Department time to allocate funds to support these positions and assess workload.

Objective 1.2 - Engage volunteer groups for specific projects.

It may be possible to enlist volunteer groups for certain projects, especially if the project has an educational component. Volunteering enables a sense of pride and ownership of shared resources and can guarantee long-term support. Internships are another great way to teach valuable skills in return for needed services.

Examples of volunteer organizations include:

Adopt a Park (State)
Ameri Corps/Student Conservation Association (Federal)
Audubon Society (National)
Boy Scouts of America (National)
Boys and Girls Club (National)
Kiwanis (International)
National Recreation and Parks Association (National)
Senior Corps (Federal)
Vermont Youth Conservation Corps (State)

Objective 1.3 - Increase funding for parks, trails, venues and facility maintenance and acquisition.

Revenue enhancement is a key theme for any financially sustainable plan. The town should pursue creative funding strategies to diversify capital available for improvements to the system.

1.3.1 Explore alternate funding sources (grants) and public-private partnerships. The town currently takes advantage of grant opportunities available for programming and facility improvements. The town should continue to pursue any grant opportunities at the federal, state, regional, and local levels. Potential grant sources include:

- The Outdoor Recreation Legacy Partnership Program (ORLP) offers grants to improve local parks and outdoor recreation areas. The program is funded through the Land and Water Conservation Fund (LWCF).
- Public-Private Fundraising: The towns could work with non-public entities or the general public to raise funds through private fundraising or grant sources available only to the non-public entities to match public funds for the trail. It could be possible to provide some memorial that acknowledges the contribution.
- Donations: The towns could work to acquire donated funds, materials or services from local companies or residents to support the trail development. Acknowledgement of supporting companies or individuals could be included along the trail as desired.
- A new online tool developed by a partnership between the Alliance for Biking and Walking and the League of American Bicyclists helps find potential federal funding sources for alternative transportation projects. The site can be reached at http://bit.ly/11xhEtr.
- The Robert Wood Johnson Foundation offers grants for community-based programs and interventions that positively affect the health.

1.3.2 Explore funding options to provide dedicated revenue for trails & venues. A campaign for an increased community investment may be a successful way of implementing the long-term recommendations in the plan. These funding opportunities may also include a bond referendum to support renovations and redesign of existing venues, construction on new facilities, and/or acquisition of new land for conservation or recreation.

1.3.3 Analyze current fees and develop a cost recovery/pricing policy. It is sensible to apply equitable user fees for Trails & Recreation activities based on a value received by the participant for the services with a personal benefit. The town should consider implementing a Cost Recovery Policy such as the Pyramid Pricing Methodology to determine a consistent method of pricing for select recreational venues and activities.

Goal 2: Enhance and Improve Communication Tools for Activities and Services

The town should develop a Marketing and Communications Plan that will guide its efforts in communicating and promoting its activities and facilities. This should include all the recommendations in the Master Plan for programs, services, and facility upgrades to promote awareness. The Marketing Plan should be reviewed periodically, updated as needed and include marketing strategies that incorporate the efforts of partner departments and projects.

Objective 2.1 - Improve overall external communications.

Develop a Marketing & Communications Plan to improve overall external awareness of current and future facilities. People are increasingly overwhelmed by pervasive media and marketing campaigns, resulting in burnout and subsequent inattention to communication efforts. Provide more continuity town-wide and consolidation of messages including maintenance practices, events, and community engagement opportunities.

Objective 2.2 - Improve Department website.

Update/expand department website to include all parks, trail facilities, and venues with descriptions so the public is better to able to access recreational opportunities across the town. When the resources are available, the town can consider creating an online interactive map of parks, trails, and venues. Platforms available for this service include Esri, my rec, and independent website builders. Mapping should be updated periodically to reflect changes in trail routes, facility offerings, and seasonal attractions.

Develop a means for local groups to advertise/announce offerings to increase participation and visitation. Dover has a robust outdoor enthusiast community, many of whom are already organized under various collectives. Providing a central communication platform for these groups will attract greater use and stewardship of town resources.

Goal 3: Improve Programs and Services

Weston & Sampson has often found that towns which value civic gathering and recreation have higher population retention, increased community engagement, and better overall public health. Dover is fortunate to attract physically active, educated residents and should develop programs and services that promote greater cultural and environmental connection. It is important to stay informed and aware of changing recreation trends to ensure the Department stays relevant to an evolving demographic. Continued communication and opportunities for feedback is recommended.

Objective 3.1 - Develop recreational program offerings and adjust annually.

The community would like to see additional programs for families, teens, and seniors. Group sports, cultural attractions, and intensive outdoor recreational sports are in high demand. In order to ensure service delivery reflects the diversity of the community, the Department should engage the community in program development. To effectively achieve this objective, the Department should look to partner with other service providers in the community.

3.1.1 Diversify program offerings. Varied offerings are more likely to attract participants from a wider demographic, fortifying the town's continued support. Based on demand and current trends in the industry, the town should explore opportunities to develop and expand programs with public-private partnerships within the town. There are also opportunities to develop or expand on non-traditional sports programs such as disc golf, skateboarding and pickle ball. Active recreational activities are already prevalent in Dover and are increasingly popular nation-wide. Biking, hiking, cross country skiing snowshoeing, disc golf, skateboarding, and trail running are all great examples of active sports and outdoor activities.

3.1.2 Expand special event offerings. Dover already attracts visitors from miles away for the extraordinary skiing and beautiful landscape. Regional festivals are now drawing patrons to the area during the summer and fall. It is important to maintain time-honored traditions while looking to the future – the town should work continuously with the community to obtain ideas for special events that delight and unite participants. Possible events include:

- Athletic events – running, skiing, and biking competitions
- Pop up concerts – provide local musicians with temporary venues in which to showcase their talents.
- Movies in the park – show a spectrum of movies for a wide assortment of ages and interests. Consider documentaries and international screenings.
- Agricultural heritage themed festivals are a great way to celebrate delicious locally available produce, craft beverages, and artisanal culinary products. These festivals unite people around common, quintessentially Vermont traditions.

Objective 3.2 - Collaborate with local alternative service providers for programming

The Town of Dover currently partners with several agencies to provide programs and activities to the community. The Department should continue to explore additional opportunities as well as build on its existing partnerships. The town should ensure that all existing and future partnerships are accurately portrayed in a signed partnership agreement.

3.2.1 Partner with local alternative service providers to provide programming from entry level to advanced course offerings. When established, the Trails & Recreation Department should work collaboratively with other town departments and recreation service providers to enhance and expand offerings.

3.2.2 Partner with the USFS to provide trail connections to federal trail networks. Utilize proposed successional habitat projects to plan for trail development to reduce impacts to the land and facilitate permitting. Trees in these areas will already be selectively harvested, reducing the need for additional clearing for the creation of trails. Alignments on town-owned properties can be designed to connect to these project areas on USFS lands to reduce cumulative impacts.

3.2.3 Partner with the Mount Snow Golf Club to develop Nordic skiing opportunities in winter months. The Mount Snow Golf Club may be amenable to the creation of groomed cross-country skiing trails across the site. This would provide another recreational season at the facility and would create a connection to Sherwood Forest and the existing, popular Crosstown Trail. The golf club is located near the center of town and Mount Snow Ski Resort, both of which have ample lodging, food, and outdoor shops.

Goal 4: Continue to Improve and Enhance Trail System

Dover already has an extensive, well-loved system of trails on private and public properties. Ample opportunities exist to improve these trails to meet recreational objectives and to enhance economic development. Dover has trails throughout its extensive forested lands and has begun to craft path connections in its residential and commercial corridors as well.

Objective 4.1 - Create connections to existing network.

Trails provide important non-motorized transportation connections within the networks of roads, sidewalks, and transit facilities. These connections can provide people looking for transportation alternatives with a healthy, energizing option to get to work, run errands, and experience the landscape. As opportunities arise and funding is available, Dover should look to create viable trail-based connections where the greatest return on investment is expected.

Objective 4.2 - Evaluate potential neighborhood connections.

Working with regional and state agencies, Dover should look for additional opportunities to develop shared-use paths and/ or sidewalks/ trails to connect neighborhoods to recreation venues, places of work and commercial centers. Non-motorized transportation provides residents with opportunities to interact with their neighbors in a meaningful fashion and encourages active lifestyles.

Objective 4.3 - Analyze current maintenance practices of path system.

4.3.1 Develop maintenance standards that reflect the purpose of the trail and use. Dover's trails represent a wide range of use and skill needed to traverse the terrain. It is therefore recommended to create a system of organizing trail types and to determine what standards of maintenance are needed to ensure the trails stay safe and enjoyable for users. Assess current surface conditions and repair/prioritize accordingly.

4.3.2 Assess current alignments and relocate trails to avoid wet areas and sensitive environmental resources. Several trails were found to have considerable issues related to inadequate drainage during field investigations. This is particularly true where trails descend along steep slopes and cross low-lying and wetland areas. Where possible, these trails should be realigned and relocated. Over time, these types of trails become progressively degraded and hazardous.

Objective 4.4 - Redevelop trails to diversify use.

4.4.1 Realign trails to develop loops, curves and slopes that accommodate desired recreational uses. Where multiple uses are desired (cross-country skiing, mountain biking, trail running) trails can be carefully designed for gradual climbs and descents with challenging features for varied skill levels.

4.4.2 Widen selected trails to promote two-way and multiple uses. This is particularly useful along trails that might serve motorized and people-powered recreation and those where significant usership is expected.

Goal 5: Maintain and improve existing facilities

There is room for significant improvement of existing facilities that will increase the range of available recreational activities. The town should continue to improve and upgrade existing facilities and amenities and should consider priority of investment in existing resources over new facilities where appropriate. The Department should develop a program to ensure consistent application of maintenance standards and cost efficiencies.

Objective 5.1 - Continue to improve ADA accessibility at select park facilities - conduct ADA compliance assessment and improve amenities based on recommendations.

According to the ADA.gov website, "Access to civic life by people with disabilities is a fundamental goal of the Americans with Disabilities Act (ADA). To ensure that this goal is met, Title II of the ADA requires State and local governments to make their programs and services accessible to persons with disabilities… One important way to ensure that Title II's requirements are being met in cities of all sizes is through self-evaluation, which is required by the ADA regulations. Self-evaluation enables local governments to pinpoint the facilities, programs, and services that must be modified or relocated to ensure that local governments are complying with the ADA."

Dover does not have an ADA Transition Plan that identifies needed changes during a self-evaluation process. Using the inventory from the Master Plan, the town needs to develop a comprehensive transition plan. Once the ADA Transition Plan is developed and adopted, it should be updated as recommendations from the master plan are implemented. Priorities for ADA improvements at park facilities follows:

1. Dover Town Park
2. Dover School
3. Valley Trail
4. Proposed Facilities (disc golf, skate park, pump track, amphitheater, ice rink)

Objective 5.2 – Improve current maintenance/management practices.

Develop an operations and maintenance plan for current facilities and proposed recreational sites. Maintenance plans should reflect the level of use of each site to best determine how labor and expenses should be allocated. Revise annually as sites are developed and maintenance and improvement goals are further refined.

Objective 5.3 - Improve access to aquatic resources.

Much of the development in Dover is situated around the Deerfield River. There is also an extensive network of streams, ponds and wetlands across the town. Weston & Sampson recommends improving and formalizing access to these resources, stabilizing shorelines with natural measures, and constructing boardwalks where wetland access and education is desired.

Goal 6: Develop New facilities & Amenities

Through the master planning process, ideas were generated and refined through the public involvement process about what new facilities and amenities would benefit the community and improve economic opportunities. The following objectives discuss the facilities that were determined to have the most potential to provide value to the town.

Objective 6.1 - Develop new venues to promote multi-season recreation.

6.1.1 Develop disc golf course (Horace Hill or other suitable properties). There was a great deal of community support for the construction of a disc golf course in the Town of Dover. These courses are relatively inexpensive and can be designed in tandem with other recreational uses (mountain biking, cross-country skiing) to maximize recreational enjoyment of a site.Construct a skate park (possible private-public partnership). Skate parks are popular destinations for kids and teens and provide a venue to practice a highly athletic skill in a social setting. While skate parks sometimes receive negative press due to perceived vagrancy and vandalism, communities find they provide a healthy outlet for groups often ignored and left to their own devices.Develop a pump track (possible private-public partnership). Pump tracks are popular facilities for a wide variety of age ranges and skill levels and are relatively easy to install. A pump track would likely be a popular venue for kids and teens alike. If possible, the pump track could be developed near a network of mountain biking trails on town-owned or private lands.Construct a GaGa ball pit at the Dover School. Assembly of a GaGa pit is straightforward and will provide kids with a popular athletic activity. GaGa ball is an inexpensive, simple amenity that could also be constructed at the Dover Town Park if the town feels there is sufficient demand.Construct a seasonal ice rink (possible private-public partnership). A seasonal ice rink could be installed near other community sites, such as Town Hall or the Dover Town Park. In certain communities, the volunteer fire department maintains the ice rink and holds events to raise money for equipment and supplies.Construct amphitheater (consider property adjacent to Town Hall). A public performance venue would provide a space for local concerts, outdoor movies, and other community events.

Objective 6.2 - Conduct feasibility study for a Community Center/Recreation Facility.

A Community Center/Recreation Facility for developing cohesive community service and year-round recreation opportunities. The town may explore options for rental of underutilized spaces where the owner is amenable to creating improvements to increase use of the facility. As part of this feasibility study, it is recommended the town explore options for an indoor or outdoor pool within or adjacent to the Community Center. Another option might be a splash pad. Aquatic facilities are typically quite expensive to construct, staff, and maintain; therefore, it is recommended to evaluate demand and cost-recovery policies prior to moving forward.

Objective 6.3 - Provide Park Amenities at Proposed Facilities.

Improve/replace park amenities to current standards to minimize maintenance demands. Prioritize improvements based upon user demand, conditions, location. For example, facilities at sites where the town anticipates increased usership should be prioritized over those designated for enhancements at later phases. Examples include Horace Hill, Dover Town Forest, the Valley Trail, and Dover Town Park.

- Restrooms
- Picnic Tables, Grills, Benches & Bike Racks
- Playgrounds
- Buildings/ Pavilions
- Water Fountains
- Lighting
- Shade Plantings and Structures
- Parking

Goal 7: Acquire Land for Conservation and/or Development for Recreation

As land becomes available or opportunities arise to acquire new parcels of land for parks and trails, the town should strongly consider acquiring these lands to protect the scenic character and rural

landscape of the town. Where possible, partnerships should be developed with private landowners to enhance connectivity and preserve tracts of land for outdoor recreational purposes. Collaborative preservation strategies keep properties on the tax roll and engage the citizenry to become active participants in land conservation and recreation.

Objective 7.1 – Strategically purchase land that will provide long-term health and recreational benefits to the Town of Dover.

- 7.1.1 Purchase land near Town Center along Route 100 to be developed for active recreational purposes. Securing these parcels will provide visitors with year-round outdoor activities with the added benefit of the close proximity to local businesses. The town should additionally consider purchasing lands for conservation purposes particularly where benefits to air, water, and soil quality are evident. Lands that protect watershed resources should be considered for purchase to ensure water quality is preserved for drinking and recreational use.
- 7.1.2 Develop policy/procedure for evaluating development requests within new/existing conserved lands for active recreational purposes to determine environmental impacts. It is likely the Town of Dover will receive varying opinions from the public about how purchased lands should be utilized. Some might be in favor of developing land for high-intensity recreational use, while others would like to see that land preserved for habitat and passive enjoyment. It is therefore advised that the town develop a formal policy and procedure for any development request that would alter or undermine the ecological value of existing and future town-owned lands.
- 7.1.3 Partner with local landowners for conservation and recreation. As Dover adapts to increased visitation and year-round population increases, it will be important to protect open space, particularly where such measures will protect water quality and sensitive ecological resources. Since wildlife and hydrologic systems do not follow administrative boundaries, geographic-scale thinking must be used to develop open space recommendations that reflect wider conservation efforts.

Goal 8: Improve Wayfinding, Trail and Interpretive Amenities

Interpretive signage, while seemingly of little consequence, can provide visitors and residents not only with critical information but with pride of place. Similar to zoning standards, consistent, legible, and beautifully designed wayfinding and educational amenities solidify the character of a place and provide reassurance that people will be able to efficiently navigate across the town.

Objective 8.1 – Develop standardized system of signage across all town-owned trail facilities.

- 8.1.1 Develop consistent kiosk, trailhead, distance, reassurance, difficulty level, and directional signage across town trails. Signage based on USFS standards will provide continuity between Federal and town-owned lands, reducing confusion and ensuring signage is of a high quality. Signage can direct visitors to trails appropriate for their physical endurance and other constraints.
- 8.1.2 Create signage to educate users about environmental safety risks (wildlife, ticks, poison ivy etc.). Dover is home to a bounty of wildlife, most of whom pose no threat to humans. Proper education about precautionary tactics in an animal encounter can go a long way to foster appreciation of wildlife while keeping people safe. Nature interpretation is an excellent way to inform visitors about the role of what are commonly considered undesirable landscapes, such as wetlands, bogs, and shrub

thickets. It is also a great way to teach about the types of wildlife that use these landscapes, their greater role in the web of life, and an opportunity to educate the public to ongoing and recent sustainable forestry activities like prescribed thinning, wildlife habitat improvements, and invasive species control.

8.1.3 Develop historic interpretation facilities (agricultural legacy, revolutionary war). Work with the Dover Historical Society and surrounding municipalities to develop engaging, interconnected educational sites. Consider accessible historic interpretation sites to ensure people of all abilities can gain an understanding of the region's past. Engage school groups to utilize these sites to provide experiential learning.

VI. IMPLEMENTATION AND FUNDING

The recommendations have been prioritized based on the ability to meet the needs of the town, potential costs to implement and recommended timing for implementation based on the anticipated effectiveness to resolving the key issues. Each of the recommendations have been prioritized by the consultant team based upon which would be most beneficial to the town (high, moderate or low). All cost estimates are in 2020 figures. Most costs are dependent on the extent of the enhancements and improvements determined. Capital project costs (including maintenance and enhancement projects) are typically greater than $10,000 with a minimum life expectancy of 15 years.

Goal 1: Improve Organizational Efficiencies

Objective 1.1 –Develop Trails & Recreation Department			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
1.1.1 Establish committee to review the feasibility of a Trails & Recreation Department.	Additional Staff Budget	High	Year 1
1.1.2: Develop formal Trails & Recreation Department. Define Department roles and responsibilities.	Additional Staff Budget	High	Year 1
1.1.3: Hire Trails & Recreation Superintendent and Programming Coordinator to maintain operations and programming for proposed facilities. Hire additional staff as use of recreational facilities increases.	Additional Staff Budget	High	Superintendent: Year 1 Programming Coordinator: Year 2 Additional Staff: Years 3-5

Objective 1.2 - Engage volunteer groups for specific projects.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Engage volunteer groups (federal/state/local) for specific projects. (amenity improvements, trail improvements, plantings/enhancements).	$0/ (reduction in maintenance needs if completed by volunteers)	Moderate	As opportunity Arises

Objective 1.3 – Increase funding for parks, trails, venues and facility maintenance/acquisition.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
1.3.1: Explore alternate funding sources. Consider contracting with a dedicated grant writer to research, submit, and track federal, regional, state, and local grants.	Potential matching funds/ % of Successful Grants/ TBD	High	Year 1
1.3.2: Expand funding options that provide dedicated revenue for trails & venues (impact fees, tax levy, bond referendum).	$0	Moderate	Year 3
1.3.3: Consider implementing a cost recovery and pricing policy and continue periodic evaluation of fees for programs and facilities.	$0/ Additional Staff Time	High	Year 1

Goal 2: Enhance and Improve Communication Tools

Objective 2.1 – Improve overall external communications.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Develop marketing and communications plan to improve awareness of town resources and facilities.	TBD/ Additional Staff Time	High	Year 2

Objective 2.2 – Improve Department Website.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Improve website to include descriptions and updated maps of parks, trails and recreational facilities. Develop means for local groups to advertise offerings.	TBD/ Additional Staff Time	High	Year 3

Goal 3: Improve Programs and Services

Objective 3.1 – Develop recreational program offerings and adjust annually.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
3.1.1: Diversify and expand program offerings for kids, seniors, multi-generational/family, and teens/tweens. Explore possible public-private partnerships.	Additional staff time/ (Potential Increased Revenue)	Moderate	Year 3
3.1.2: Expand special event offerings (pop-up concerts, movies in the park, agriculture/food festivals, etc).	Additional staff time/ (Potential Increased Revenue)	Moderate	Year 4

Objective 3.2 – Continue to collaborate with alternative service providers.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
3.2.1: Partner with local alternative service providers to provide entry level through advanced course offerings	Additional staff time/ (Potential Increased Revenue or Decreased Expenses)	Moderate	As opportunity arises
3.2.2: Partner with the USFS. Utilize proposed successional habitat projects to plan for trail development to reduce impacts to the land and facilitate permitting.	TBD/ Depends on size/ complexity	Moderate	As opportunity arises
3.2.3: Partner with Mount Snow Golf Club. Create groomed trails in the winter months to provide Nordic skiing opportunities.	TBD/Depends on partnership	Moderate	Year 1

Goal 4: Continue to Improve and Enhance Trail System

Objective 4.1 – Create connections to existing network.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Create connections to existing trail systems and expand accessible multi-use trails within town and places of work.	Depends on size/ complexity	Moderate	4-7 years

Objective 4.2 – Evaluate potential neighborhood connections.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Evaluate potential neighborhood trail connections. Develop shared stewardships of proposed connector trails with local HOA/neighborhood groups to reduce future maintenance and expense.	TBD: Depends on size/ complexity	Moderate	As opportunity arises

Objective 4.3 – Analyze current maintenance practices of path system.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
4.3.1: Develop maintenance standards that reflect the purpose of the trail and use (surface, clearing, grooming, plowing).	TBD: Depends on size/ complexity	High	Year 1
4.3.2: Reroute trails experiencing erosion, washouts, muddy surfacing conditions, and infringement on wetlands and other sensitive environments.	Capital Cost/ Operational Budget Impact	High	Year 1

Objective 4.4 – Redevelop trails to diversify use.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
4.4.1: Realign trails to develop loops, curves and slopes that accommodate desired recreational uses.	Depends on size/ complexity	High	Year 2
4.4.2: Widen selected trails to promote two-way and multiple uses.	Depends on size/ complexity	Moderate	Year 3

Goal 5: Maintain and Improve Facilities & Amenities

Objective 5.1 – Continue to improve ADA accessibility at all facilities.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Improve accessibility of paths, amenities, and existing structures. Update ADA transition plan every five years.	TBD/ Depends on size/ complexity	Moderate	Year 1; Ongoing

Objective 5.2 – Improve current maintenance/management practices.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Develop operations, maintenance and improvements plan for current and proposed facilities. Revise annually as sites are developed and maintenance and improvement goals are further refined.	Additional Staff Budget	High	Year 1 Annual review of policies

Objective 5.3 – Improve Access to Aquatic Resources.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Improve/ provide access to Deerfield River and other aquatic resources to improve fishing, boating, and nature-based recreation activities.	Depends on size/ complexity ($5,000 – 80,000)	Low	Year 1 – Identify Sites; Implement Years 4-7

Goal 6: Develop New Facilities & Amenities

Objective 6.1– Develop new venues to promote multi-season recreation in the Town of Dover.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
6.1.1: Develop disc golf course at Horace Hill or other suitable property.	Depends on size/ complexity [Budget: $50,000-$60,000]	High	Year 1
6.1.2: Construct skate park.	Depends on size/ complexity [Budget: $40,000 – 200,000]	Moderate	Year 2
6.1.3: Develop pump track and mountain biking trails.	Depends on size/ complexity [Budget: $30,000 – 120,000]	Moderate	Year 3
6.1.4: Construct a GaGa ball pit at the Dover School and/or Dover Town Park.	Depends on size/ complexity [Budget: $4,000 - $8,000 each]	High	Year 1
6.1.5: Develop ice rink.	Depends on size/ complexity [Budget: $50,000 (seasonal) - $250,000 (indoor)]	Moderate	Year 3
6.1.6: Construct amphitheater.	Depends on size/complexity [Budget: $80-100,000]	Low	4-7 years

Objective 6.2 – Conduct feasibility study for a Community Center/ Recreation Facility.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Conduct feasibility study for a Community Center/ Recreation Facility for developing cohesive community service and year-round recreation opportunities. Explore options for rentals. Explore options for an indoor or outdoor pool.	Depends on size/ complexity [Study Range: $40,000-60,000]	Low	Years 4-10

Objective 6.3 – Provide park amenities at proposed facilities.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
Improve/replace park amenities to current standards to minimize maintenance demands. Prioritized based upon user demand, conditions, location. • Restrooms • Picnic Tables, Grills, Benches, Bike Racks • Playgrounds • Buildings/ Pavilions • Water Fountains • Lighting • Shade Plantings & Structures • Parking	Depends on size/ complexity [Budget: $50,000 – 300,000]	Moderate	Years 4-7

Goal 7: Acquire Land for Conservation and/or Development for Recreation

Objective 7.1 – Strategically purchase land that will provide long-term health and recreational benefits to the Town of Dover.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
7.1.1: Purchase land near Town Center along Route 100 to be developed for active recreational purposes. Purchase lands for conservation purposes particularly where benefits to air, water, and soil quality are evident.	Depends on market rate/willingness of seller	High	As opportunity arises
7.1.2: Develop policy/procedure for evaluating recreational development requests within new/existing conserved lands.	Additional staff time	Moderate	As opportunity arises
7.1.3: Develop partnerships with local landowners for conservation and recreation (water quality, trails).	Additional staff time	Moderate	As opportunity arises

Goal 8: Improve Wayfinding, Trail and Interpretive Amenities

Objective 8.1 – Develop standardized system of signage across all town-owned trail facilities.			
Actions	Capital Cost/ Operational Budget Impact	Priority	Timeframe to Complete
8.1.1: Develop consistent kiosk, trailhead, distance, reassurance, difficulty level, and directional signage across town trails.	Depends on size/ complexity / [Budget $15,000 - $25,000]	High	Year 2
8.1.2: Create signage to educate users about environmental safety risks (wildlife, ticks, poison ivy etc.) and to provide historic and nature-based information.	Depends on size/ complexity / [Budget $15,000 - $25,000]	Moderate	Years 4-7
8.1.3: Develop historic interpretation facilities (agricultural legacy, revolutionary war). Work with the Dover Historical Society and surrounding municipalities to develop engaging, interconnected educational sites.	Depends on size/ complexity	Low	Years 4-7

VI. IMPLEMENTATION & FUNDING

Estimated Opinion of Probable Cost

The purpose of this section is to provide a budgetary estimate of anticipated construction and project development costs for selected high priority trail and venues identified through the course of this master plan. These numbers should be considered conceptual and can be used to develop budgetary estimates for project phasing, potential Requests for Qualifications/Proposals for future design, and project funding. It should be noted that these costs are subject to change and are based only on the conceptual plans included in this study. In the case of venues, costs are estimated based on typical sizing and facility features for usership of approximately 20,000 people (the population estimated in the Town of Dover during peak tourism). Expansion of these facilities may be necessary down to the road to accommodate increased usership. Trail design and construction numbers are based on overall lengths, trail type, and number of features such as signs, stream crossings and boardwalks.

As the project moves into and through the next phases of design, the proposed impacts, easement, or acquisitions will be further defined and detailed. It is imperative to continue the dialogue with any potentially impacted private property owner initiated during the public involvement process of this study throughout the next project phases. It is the hope that this dialogue can go a long way in avoiding a difficult and lengthy easement or acquisition agreement process.

Overall, the preliminary construction cost estimate is based on similar work completed by the project team, unit costs from VTrans and product manufacturers/suppliers. A 25-percent construction contingency cost has been included to account for specific items of work that will be determined during the preliminary design phase and for annual escalation of costs. A project approvals & permitting contingency of 10-percent and a 25-percent engineering, design & construction administration contingency was added to the costs. The design phase includes a topographic survey including delineation of environmental resource areas, and preparation of layout/alignment plans, profiles and typical cross sections for the pathway and recreation improvements. Based on this information, it is possible to determine the extent of actual impacts, if any, that a pathway or recreation facility would have upon adjacent resource areas and private properties. During the preliminary design phase, the designer should determine which permits and approvals will be required for the project and will initiate early coordination with those local and state agencies.

After the preliminary design phase is complete and approved by the appropriate regulatory agencies, a design public hearing is typically held in the community. The project can then advance to the final design phases (Final Plans, Specifications & Estimates). All necessary permits are secured before the project is put out to bid for construction.

Cost estimates are divided between the recommended projects as follows:

Recreational Venues

Preliminary Opinion of Total Probable Cost – Pump Track Venue

Site Improvements (Pump Track)	Cost
Pump Track – dirt (43,560 sf)	$ 30,000
Construction Subtotal	$ 30,000
Construction Contingency (25%)	$ 7,500
Approvals & Permitting (10%)	$ 3,000
Engineering/Design/Construction Administration (25%)	$ 7,500
Total Cost – Pump Track Venue	**$ 48,000**

Preliminary Opinion of Total Probable Cost – Outdoor Skate Park Venue

Site Improvements (Skate Park - Outdoor)	Cost
Skate Park (20,000 sf)	$ 800,000
Construction Subtotal	$ 800,000
Construction Contingency (25%)	$ 20,000
Approvals & Permitting (10%)	$ 8,000
Engineering/Design/Construction Administration (25%)	$ 20,000
Total Cost – Skate Park Venue	**$ 848,000**

Preliminary Opinion of Total Probable Cost – Amphitheater Venue

Site Improvements (Amphitheater)	Cost
Amphitheater – stage + seating with grass (20,000 sf)	$ 100,000
Construction Subtotal	$ 100,000
Construction Contingency (25%)	$ 25,000
Approvals & Permitting (10%)	$ 10,000
Engineering/Design/Construction Administration (25%)	$ 25,000
Total Cost – Amphitheater Venue	**$ 165,000**

Preliminary Opinion of Total Probable Cost – Ice Rink Venue

Site Improvements (Ice Rink – Seasonal)	Cost
Seasonal Ice Rink (80' x 180')	$ 30,000
Construction Subtotal	$ 30,000
Construction Contingency (25%)	$ 7,500
Approvals & Permitting (10%)	$ 3,000
Engineering/Design/Construction Administration (25%)	$ 7,500
Total Cost – Seasonal Ice Rink Venue	**$ 48,000**

Additional Items:

- GaGa Ball 18' dia – $8,000
  -includes equipment, staff time, materials, and site preparation
- Interpretative Signage - $10,000

Trail Venues

Preliminary Opinion of Total Probable Cost – Horace Hill Property

Site Improvements (Trails & Venue)	Cost
Trail Alignment (cross country skiing, hiking, mountain biking)- 1.83 mi	$ 240,000
Disc Golf Course	$ 50,000
Parking Lot (43,560 sf)	$ 220,000
Construction Subtotal	$ 510,000
Construction Contingency (25%)	$ 127,500
Approvals & Permitting (10%)	$ 51,000
Engineering/Design/Construction Administration (25%)	$ 127,500
Total Cost – Trail & Disc Golf Course	**$ 816,000**

Preliminary Opinion of Total Probable Cost – Sherwood Forest/Handle Road Property

Site Improvements (Trails)	Cost
Trail Alignment (cross country skiing, hiking, mountain biking) - 6.99 mi	$ 923,000
Construction Subtotal	$ 923,000
Construction Contingency (25%)	$ 230,750
Approvals & Permitting (10%)	$ 92,300
Engineering/Design/Construction Administration (25%)	$ 230,750
Total Cost – Trails	**$ 1,476,800**

Preliminary Opinion of Total Probable Cost – Dover Town Forest

Site Improvements (Trails) -	Cost
Trail Alignment (cross country skiing, hiking, mountain biking) – 9.75 mi	$ 1,287,000
Construction Subtotal	$ 1,287,000
Construction Contingency (25%)	$ 321,750
Approvals & Permitting (10%)	$ 128,700
Engineering/Design/Construction Administration (25%)	$ 321,750
Total Cost – Trails	**$ 2,059,200**

Preliminary Opinion of Total Probable Cost – Select Town Connections

Site Improvements (Trails) -	Cost
Trail Alignment (cross country skiing, walking, biking) – 7.5 mi	$ 922,500
Construction Subtotal	$ 922,500
Construction Contingency (25%)	$ 230,625
Approvals & Permitting (10%)	$ 92,250
Engineering/Design/Construction Administration (25%)	$ 92,250
Total Cost – Trails	$ 1,337,625

* Select Town Connections distances are based on corridors identified by Mike Purcell. Improvements necessary for the rehabilitation or reconstruction of existing trail corridors can vary considerably depending on site conditions, topography, need for trail bridges/boardwalks, permit requirements, land acquisition and many other factors. In addition, the means/methods of implementation with volunteers or contracted companies can impact costs considerably. As a result, total trail lengths have been utilized to determine potential trail costs due to incomplete field information and unknown field conditions.

Implementation & Phasing

A multi-faceted trails and venue plan requires many different levels of phasing throughout project development and construction. Several factors influence project phases, including but not limited to complexity of trail alignments, property acquisitions, level of regulatory permitting required, difficulty of construction, and most importantly the amount of available funding.

If feasible, for cost and time savings, it is recommended that each project be implemented in one phase. However, in most cases, a single phase is not possible due to funding constraints or the approval processes required for various sections of the project. As a result, a framework of three phases of implementation is recommended per project. If it is determined that some of these phases can be combined, it would result in more cost and time effective implementation.

Venue phasing creates a usable facility with basic amenities necessary for access and enjoyment so visitors will support future improvements and development. Trail phasing recommendations are primarily organized by connecting usable segments of the trail network in order to create a safe facility and to gain users and momentum to continue future project phases, anticipate approvals, and to identify potential funding. Each phase is intended to attract users from the region and beyond and to create interest in development of expanded/improved facilities. Finally, where possible, phases should be combined with other improvements to leverage and enable efficiency of implementation.

In general, it is important for any plan to show results. It should be an overarching priority of the town to identify projects that can be implemented within the first year upon adoption of the plan. Unfortunately, many plans and studies result in limited on-the-ground improvements, leading to lack of citizen trust. Additionally, ensuring the citizens of Dover have an active voice and hand in implementing this plan is important to ensure the goals and objectives are carried out.

Overall, the project team recommends the implementation of the trails and venues propose in this master plan in the following order:

- Project 1: Improve Dover Town Forest, and implement signage improvements, as well as historical markers/tours.
- Project 2: Hire staff to manage/maintain park and trail resources. Develop the recently acquired Horace Hill Property for disc golf and multi-use trails. These uses are to be designed simultaneously to avoid potential future conflicts.
- Project 3: Purchase additional property along Route 100 for the development of skate park and pump track recreational facilities.
- Project 4: Re-align and rehabilitate existing trails on town and private-public partnership properties to create multi-sport/multi-season opportunities.
- Project 5: Create desired trail connections between residential areas and commercial/town-owned properties.

Depending on the desires of the town, it may be most advantageous to prioritize one project over another and deviate from the recommendations of this plan. This may be especially true if funding sources emerge that will facilitate the development of a specific facility. As long as the project aligns with the goals of the town and improves the overall economic impact of trail and recreational venues in the region, priorities can be reconsidered and adapted.

Next Steps

As first step towards implementing the recommendations of this study, the Board of Selectmen should accept and approve the master plan. Once the plan is approved, with the assistance of residents, businesses, town staff and state, the town can undertake the following steps. The steps do not necessarily need to be in the order listed here, but this order is recommended to ensure adequate funding and permitting is established to help the projects progress smoothly:

- Begin looking and applying for funding opportunities through grants, bonding or other sources considered appropriate.
- Contact landowners from whom easements might be needed to understand their willingness to consider granting easement, making sure to stay within guidelines for securing easements and rights-of-way.
- Finalize additional sources of donated funding to support the matching funds that might be needed for grants that require them.
- Hire a consultant to assist with the design of the first phase to be implemented when funding is secured through either fundraising or grants.
- Work to secure required permits and appeals. In all cases, careful site analysis, habitat assessment, sensitive species, and wetland delineation is recommended before proceeding through extensive design development and construction of trails and other amenities. Effective coordination with the USFS, VTDEC, and invested stakeholder groups is critical in the preliminary design process to ensure resources are not expended on projects that are not feasible.
- Once the construction documents are approved and permits have been secured, the actual trail and venue construction can begin.

Act 250 Program

The stringency of Act 250 review and regulation in the state of Vermont was raised at several points during the master planning process. The law is intended to balance community and environmental factors by providing public and quasi-judicial oversight of major subdivision and development projects across the state. Careful evaluation of proposed projects should be performed before design development commences to ensure Act 250 is not triggered to avoid lengthy delays and permitting costs. Act 250 review is typically triggered when a project:

- Commercial or industrial projects that disturb 10 or more acres
- Substantial improvements to existing parcels or buildings with an existing Act 250 permit
- Construction of 10 or more units of housing or lots for housing within a radius of 5 miles in 5 years (not applicable in the context of this master plan)

Act 250 may be triggered by the development of some of the venues listed below, especially if existing properties are modified to construct those facilities. Every effort should be made, regardless of regulation, to avoid degradation of the environment during and after construction of trail and recreation venues.

Currently, the Vermont Agency of Natural Resources (VTANR) conducting public input and review of the permitting process in the context of trail development. Changes to the regulation may be forthcoming; therefore, it is advisable for the town to stay informed of changes to the law.

Funding & Development

In general, the more a facility, program, or service provides a community benefit to its citizens, the more that element should be paid for by all citizens as part of the town's general fund. Conversely, the more a facility, program, or service provides individual benefits, the more that element should be paid for by user fees. This funding and cost recovery philosophy acknowledges the tremendous public benefits of parks, trails and recreation to the community. Parks and recreation services also promote and support a community's economic development, crime prevention, and community health. The town should seek to leverage partnerships wherever possible to help fund the facilities, programs, and services that it provides to the community. Town staff need to work diligently to continue to control expenses and improve revenues to maintain access and a level of affordability for full-time and seasonal residents.

Financial Sustainability for Program Delivery

It is important for the town to develop a Resource Allocation and Pricing Philosophy that reflects the values of the community and the responsibility it has to the community. This philosophy will be especially important if the town moves forward in the development of new programs and additional and/or expanded facilities, and as it strives for sustainability and determines how much operations can be subsidized with tax dollars.

One means of accomplishing this goal is applying a process using an industry tool called the "Pyramid Methodology." This methodology develops and implements a refined cost recovery philosophy and pricing policy based on current "best practices" as determined by the mission of the Department and the program's benefit to the community and/ or individual.

Critical to this philosophical undertaking is the support and understanding of elected officials, and ultimately, citizens. Whether or not significant changes are called for, the Department wants to be certain that it is philosophically aligned with its residents. The development of the core services and

cost recovery philosophy and policy is built on a very logical foundation, using the understanding of who is benefitting from recreation services to determine how the costs for that service should be offset.

Recreation programs and services are sorted along a continuum of what delivers the greatest individual benefit to what delivers the greatest community benefit. The amount of subsidy for each level (not necessarily each individual program) is then determined to create an overall cost recovery philosophy.

Developing effective ongoing systems that help measure success in reaching cost recovery goals and anticipate potential pitfalls are dependent on the following:

- Understanding of current revenue streams and their sustainability.
- Tracking all expenses and revenues for programs, facilities, and services to understand their contributions to overall cost recovery.
- Analyzing who is benefiting from programs, facilities, and services and to what degree they should be subsidized.
- Acknowledging the full cost of each program (those direct and indirect costs associated with program delivery) and where the program fits on the continuum of who benefits from the program or service to determine appropriate cost recovery targets.
- Defining direct costs as those that typically exist purely because of the program and the change with the program.
- Defining indirect costs as those that would typically exist anyway (like full-time staff, utilities, administration, debt service, etc.).
- Program fees should not be based on ability to pay, but an objective program should be in place that allows for easy access for lower income participants, through availability of scholarships and/or discounts. In many instances qualification for scholarships and/or discounts can mirror requirements for free or reduce cost lunch in schools.

Revenue Enhancement is one Key Theme in a Financially Sustainable Plan. The town should continue to pursue funding strategies that include:

- Explore alternative funding sources that strategically align with targeted services.
- Expand alternative funding for strategic initiatives through grants.
- Explore additional Community Partnerships.
- Explore additional opportunities for (and use of) sponsorships.

Below is a list of potential funding sources that may assist with the implementation of the recommendations:

- 1 percent local options tax – this funding strategy utilizes public funds raised via tax to pay for events and improvements developed by private organizations. This may be a viable method for raising money to pay for public-private partnerships to develop venues such as an amphitheater, a skate park, or a disc golf course.
- Transportation Alternatives Programs (TA Funds): TA funds can be used to increase bicycle and pedestrian mobility. These funds will cover a maximum of 80 percent of the project with the remaining portions most likely coming from the project sponsoring organization. TA funds are distributed in Vermont through a competitive grant program.
- The Outdoor Recreation Legacy Partnership Program (ORLP) offers grants to improve local parks and outdoor recreation areas. The program is funded through the Land and Water Conservation Fund (LWCF).

- Bicycle and Pedestrian Program: These State funds cover specific bicycle and pedestrian improvement projects and are provided via a competitive grant program.
- Public-Private Fundraising: The towns could work with non-public entities or the general public to raise funds through private fundraising or grant sources available only to the non-public entities to match public funds for the trail. It could be possible to provide some memorial that acknowledges the contribution.
- Donations: The towns could work to acquire donated funds, materials or services from local companies or residents to support the trail development. Acknowledgement of supporting companies or individuals could be included along the trail as desired.
- A new online tool developed by a partnership between the Alliance for Biking and Walking and the League of American Bicyclists helps find potential federal funding sources for alternative transportation projects. The site can be reached at http://bit.ly/11xhEtr.

Other funding sources may be available for the construction of health -based recreation and cultural amenities:

1. The Robert Wood Johnson Foundation https://www.rwjf.org/en/blog/2019/08/walk-with-us--building-community-power-and-connection-for-health-equity.html
2. The Vermont Community Foundation https://www.vermontcf.org/NonprofitsGrants/AvailableGrants/HillsandHollowsFund.aspx

Appendix A – Existing Conditions Mapping

DOVER TRAILS & RECREATION MASTER PLAN

Existing Trails & Recreation Areas

Weston & Sampson℠

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Dover Trails Legend

- Valley Trail Wilmington
- Valley Trail Dover
- Valley Trail Town Plan
- crosstown trails
- DTF trails
- DTF multi-use trails
- DTF ski zones
- trail heads
- somerset trails
- ridge trails
- velomont trail
- Vast trails
- blue brook trails
- ridge bc ski zones
- Private Conservation Lands
- Community Facilities
- Class 1 Wetland
- Class 2 Wetland
- dover land parcels
- Public Lands
- Easements
- Sensitive Wildlife Overlay

Miles

0 0.5 1 2 3 4

N

VERMONT 100

HANDLE ROAD

WEST DOVER FIRE STATION

DOVER POLICE STATION

WEST DOVER POLICE OFFICE

TOWN OFFICE

DOVER TOWN PARK

VERMONT 100

WASTEWATER TREATMENT PLANT

HIGHWAY GARAGE

TRANSFER STATION

DOVER ELEMENTARY

DOVER FREE LIBRARY

DOVER TOWN HALL

DOVER HILL ROAD

EAST DOVER POST OFFICE

EAST DOVER FIRE DEPTARMENT

Existing Community Resources Legend

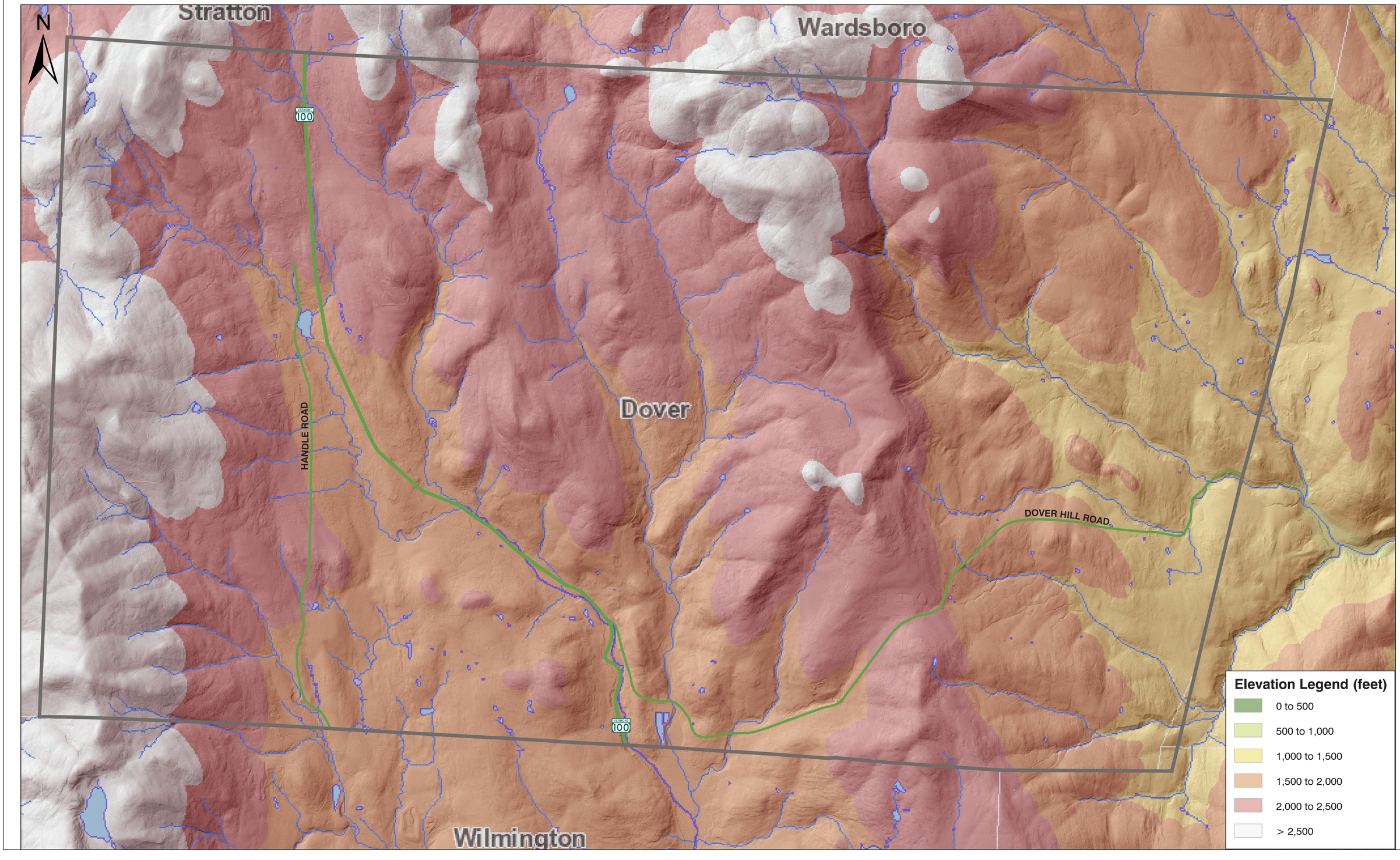
- Community Facilities
- Residential Areas
- Residential Areas (under construction)
- Commercial Areas
- Mount Snow Ski Area
- Mount Snow Golf Course
- Dover Town Forest

DOVER TRAILS & RECREATION MASTER PLAN

Existing Community Resources

Weston & Sampson

0 0.5 1 2 3 4 Miles

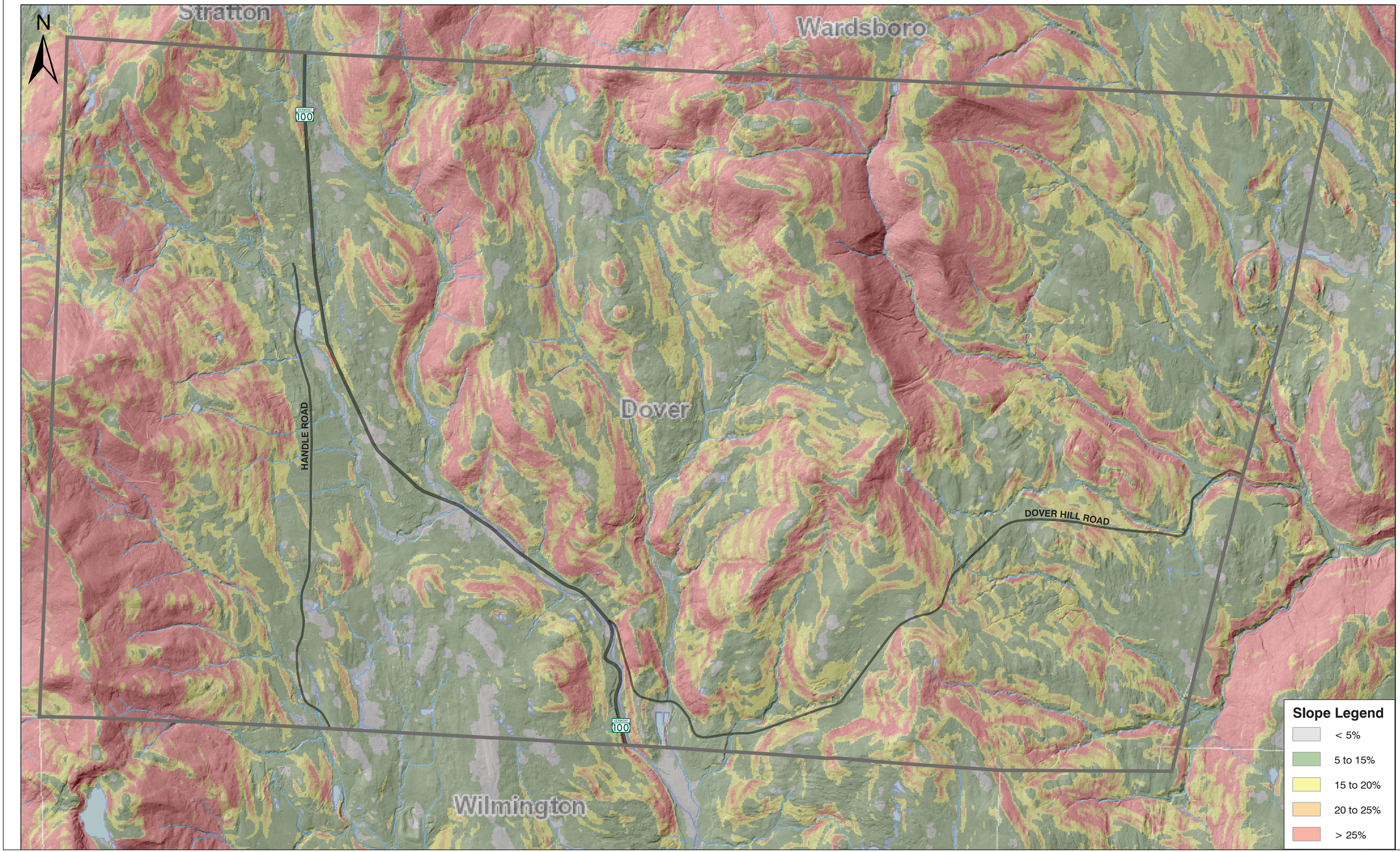


DOVER TRAILS & RECREATION MASTER PLAN

Existing Elevation

Weston & Sampson℠

0 0.5 1 2 3 4 Miles



DOVER TRAILS & RECREATION MASTER PLAN

Existing Slopes

Weston & Sampson

0 0.5 1 2 3 4 Miles