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TOWN OF STURBRIDGE

RECREATION TRAILS MASTER PLAN

Prepared for:
Recreation Trails Master Plan Subcommittee
October, 2012



CONTACT INFORMATION

Kay-Linn Enterprises, LLC
100 S. 36th Street
Boulder, CO 80305
Phone: 303.241.3301

Email: slinnenburger@gmail.com

www.kay-linn.com

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INTRODUCTION

The Town of Sturbridge has long been a commercial stop along transportation routes. From the Tantisques lead mine developed by Native Americans to the Worcester-Stafford Turnpike and the Grand Trunk Railway, the Town has catered to travelers. In more recent history, the development of Old Sturbridge Village as a living history museum depicting New England life in the late 18th and early 19th centuries has brought visitors, employees, and related commercial development such as lodging, eating, and shopping establishments to Sturbridge and created a tourism destination.

With the purchase of more than 800 acres of land around Leadmine Mountain (from Old Sturbridge Village) and nearby or adjacent purchases of the Heins Farm and River Lands properties, the Town now has significant open space holdings. Concurrently, Sturbridge is one of a number of communities actively repurposing the Grand Trunk Railway route as a recreational trail. If strategically developed and proactively managed, these endeavors have incredible potential benefits for the Town. From the very obvious conservation functions and values that befit a town in “the last green valley” to active, healthy lifestyle benefits of more accessible recreation amenities, to the economic benefits of drawing a more diverse visitor demographic and offering them a broader array of amenities, the conserved lands in and around town are a very important key to the next iteration of a successful and sustainable Sturbridge.

An important consideration in the development, redevelopment, and management of nature-based recreation resources is the enhancement of a sense of place. While residents currently relate to the Quinebaug River, and relatively large amount of conservation lands, public resources such as access and trails have not yet been adequately provided. This prohibits the enjoyment and appreciation of these resources by the public and, if not improved, could hinder additional future conservation initiatives. In the current relatively unmanaged state, degradation and misuse of these lands becomes a real possibility. However, when the public sees lands managed for their enjoyment, they more readily become passive and active stewards of those lands.

Providing improved access and diverse trail systems has tourism repercussions as well. Outdoor recreation enthusiasts, especially mountain bikers, paddlers, equestrians, and trail runners regularly make weekend trips to locales that have significant trail opportunities. While most large and diverse trail systems are located some distance from food and lodging amenities, Sturbridge holds the potential to integrate a trail system with the commercial business hub of town. Traditional visitors to Sturbridge can also benefit from the trail infrastructure, especially as an additional activity during a visit that increases the potential for overnight stays and other local spending.

This plan will help the Town create a trail system that provides 1) substantial and diverse benefits to Sturbridge residents, businesses, and visitors, 2) specifications to create and maintain a manageable trail infrastructure, and 3) project prioritization and cost estimation for implementation planning.

PLAN CONSISTENCY

This recreational trails master plan seeks to build upon and retain consistency with existing planning endeavors that have been adopted by the Town of Sturbridge. Background information regarding the Town's current and future demographics are not included in this document as it has already been developed and presented in the Comprehensive Master Plan and Open Space and Recreation Plan. That information has been analyzed and incorporated into this document. Plans reviewed in the development of this document include:

- Open Space and Recreation Plan
- Town of Sturbridge Comprehensive Master Plan
- Sturbridge "Dialogue For The Future" Strategic Plan
- Commercial Tourist District Revitalization Plan
- BioMap and Living Waters Map
- Priority Habitats and Estimated Habitats Map
- Sturbridge Reconnaissance Report- Blackstone Valley/ Quinebaug-Shetucket Landscape Inventory
- Leadmine Mountain Property Forest Stewardship Plan and Conservation Easement



Spatial data related to the Town's conservation lands and priority resources were examined to assure that recommendations made within this plan are consistent with priorities outlined in the planning documents listed above. Final recommendations will be incorporated into GIS layers consistent with Town and MassGIS standards for incorporation into future planning updates.

PLAN CONSISTENCY

Sturbridge Comprehensive Master Plan Vision & Goals

The following text is excerpted from the recently adopted Sturbridge Comprehensive Master Plan. The Vision and a number of the Goals from the Comprehensive Master Plan are presented here to demonstrate the consistency with the goals of the Recreation Trails Master Plan. As such, the adoption and implementation of the Recreation Trails Master Plan will further support the Vision and Goals already vetted by the Town.

Community Vision

Sturbridge is a community that cherishes its small town character, its vast open spaces, and the natural resources that provide numerous cultural and recreational opportunities. This rural character is the Town's core value as expressed by the many scenic vistas, the places where people gather, the open spaces, and the historical and cultural assets that residents and visitors hold dear.

Open Space and Recreation Goals

- Preserve the small town New England character of Sturbridge.
- Educate residents and others about the importance of open space preservation for passive recreation, habitat protection and water supply protection.
- Increase the inventory of open space within the Town by fee, conservation restriction, donation or easement in perpetuity. Give emphasis to these parcels that create green corridors, protect our water supplies and natural, cultural and historic resources, and provide access to our recreational resources.
- Expand outdoor recreational opportunities, both passive and active for all Sturbridge residents regardless of age or ability.
- Encourage the appropriate use of public lands and recreational resources as a tool to promote sustainable tourism and enhance economic development within the community.
- Protect and enhance drinking water supplies.
- Promote a cooperative and regional approach to open space and resource protection.



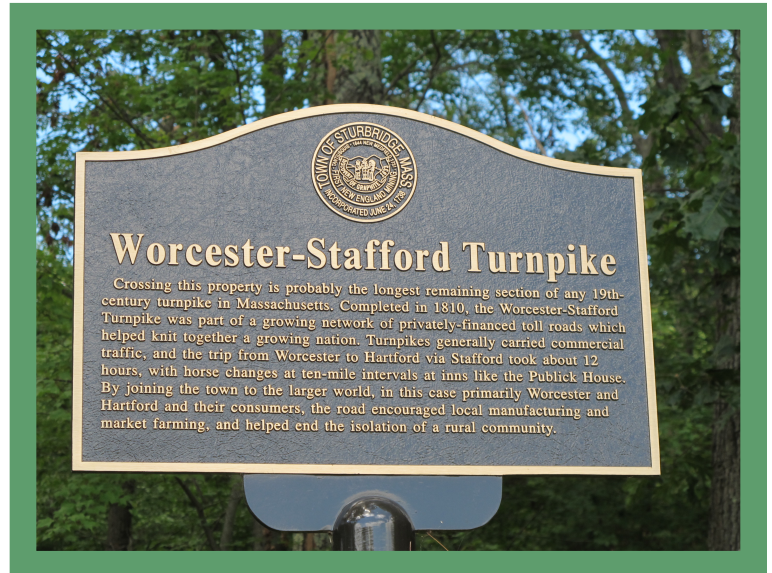
PLAN CONSISTENCY

Natural, Historic and Cultural Resources Goals

- Provide better public access to water resources for passive recreation.

Transportation Goals

- Develop an identity and sense of arrival into Sturbridge through the creation of distinct gateways and streetscaping, especially given the number of tourists coming to the area; prioritize Route 20 through the CTD.
- Balance the need to facilitate traffic flow with desires to make the roadways more walkable and bikeable and calm vehicle traffic speeds where appropriate (especially through the Commercial Tourist District along Route 20).
- Eliminate sign clutter and improve wayfinding to the key destinations.
- Make public transportation more available and increase opportunities for residents to walk and bicycle safely around Sturbridge.



Energy and Sustainability Goals

- Encourage energy efficiency, conservation, and sustainability in Sturbridge to reduce energy consumption and cost.

Economic Development Goals

- Foster economic sustainability via focused and integrated support of the existing business base while simultaneously encouraging longer-term economic diversification (such that Sturbridge is not so heavily dependent on tourism/hospitality).
- Promote economic development from a regional perspective.
- Create a Brand Promise/Identity for Sturbridge that presents a distinctive and positive image of the town.



EXISTING TRAILS

Grand Trunk Trail

The Sturbridge section of the Grand Trunk Trail has been completed from Westville Reservoir to a bridged crossing of the Quinebaug River near South Road, north of Mashpaug Road. The subsequent upstream section of the trail (approximately 1-mile) has been approved for construction. The final section of the trail in the western and upstream portion of Town, connecting to the Brimfield Reservoir dam, has also received final approval for construction. This current status leaves an approximately 2-3 mile section in the middle of the trail and through the Commercial Tourist District to be completed in the future. A number of issues are delaying the completion of this large project, including funding, route selection, and environmental issues.

Heins Farm Trails

Three trails, primarily on the Heins Farm Open Space tract, have been completed to date. The trails total a bit over three miles. Approximately two miles of the trails have been surfaced with aggregate material to a width of 4-5 feet to facilitate access by a broad range of visitors. The trailhead for the property has been developed on the Leadmine Mountain property, across the road from the Heins Farm property. The trails reach and interpret significant and interesting locations on the property including a pond/wetland complex, historic cabin, and the Stafford-Worcester Turnpike route.

Leadmine Mountain Trails

A large amount of relict transportation routes are present on this property. At some point in the past, many of these open corridors were “blazed” as trails for use by visitors and staff of the Old Sturbridge Village property. These routes generally do not meet modern standards for physical sustainability or a high quality recreation experience.

Recent efforts have taken place to improve a number of bridges close to the Heins Farm Trailhead. A few trails near the defunct Camp Robinson Crusoe have been improved with aggregate surfacing and bridges have been constructed in this area. Plans for additional bridges over Hamant Brook and its tributaries and surfacing of additional trails in this have been planned.

Other Trails

A number of trails exist within Town on land managed by other entities. Wells State Park, Opacum Land Trust, and the Tantisques Reservation all have natural surface trails. The vast majority of these trails, like those on Leadmine Mountain, have been developed within the open corridors or relict transportation routes and do not have sufficient characteristics of physical sustainability or high quality recreation experiences (a notable exception is the “Heart Healthy Trail” in Wells State Park).

A system of recreational trails is ultimately dependent upon the quality and accessibility of an area’s natural resources and the public’s ability for management of recreation within those lands. The Town’s setting and resources were assessed from the perspective of developing a modern, sustainable system of recreational trails. The opportunities and constraints in developing a high quality trail system are presented below.

OPPORTUNITIES & CONSTRAINTS

Opportunities:

Conserved Land

The total amount of conserved lands in and around Sturbridge is an incredible asset. The public's desire to improve the quality of environment through the support of conservation demonstrates an enlightened community attitude that looks at the area through a longer term lens. Especially when the Town compares itself to nearby urban areas, the development of green corridors through the area allows for a more natural ecological state, improved natural functions, and consequently increased societal value.

The Town has the opportunity to create trails that provide these important societal values because of the amount of already conserved land and the potential to make additions to that account. With all these potential trail resources located in close proximity, the Town is running squarely but positively in the face of still-active trends of less accessibility to natural lands and active, healthy communities.

Water Resources

Like the conserved land resources, the amount of public water resources in the Town is quite valuable. The public's willingness to alter land use, such as wetland setbacks that are more stringent than state or federal regulations, to improve water quality is another indication of the more sustainable long term vision present in Sturbridge. While the difficulties presented to traditional productive land use (i.e. development of maximum possible acreage or maximum allowable discharge) are challenging to overcome, communities with the political will to do so often reap benefits in very tangible ways such as a more desirable locale for similar-minded businesses, higher land values, and lower secondary costs of water treatment, site stabilization, and clean up.

While none of the lakes are particularly large, the Quinebaug River is not a classic backcountry paddling experience, and the smaller streams are not world class trout streams, the geographic location of the Town allows for frontcountry introductions to water-based trail recreation. Realizing these joint goals of environmental and recreation quality will require additional and significant shifts in current developed infrastructure (i.e. little pond public access, Commercial Tourist District "masking" the Quinebaug), but those shifts could also significantly redefine the Town as a nature-focused, sustainable community.

Diversity Of Ownership/Management Focus

With conserved land with recreational connectivity controlled by many entities, there becomes many more options for additional conservation, funding for recreation development, and quite simply, more like minded stakeholders. Sturbridge is very fortunate to have an open space program that was able to seize the opportunity of protecting lands such as Leadmine Mountain, Heins Farm, and other properties. When combined with properties managed by land protection entities such as Trustees For Reservations and Opacum Land Trust, the State's park and wildlife management departments, the US Army Corps of

OPPORTUNITIES & CONSTRAINTS

Engineers, and private landowners providing similar conservation and recreation land uses, there are many opportunities for diverse recreation that is in keeping with the primary management functions of the land.

Potential for Recreation Diversity

Diverse trail systems are not possible without a significant and diverse base of conserved lands. While all lands will not be managed for the same outcomes, different types of trails and recreation experiences fit into most conservation management regimes. For instance, fishing access trails that protect a coldwater trout stream from siltation and wildlife interpretation/viewing trails typically complement State Wildlife Management Area goals of public education and responsible use. Trails to cultural sites offer interpretive and reflection opportunities regarding the past use of the land and the history of the community. Trails created for exercise and passive enjoyment of the land provide a sense of place and lead to healthier, more productive communities. Longer distance trails provide a sense of adventure and connectivity throughout a region.

Water-focused forms of recreation, from paddling, to fishing, ice skating, and wildlife viewing, add immensely to the diversity of a trail system. The Great Ponds of Sturbridge along with the Quinebaug River provide a number of focal points to the Town, as people are naturally drawn to water. Many of these water resources are currently underutilized as truly public spaces and some have excess nutrient levels, but both issues can be resolved with clear focus and community will. Drawing attention to the potential of these resources and subsequent successes in protecting and improving their quality will be invaluable in marketing the character of the Town.

Unique Outdoor Quality of Life

The current assemblage of conserved lands in close proximity to all of Sturbridge's residents offers a very unique opportunity to facilitate a community-wide outdoor, active lifestyle. This ease of outdoor recreation access is often a community asset more closely associated with remote, small vacation destinations. "Backyard access" to trails leads to higher property values and active, energetic residents eager to maintain that high quality lifestyle and further community efforts to enhance those amenities. Sturbridge residents have already expressed this desire in surveys associated with the Open Space and Recreation Plan and Master Plan updates.

Ease of Visitation Access to Town

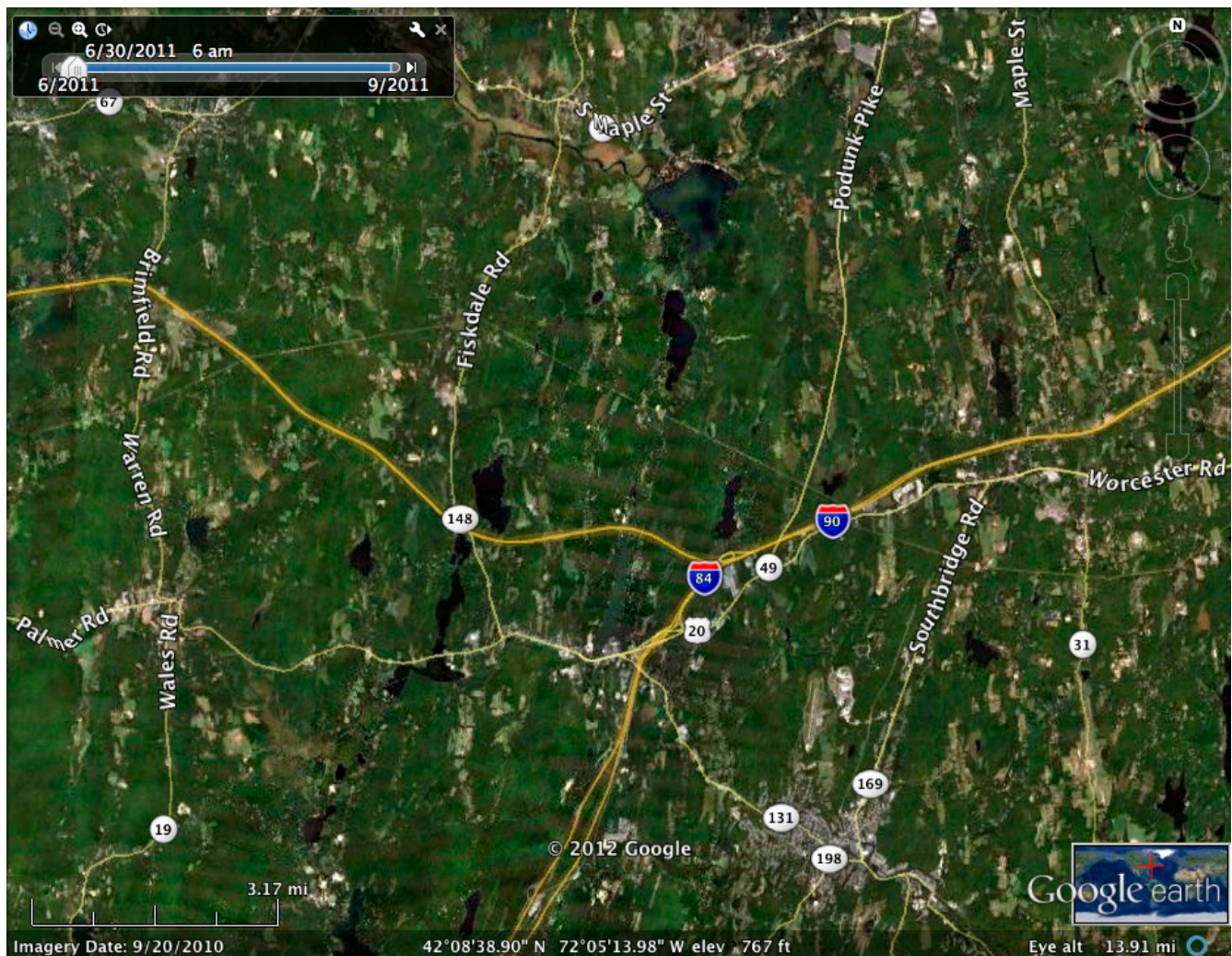
Most outdoor destinations are located far from population centers. Most New England destinations typically require significant time spent on twisting, two-lane highways that further decrease the accessibility to large numbers of visitors. Sturbridge's interstate access from either I-84 or the Mass Turnpike to population centers of Boston, Worcester, Springfield, Hartford, and Providence is the antithesis of the common scenario. The development of substantial and diverse trail systems would allow the Town to market itself as a "local" outdoor destination in these urban areas. This would both diversify the visitation demographic and provide additional activities for the current visitors. Together,

OPPORTUNITIES & CONSTRAINTS

the increased opportunities provide a higher potential for overnight stays and return visitation, resulting in higher spending per visitor along with the increased total visitation.

Connectivity to Commercial Tourist District

The geographic connectivity of the Commercial Tourist District, Old Sturbridge Village, River Lands, and Leadmine Mountain is a tremendous opportunity. Visitors and residents alike could base an entire day's activities from a single parking space. This connectivity of recreation, culture, shopping, food, and lodging is often a struggle for resorts that try to combine all these different activities, yet Sturbridge already has quality assets in all regards, except for a well-developed recreational trail system. When this final piece is accomplished, it will position the Commercial Tourist District as the hub of both tourism and community activity.



OPPORTUNITIES & CONSTRAINTS

Constraints:

Major Highway Dissection of Town

While I-84, Mass Turnpike, HWY 20/26, 49, 131, and 148 provide convenient and efficient access to Sturbridge for millions of potential visitors, these highways are a major deterrent to connectivity between conserved lands and pedestrian/bicycle safety around Town and to schools. This heavily trafficked infrastructure also impacts the potential serenity of a trail experience. The latter may not be a major tourism impediment, given the potential visitor origins with similar qualities. However the former issues are difficult and costly hurdles to clear. Highway departments are backlogged with projects that have been on Transportation Improvement Plans for many years and new, non-emergency projects rarely attain priority status. If improved pedestrian and bicycle access does reach the implementation phase, project costs are very high, especially for underpass expansion, bridges, and widening of paved surfaces. Projects that do not incur these high costs are much more likely to move forward on shorter timeframes, but transportation departments at all levels still prove difficult to negotiate projects that do not focus on the passage of increasing numbers of vehicles.

Focusing on the long term, additional planning instruments may be necessary, such as the adoption of a Complete Streets ordinance or a Safe Routes To School program. Broad coalitions should be developed where numerous stakeholders will benefit from individual projects. External technical support and public facilitation (i.e. MassRides, MassBike, Walk Boston, Alliance For Biking And Walking, Bikes Belong) will also be a vital part of stakeholder development and community outreach.

Diversity of Ownership/Management Focus

While having numerous conservation entities within the Town boundaries holds great opportunities, getting these numerous stakeholders to collaborate under a common vision of recreational trails may be very difficult. Care must be taken to conform potential trail developments to best serve each group's unique mission and implementation may be slowed while these organizations move projects through managerial approval processes. Connectivity through parcels not managed by the Town may not be granted or may not reach the standard of sustainability or quality recreational experience that is provided on Town-managed lands. Therefore, initial dependence on non-Town-managed lands for a connected, high quality recreational trail system is not recommended.

Bringing outside land managers to the table for trail development discussions is likely to be slow at the outset and time consuming throughout the process. However, with "proof of concept" projects initially developed on Town conservation land, it will likely become easier to demonstrate how similar specifications can benefit other land managing entities.



OPPORTUNITIES & CONSTRAINTS

Navigation, Signage, Messaging

Navigation, signage, and messaging to and throughout trails in Sturbridge are rudimentary and ineffective. Road signs noting trailheads do not provide sufficient warning for both trail users and passing vehicles to decelerate. Maps at trailheads have clarity and orientation issues. Confidence signage along trails (i.e. Hein's Farm) are more numerous than necessary but too small to notice or read. The current "Trek Sturbridge" logo has numerous practical challenges as a universal symbol for the Town's trail system. Messaging at trailheads is regulation-heavy without helping to define the potential experiences provided, history or significance of the property, or ways to become involved in the stewardship of the trails and natural resources.

A successful recreational trail system will begin with clear navigation to the Town of Sturbridge, continue by efficiently directing residents and visitors to trailheads/opportunities within Town, and follow with easy interpretation of trail opportunities and directions while at the trailhead or within the trail system. Signage type, color, and size should be consistent and a Town-wide map should be available that directs trail users to different trailheads. Simplicity should be a driving focus for signage development, depending on clear symbols and minimal verbiage as much as possible. When explanation is necessary, messaging should help set the stage for a positive experience.



Lack of Pedestrian/Bicycle Infrastructure

The Town currently has little effective pedestrian/bicycle infrastructure, due in large part to the major highway issue described previously. It is currently quite difficult for pedestrians to access shops within the Commercial Tourist District. Safe crossings and infrastructure to access the Town's schools are not sufficient. Shoulders on major roads that are sufficient to facilitate bicycle commuting or exercise are largely non-existent.

OPPORTUNITIES & CONSTRAINTS

There are some noteworthy exceptions. Road improvements to HWY 131 that included a continual sidewalk on the south side provides connectivity from the commercial area on the east side of Town to the I-84 interchange. Rte. 15, south of Main St./HWY 131 provides a sufficient paved shoulder relative to the traffic volumes of the road. Other secondary roads in Town, especially those with speed limits of 35 mph and below, hold potential for cycling infrastructure.

Commercial Tourist District Access and Amenities

As outlined in the Commercial Tourist District Revitalization Plan, the area does not have efficient access. Centralized public parking is not available. Sidewalks are inconsistent and primarily on the north side of the road only. Lighted and striped crossings to move visitors across the road are lacking. Amenities along this strip are also largely absent. A few small pocket parks with a sitting bench have been constructed and some trees have been planted, but larger areas for public congregation, shade, mapping, and interpretation have not been developed or are not connected with the businesses and parking.

A vibrant Commercial Tourist District integrated with the Town's trail system will add value to the recreational trails and an integrated system will add visitor traffic and revenue to the shops, restaurants, and lodging in the district. At a minimum, public parking with a bridge over the Quinebaug will have to be developed to provide connectivity to the Grand Trunk Trail.

Funding for Major Capital Projects

Sturbridge is a small town and therefore does not have a large tax base to employ when considering large capital projects. With a substantial amount of tax revenues derived through individuals residential and personal property taxes, any proposed tax increase to fund trail development may be difficult to support even though the vast majority of residents have requested more of these facilities. This will hinder the development of bridge, underpass, or road widening projects that improve pedestrian/bicycle infrastructure.

However, less costly trail development can be achieved with the assistance of smaller funding sources, including Community Preservation Act funds, the Betterment Program, lodging/restaurant taxes, grants, donations, and volunteer leadership.

TRAIL USE TRENDS

As more Americans have become active trail users and different trail-based activities have experienced exponential growth, the backcountry style of management and construction of trails has become less effective at meeting recreational desires and impacts. In just the last few decades, participants in mountain biking, rail-trail cycling, and trail running have grown from just a few pioneering individuals to activities regularly enjoyed by many millions. The vast majority of these participants reside in more urban/suburban environments and have limited time for recreation, especially relative to the almost-romantic notion of traversing an entire Wilderness or Appalachian Trail.

This change in activities and desires necessitates alterations in how trails are constructed and managed. Linking overall trail user participation trends, stated desires for facilities, differences in the motivations within trail user types, and similarities across others are all necessary in developing a successful modern trail system. The Town of Sturbridge, with conservation lands and outdoor appeal similar to rural, northern New England towns but much closer to many urbanized population centers, has a unique challenge in creating trails that are desired and enjoyed by both backcountry and urban trail enthusiasts.

Developing this system will require an eye towards trail user participation trends, desires and motivations, an understanding trail use and natural resource impacts, and the creation of management strategies that jointly provide a feeling of adventure and safety.



TRAIL USE TRENDS

NATIONAL RECREATION TRENDS

The trends in recreational use are of great importance in creating a trail system that will serve the needs of Sturbridge residents and visitors. The trails, their public support, and volunteer stewardship will all suffer if the “wrong” trail product is developed, either because it does not mesh with existing desires of residents, does not provide adequate opportunities for demographics or types of users that typically travel for trail experiences, or does not take into account regional and national trends for trail use. The Outdoor Industry Association (OIA), a national trade group for manufacturing and retail entities involved in providing products for outdoor recreation, provides regularly updated market research. The OIA 2009 Recreation Participation Study provides participation estimates across the board and for particular outdoor activities. Some of the salient points reported include:

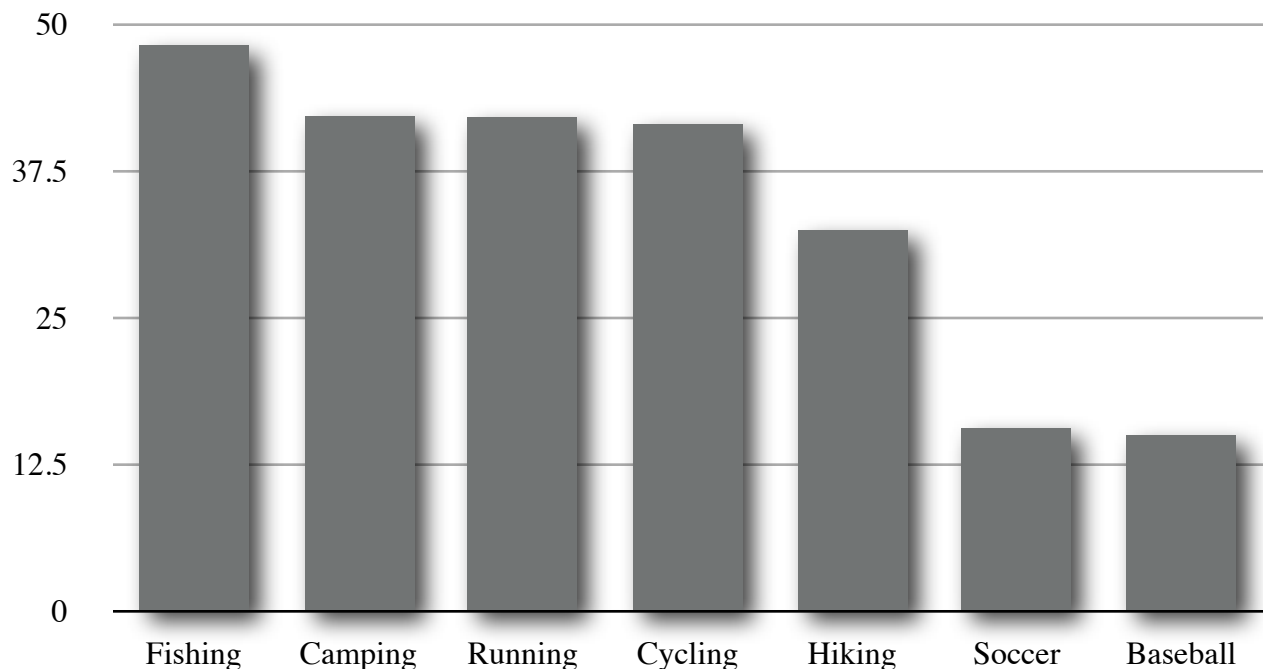
- 48.6% of Americans (6 years and older) participated in outdoor recreation in 2008
- 11.16 Billion trips were made- from close to home to overnight- for the purpose of outdoor recreation
- 43% of those participants got outdoors for recreation less than once every other week
- 43% of outdoor recreation participants are female
- Americans started to get outside more in 2008, and it is reflected in double digit participation increases in trail running, mountain biking, and backpacking and high single digit increases in hiking and camping
- 53% of Americans between the ages of 18 and 44 participated in outdoor recreation in 2008
- 38% of Americans over the age of 45 participated in outdoor recreation in 2008
- Participation rates in New England are estimated at 51% of the population, which translates into 5% of the national outdoor recreation participation
- 66% of outdoor recreation participants have household incomes greater than \$50,000/year



TRAIL USE TRENDS

- 30% of outdoor recreation participants have household incomes greater than \$100,000/year
- Urban-based recreation activities of jogging and road cycling, though very large in total participation, do not show growth, while nature-based activities like trail running and mountain biking are showing rapid growth
- The most popular outdoor activities, by gross participation were fishing (48.2 Million), Camping (42.2 Million), Running (42.1 Million), Cycling (41.5 Million), and Hiking (32.5 Million) and these activities have participation rates that are 2-3 times those of Soccer (15.6 Million) and Baseball (15 Million)
- Over 70% of the participants in these activities also participated in other types of outdoor activities
- Outdoor recreation participation by youth (Ages 6-17) dropped by 6% overall in 2008, but participation rose dramatically in mountain biking (17%), backpacking (16%) and hiking (5%)
- In terms of participation frequency, Running (79 outings/runner), Cycling (51 outing/cyclist), Fishing (17 outings/fisherman), Wildlife Viewing (28 outings/watcher), and Camping (12 outings/camper)

■ US Recreational Participation By Activity Type (Millions of People)



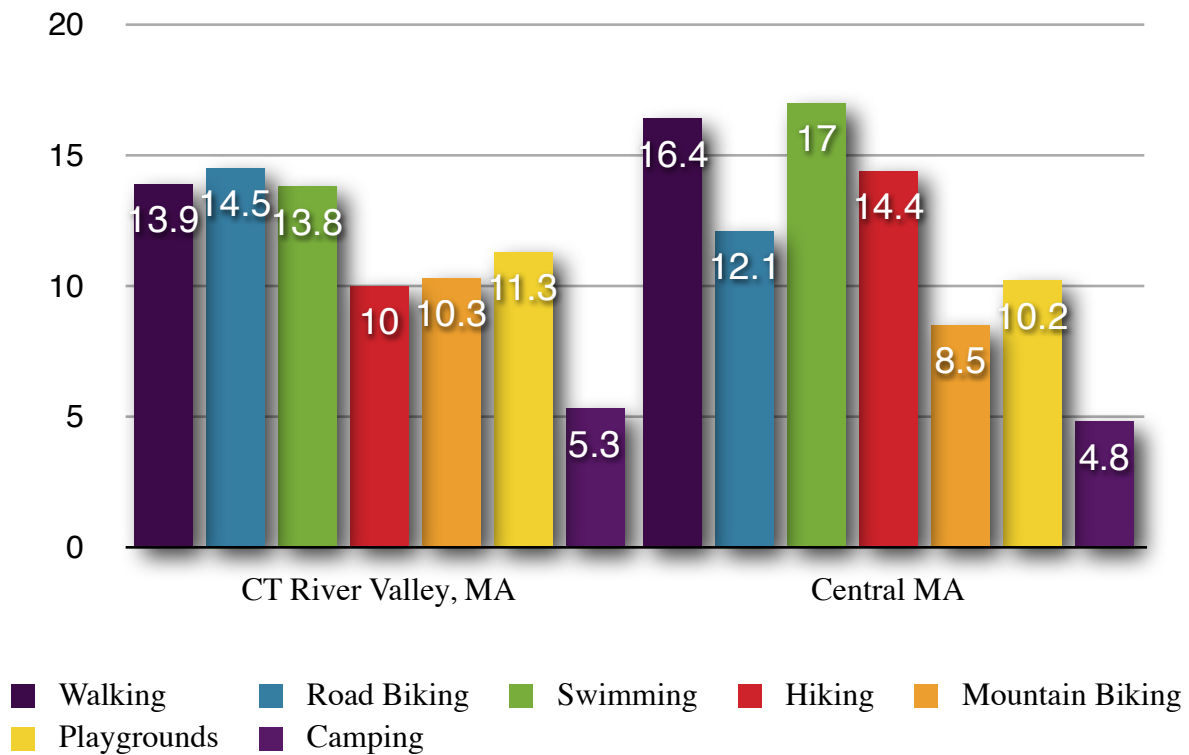
TRAIL USE TRENDS

MASSACHUSETTS RECREATION TRENDS AND DESIRES

At a more local level, states are required to develop a Statewide Comprehensive Outdoor Recreation Plan (SCORP) to be eligible for federal funding in some land conservation programs. Massachusetts is in the process of its 5-year update of the SCORP. Excerpted information presented in the 2005 document includes:

Overall, ***the greatest statewide need is for trail-based activities*** (emphasis added), with walking and road biking indicated as the individual activities in greatest demand.

Highest Desired Recreational Facility Expansion By MA Region (% Desired)



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Trail Dynamics
art & science of trails

