

Franklin's Outdoor Activities & Associated Economic Impact



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Executive Summary

Franklin is a centralized city and the gateway to the New Hampshire Lakes Region, a region famous for outdoor recreation: boating, fishing, hiking, and paddling. However, Franklin has not yet implemented a strategy for capturing some of the market share for these outdoors activities.

Through market analysis and research, this study approximates Franklin's opportunity to be over \$6.83 million in new visitor spending, with an associated indirect & induced spending of \$4.68 million. This is spread over 161,471 annual visitors partaking in outdoor activities, such as, whitewater rafting, kayaking, biking & special events.





1 Introduction

Franklin is the smallest of New Hampshire's 13 cities. It is centered at the confluence of the Winnepesaukee and Pemigewasset Rivers, which combine to form the Merrimack River downstream. The city has a long history of harnessing the power of the rivers to produce cloth, hacksaws, needles and paper. The town was vibrant and alive during the industrial age. Exiting the industrial age and regrouping after war was difficult for city and it has not recovered.

The City of Franklin and Perma City Life, a non-profit organization are working on a major initiative to revitalize the city while focusing on permaculture and sustainability. Their goal is to improve the quality of life within the community, by adding amenities, destinations and activities for visitors and tourists.

1.1 Scope

This study identifies economic impacts due to outdoor activities that are currently possible in Franklin. This specifically includes commercial activities (whitewater rafting, kayak instruction and kayak rentals) and noncommercial activities (whitewater enthusiasts participation and special events).

1.2 Data & Research Methods

All data points within this report are traced to economic impact studies or documentation, which are listed in the Bibliography.

The following steps were used to estimate possible economic impacts for the region:

1. Evaluate national, state, and local trends for associated activity.
2. Determine total user days and non-local percentage of visitors.
3. Calculate economic impact for individual activities.
4. Sum total economic impacts of whitewater recreation to the Franklin area economy.



2 Outdoor Recreation

The outdoor industry's foundation is investments from participants and enthusiasts. Participant spending is centered around experiences (i.e., whitewater rafting, kayaking, biking, climbing) and the associated expenses (i.e., travel, lodging, food, passes). Enthusiasts initially purchase the necessary equipment and lessons which enable them to repeatedly perform a specific outdoor activity. These revenue streams create the outdoor recreation industry, which is the third largest market in the United States with an the annual spending of \$646 billion (Association 2012).

Annual Industry Spending



America's commitment to the outdoors and to core human-powered activities is strong. The Outdoor Recreation Participation Report, by the Outdoor Foundation, documents participation and illustrates this strength;

“In 2013, a record number of Americans — 142.6 million — participated in at least one outdoor activity and collectively, went on 12.1 billion outdoor outings. Although the number of participants rose, the percentage of participants fell slightly from 49.4 percent in 2012 to 49.2 percent in 2013, due to population increase.” (Foundation 2014)

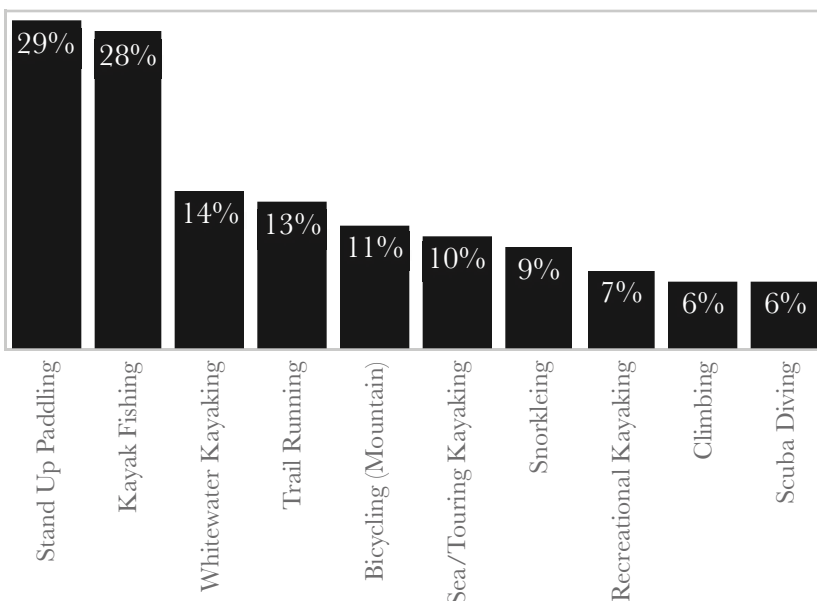
Moreover, the number of participants has steadily increased since 2008. The 12.1 billion outings, when extrapolated over all participants aged six or older, results in 84.6 average outings per participant.



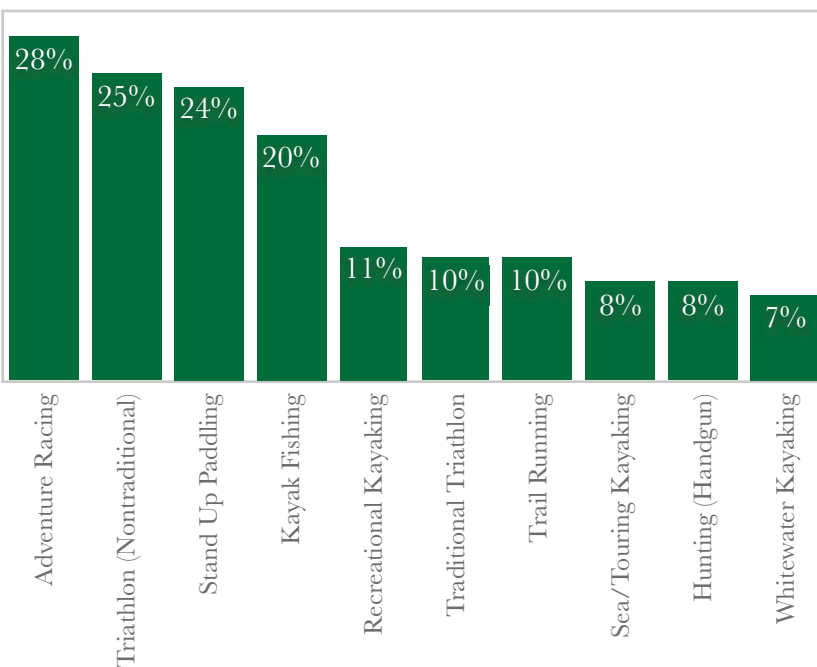
The report also documents the top ten trends in the outdoor industry. The 1 Year Trend and 3 Year Trend graphs illustrate the top ten outdoor trends as documented by the Outdoor Foundation's Report. Out of the top ten, paddlesports are well represented. Stand up paddling, kayak fishing, recreational kayaking, whitewater kayaking and sea/touring kayaking rank among the top activities for both one and three year trends across the outdoor industry. These national trends directly correlate to those outdoor activities provided by the Franklin Outpost.

The table on page 8 utilizes Outdoor Foundation's analysis from 2011 through 2013 (Foundation 2014). New England represents 5% of national activity numbers. Therefore, the rightmost column represents New England's market for each respective activity.

1 Year Trend



3 Year Trend





Participation for Franklin Outpost Activities

Activity	2011	2011	2012	2013	3 Year % Change	% of Population	Number of NE Participants
Road/Paved Bicycling	39,320,000	40,349,000	39,232,000	40,888,000	1.4%	14.10%	2,044,400
Mountain Biking	7,161,000	6,816,000	7,714,000	8,542,000	6.4%	2.95%	427,100
Canoeing	10,553,000	9,787,000	9,839,000	10,153,000	-1.2%	3.50%	507,650
Kayak Fishing	1,044,000	1,201,000	1,409,000	1,798,000	20%	0.62%	89,900
Recreational Kayaking	6,465,000	8,229,000	8,144,000	8,716,000	11.1%	3.01%	435,800
Sea/Touring Kayaking	2,144,000	2,029,000	2,446,000	2,694,000	8.4%	0.93%	134,700
Whitewater Kayaking	1,842,000	1,546,000	1,878,000	2,146,000	6.6%	0.74%	107,300
Rafting	4,460,000	3,821,000	3,690,000	3,836,000	-4.6%	1.32%	191,800
Stand Up Paddling	1,050,000	1,242,000	1,542,000	1,993,000	23.9%	0.69%	99,650
Total	74,039,000	75,020,000	75,894,000	80,766,000		27.85%	4,038,300



3 Franklin Outdoor Recreation & Economic Impact

A number of national and local studies were examined and quoted to evaluate the economic impact of a diverse outdoor facility in Franklin. The subsequent sections will document the available activities and the associated economic impacts of each.

3.1 Commercial Recreation

3.1.1 Whitewater Rafting and Kayaking

Whitewater rafting and kayaking require either recreation releases or a play feature also known as a whitewater park.

Recreation releases have the most economic impact during the warm summer months when all natural flow rivers are at their lowest and children are out of school. These “guaranteed water releases” provide a destination for tourists, vacationers and/or paddlers regardless of skill or ability. Currently, the only consistent New England alternatives are in upstate Maine or Western Massachusetts, 4.5 hours and 3 hrs respectively from Boston. Franklin would also be able to provide a more historical experience due to the rich nature of the Winnepesaukee, Merrimack and Pemigewasset Rivers, which would appeal to many local school systems.

A play feature or whitewater park, in this location’s context, is the improvement of the river to add more features to appeal to customers and paddlers. These features provide the ability to surf and perform freestyle or play boating tricks. Across the nation, play features are being manufactured into existing rivers. Locations with these amenities become more attractive to all participants.

Guaranteed water releases are a requirement for a dam-controlled river. Without the water allocation, measured in cubic feet per second (cfs), the river may not run without significant engineering. Through coordination with the NH Department of Environmental Services Dam Bureau, it is possible to establish whitewater releases.

Permit structures are used to control the amount of people that visit a river annually. The Chattooga and the Middle Fork of the Salmon Rivers both implement such a structure to maintain their designation as a Wild and Scenic River or to minimize the number of participants.

The following table identifies the strength of the rafting industry by examining eight rivers throughout the United States. The table documents the number of rafters per season, the



percentage of non-locals (defined as anyone traveling more than one hour to the destination), the number of river days in the season and number of rafters per day.

Unlike most tourist or vacation destinations, whitewater rafting participants do not highly value the surrounding area. The allure is the experience and the convenience to reach the location to partake in the experience. The Population Density graph illustrates the market at one, three, and six-hour drives, and compares it to the eight other successful rafting destinations.

In order to estimate the economic impact, two assumptions were made. First, the 200 rafters per day permit system utilized on Maine's Kennebec River was implemented. Second, instead of utilizing the calculated 72.23% average of non-local participation (which identifies the rafters driving

Summary of Whitewater Rafting by Location

River	Location	Year of Study	# of Rafter/Season	Non-Local % ¹	# of Releases/Season ³	Rafter/Release
Kennebec River	The Forks, ME	1996	36,000	> 77.8% ²	178	202
Gauley River	Fayetteville, WV	1996	45,000	> 99.2% ²	25	1,800
Chattooga River	Clayton, GA	1996	39,000	> 72.8% ²	140	279
Middle Fork of the Salmon	Stanley, ID	1996	4,500	> 95% ²	98	46
Truckee River	Reno, NV	2000	16,000	75%	37	432
Ocoee River	Ducktown, TN	2012	229,542	47.26%	115	1,996
Clear Creek	Golden, CO	2000	13,170	45%	153	86
Animas River	Durango, CO	2006	52,700	66%	150	351
Average			54,489	72.23%	112	649

Notes:

¹ - Non-Local is defined as anyone traveling more than 1 hr to the destination.

² - Study for Kennebec, Gauley, Chattooga, & Middle Fork of the Salmon Rivers identified percentages as the number of participants from out of state.

³ - Number of River Days is based of American Whitewater release schedules for 2015.

Population Density in Proximity to Comparable Rivers

River	Location	1 hr drive ¹	3 hr drive ¹	6 hr drive ¹
Winnepesaukee River	Franklin, NH	1,566,152	16,154,112	50,263,678
Kennebec River	The Forks, ME	100,531	2,612,633	2,105,199
Gauley River	Fayetteville, WV	726,756	13,658,670	81,541,581
Chattooga River	Clayton, GA	1,613,462	18,330,689	50,573,037
Middle Fork of the Salmon	Stanley, ID	22,375	1,483,306	7,460,178
Truckee River	Reno, NV	608,697	8,584,862	21,548,404
Ocoee River	Ducktown, TN	2,050,800	18,068,748	52,039,131
Clear Creek	Golden, CO	2,857,800	4,941,827	8,706,970
Animas River	Durango, CO	230,674	1,963,171	11,203,295

Notes:

¹ - 2010 US Census Bureau Tiger Data Set utilized to generate population density numbers. No Canadian census data was used.



more than one hour), the Ocoee River's non-local percentage of 47.26% was selected. The Winnepesaukee River is most similar to the Ocoee River. They share resemblances in regards to population density, proximity to a major city, and to geographic location. Franklin is the gateway to the Lakes Region, and en route to the White Mountains; the Ocoee River lies between Chattahoochee National Forest and the Great Smokey Mountains National Park.

Economic Impact due to Whitewater Rafting

Rafters Per Release	Non-Local %	Number of River Releases	Net New Visitor Spending	Jobs	Indirect & Induced Spending
200	47.26%	100	\$415,888	9	\$145,696

Working with the NH Department of Resources & Economic Development (DRED) the above table was generated to illustrate the impact due to rafting. This table is constructed with an understanding that the participants are regular tourists who are already coming to NH. However, it is assumed that visitors would stay a half-day longer due to the new attraction, and therefore, half a day's worth of typical visitor spending (\$88/day) is attributed to each person.



3.1.2 Kayak Instruction & Rental

Instruction and rental programs offer an avenue for every skill level to improve and an activity for every customer. Rentals considered are canoes, kayaks and stand up paddleboards.

The American Canoe Association (ACA) National Survey on Recreation and the Environment (NSRE) 2010 Paddlesport Participation Report is used to evaluate the market size of instruction and rental programs. Based on data collected by surveying participants, this study suggests that 47.8% of paddlers identify as novices (Association 2010). Further, 34.4% of novices either rent or borrow kayaks every time they paddle, and 34.8% of novices receive on-water instruction or workshop courses (Association 2010).

Extrapolation of the ACA Report using the following formulas yielded 257,632 New England paddlers renting or borrowing and 260,627 attending instructional courses.

$$\begin{aligned} & \text{Estimate of Paddlers Renting or Borrowing} = \\ & \text{Number of New England Paddlers} \times \text{Percentage of Novices} \times \text{Percentage Renting or Borrowing} \end{aligned}$$

$$\begin{aligned} & \text{Estimate of Paddlers Attending Instruction Courses} = \\ & \text{Number of New England Paddlers} \times \text{Percentage of Novices} \times \text{Percentage in Instruction Courses} \end{aligned}$$

These are strong numbers to define the market for these activities, but not a conservative estimate based on performance. A secondary study analyzed is the Economic Impact Study of the Animas River in Durango, CO, which published findings from two interviews with outfitters offering instruction and rental programs. The study documented 2,360 customers in 2006 (66% non-local) who spent \$209,679 (Consulting 2006). A linear extrapolation of Durango and Franklin, based on population density within a one hour drive yielded 16,023 annual customers in Franklin.

A linear extrapolation estimate based off one data ratio carries inherent risk. However, the population disparity between the two locations is significant, as documented by the Population Density in Proximity to Comparable Rivers Table in Section 3.1.1. It is this set of data points that demonstrates how conservative the estimate is.



Economic Impact due to Instruction & Rentals

Location	Annual Visitors	Non-Local %	Net New Visitor Spending	Jobs	Indirect & Induced Spending
Franklin, NH	16,023	66%	\$1,861,232	40	\$652,037

These activities are primarily for enthusiasts, as they are not offered anywhere else in the region. Hence, the majority of these visitors are non-local. It is assumed that non-local participants will be spending two full days in the region.



3.1.3 Bicycle Retail & Rental

According to the Outdoor Industry, biking is the second most popular activity, behind running. Studies in Vermont, New York, North Carolina, Montana, Oregon and Michigan show that this growing market seeks...

“safe, mostly off-road cycling between historic communities; scenic landscapes, historic sites, parks and other attractions; detailed maps and route descriptions; and cycling options ranging from day trips to week long adventures.” (Corporation 2014)

Similarly,

“the three most important factors in choosing a mountain bike destination are variety of trails, ease of getting to destination, and the number of trails.” (Steve Posner 2012)

These quotes define the model of Franklin: easily accessible off two I-93 exits, and already established as a diverse center for biking, with access to the world’s only 100% mountain bike park, Highland Mountain Bike Park, multiple New England Mountain Biking Association (NEMBA) public trail systems, and rail trail systems running across the state from Lebanon through Franklin to Salem.

Interconnecting the rail trails with NEMBA sites and conservation areas will provide more opportunities for bicyclists and economic stimulus for the region. The many venues provide an opportunity for everyone at every skill level on all types of surfaces. The table to the right identifies the Franklin biking network.

The Concord-Lake Sunapee Rail Trail (CLSRT) Economic Impact Study approximates that

Local Mountain Biking Network

Number of River Releases	Type	Location	Length of Trails
Winnepesaukee River Trail	Rail Trail	Franklin to Tilton	5 mi
Spaulding Woods	NEMBA	Northfield	10 mi
Knowles Pond	Conservation Area	Northfield	~ 5 mi
Franklin Falls	NEMBA	Franklin	10 mi
Northern Woods Rail Trail	Rail Trail	Lebanon to Boscawen	55+ mi
Page Hill	NEMBA	Hill	7 mi (8 mi)
Highland Mountain Bike Park	Downhill Bike Park	Northfield	30+ mi
Great Gains Memorial Forest	NEMBA	Franklin	5 mi
WOW Trail	Rail Trail	Lakeport to Meredith	1.4 mi (9 mi)

Notes:
(# mi) - indicates the number of miles planned or under construction.



106,148 annual visitors would use the trail system, of which 80% are non-local participants (Development 2015). The report illustrates that the trail is primarily for running, walking and biking. However, this trail is not diversified for mountain bikers.

Therefore, economic impact due to mountain bikers was approximated by analyzing the Millstone Trail Association (MTA) and Kingdom Trails in Vermont (VT). Franklin's

economic impact due to mountain biking is modeled after these two sites. A linear extrapolation based on population density between the VT sites and Franklin yields 19,300 annual bikers in and around the region. Linear extrapolation was utilized to estimate economic impact in Section 3.1.2. Unlike the previous section, the VT trail systems are similar in location, demographic and population density. These qualities mitigate the risk mentioned in the previous section.

VT Mountain Bike Trail Summary

River	Location	Year of Study	Visitors/Year	Non-Local % ¹
Millstone Trail Association	Town of Barre, VT	2012	5,500	> 15% ¹
Kingdom Trails	Burke, VT	2012	9,056	75%
Average			7,278	45%

Notes:

¹ - Study for MTA identified non-local percentage as the percentage of participants from out of state.

Population Density in Proximity to Comparable Bike

Location	Location	1 hr drive ¹	3 hr drive ¹	6 hr drive ¹
Interconnected Trail System	Franklin, NH	1,566,152	16,154,112	50,263,678
Millstone Trail Association	Town of Barre, VT	676,963	13,170,982	50,721,999
Kingdom Trails	Burke, VT	504,173	9,854,712	45,618,909

Notes:

¹ - 2010 US Census Bureau Tiger Data Set utilized to generate population density numbers. No Canadian census data was used.

Economic Impact due to Biking Service, Sales & Rentals

Activity	Annual Visitors	Non-Local %	Net New Visitor Spending	Jobs	Indirect & Induced Spending
Mountain Biking	19,300	45%	\$1,528,560	33	\$535,494
Running, Walking & Biking	106,148	80%	\$934,076	20	\$452,353
Totals	125,448		2,462,636	53	987,847



3.2 Noncommercial Recreation

On any given day you can find whitewater kayakers, canoeists, squirt boaters, stand up paddler boarders, river boarders, and rafters enjoying a whitewater river. Whitewater paddling, although a niche sport, is a growing one with a faithful following.

These same enthusiasts flock to multiple river and outdoors festivals as well as competitions. The most common motivation for enthusiasts is the quality and proximity of a given river. The Winnepesaukee River already has a favorable reputation for these reasons. Similarly, it already has a large following for the two guaranteed water releases, including one on New Years Day, which is growing in popularity each year.

Possible scenarios that can increase the amount of days the river is usable are increasing the amount of guaranteed releases or modifying the river features to create play features (or a whitewater park). Both possibilities are discussed in Section 3.1.1. The addition of a whitewater park would have a profound impact on the region and bring the ability to host festivals or events. The closest manmade play feature is in New York on the Sacandaga River. Although many are proposed, none have been constructed in New England.

The impact due to play features is well documented. As identified in the Site Visit and Conceptual Design Study of the Asheville Whitewater Park.

“The impacts of these parks are manifold and are based on regular usage at the Whitewater Park, as well as instructional programs, competitions, festivals, and other attractive events. Freestyle events that occur in Colorado every year can bring millions of dollars into the local economy on a single weekend alone. For example, the TEVA games in Vail, CO have a documented yearly economic impact of \$3.5 million dollars. In addition to creating economic impacts, these events also help to market a particular community as an outdoor town and whitewater destination.” (Shipley 2015)

In New England, there are no whitewater parks. Similarly, there are only a couple medium scale events for outdoor enthusiasts and paddlers. The following table, also from Asheville Study, shows the success of multiple whitewater rivers altered with manmade features.

The sky is the limit for the economic impact of the Winnepesaukee River. It can be compared, as illustrated in this study, to such destinations as the Ocoee River (229,000 annual user days in 2012), or to Gore Creek in Vail, CO (1,000 to 2,300 annual user days). Simply stated, the success of such a destination lies in the design and the amount of money invested in the improvements.



The averages from the Whitewater Park Summary were implemented to estimate economic impact. As previously explained, these averages should be considered a highly conservative estimate. As a non-local percentage was not documented in the Asheville Study, the percentage utilized in Section 3.1.1 for whitewater rafters was implemented. This is due to the significant similarities between demographics for the outdoor enthusiast and whitewater rafter.

Whitewater Park Summary & Economic Impact

River	Location	Annual User Days	Net New Visitor Spending	Indirect & Induced Spending
Clear Creek	Golden, CO	13,000 - 14,000	\$910,000 - \$1,100,000	\$1,300,000 - \$2,200,000
Blue River	Breckenridge, CO	1,200 - 2,300	\$220,000 - \$460,000	\$400,000 - \$1,100,000
Gore Creek	Vail, CO	1,000 - 2,300	\$3,500,000	\$3,500,000 - \$4,000,000
Sacandaga River	Saratoga County, NY	17,600 - 25,400	\$1,800,000 - \$2,800,000	\$2,300,000 - \$3,700,000
Cuyahoga River	Kent, OH	10,000 - 40,000	\$200,000 - \$800,000	\$500,000 - \$1,700,000
Yampa River	Steamboat Springs, CO	75,700	\$4,900,000	\$7,200,000
	Averages	23,183	\$2,090,833	\$2,895,833



4 Conclusion

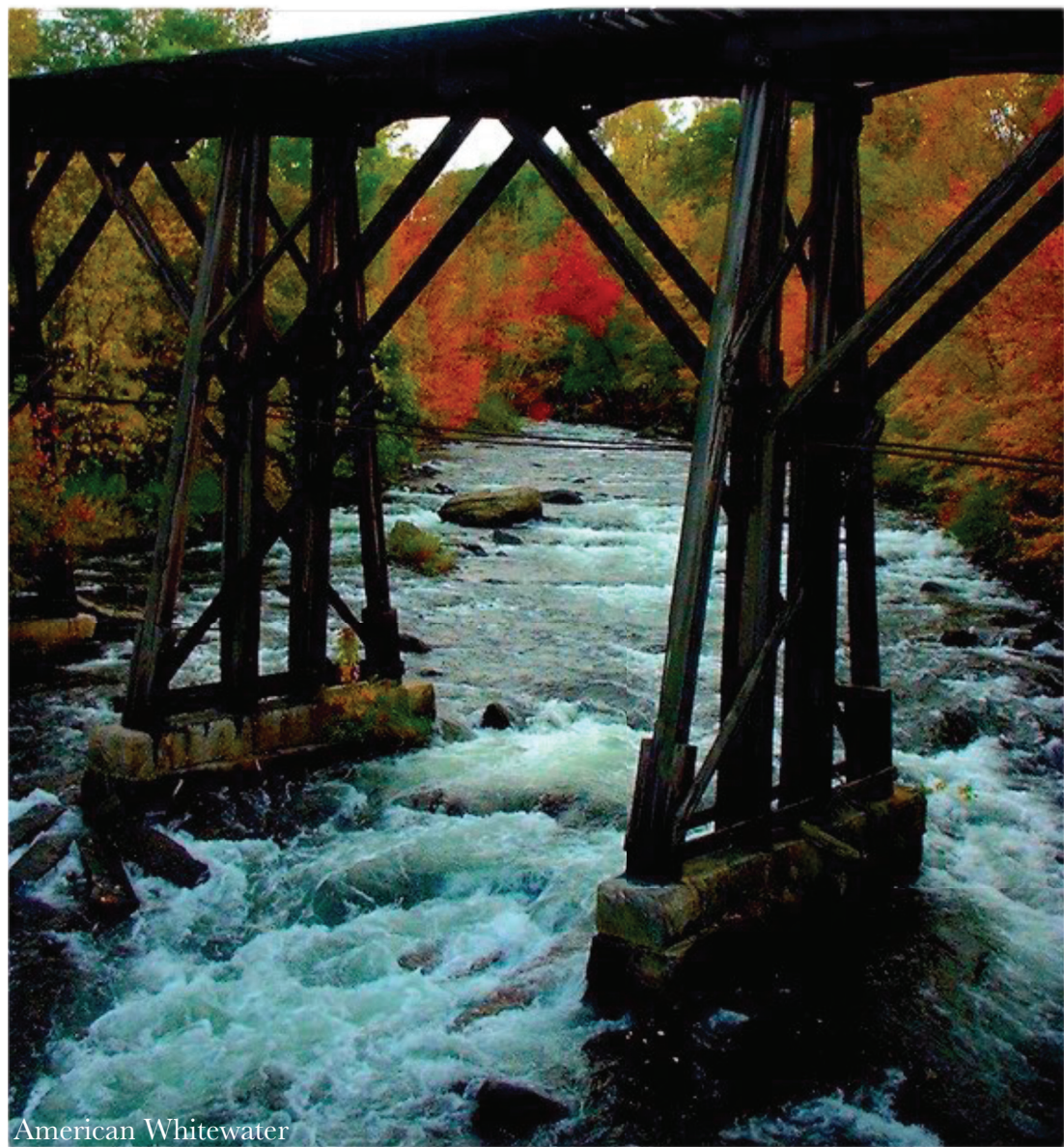
Franklin has a unique opportunity to strengthen its economic future and stature in the diverse Lakes Region through outdoor experiences utilizing existing infrastructure.

Total Economic Impact

Activity	Annual Visitors	Net New Visitor Spending	Indirect & Induced Spending
Whitewater Rafting	20,000	\$415,888	\$145,696
Kayaking	16,023	\$1,861,232	\$652,037
Biking	125,448	\$2,462,636	\$987,847
Noncommercial Recreation	23,183	\$2,090,833	\$2,895,833
Totals	161,471	\$6,830,589	\$4,681,413

The benefits are more than the numbers presented in the Total Economic Impact table. Benefits include but are not limited to:

- Increasing the community's quality of life
- Developing a community identity & building a sense of pride
- Creating environmental attachment & promoting Franklin as a regional outdoors destination
- Providing opportunities to community, business owners, sponsors, vendors & entrepreneurs
- Increasing property values





Appendix A: Acronyms & Abbreviations

ACA	American Canoe Association
cfs	cubic feet per seconds
CO	Colorado
CLSRT	Concord-Lake Sunapee Rail Trail
DES	Department of Environmental Services
DRED	Department of Resources & Economic Development
GA	Georgia
ID	Idaho
ME	Maine
MTA	Millstone Trail Association
NEMBA	New England Mountain Biking Association
NH	New Hampshire
NPO	Non-Profit Organization
NSRE	National Survey on Recreation and the Environment
NV	Nevada
NY	New York
OH	Ohio
TN	Tennessee
VT	Vermont
WV	West Virginia



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A Vision for the Winnepesaukee River at Franklin Falls, New Hampshire



December 2016



MILL CITY PARK
AT FRANKLIN FALLS

John Anderson Architect, LLC and The Shimoda Group for PermaCityLife with Funding from Timothy Horne, Watts Water Technologies & Crowdfunding from Franklin's Community with New England's Whitewater Paddlers

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Project Need & Purpose

Act I | Mill Town

The Winnepesaukee River once had nine dams that powered a diverse manufacturing and mill economy in Franklin Falls from the mid-eighteenth century until the 1970's. Two dams remain in the center of town while the rest have fallen into the river through aging and subsequent floods. There are two disused rail bridges that could be rehabilitated for hike/bike trail crossings.

At its peak, Franklin Falls was one of the richest enclaves in the state of New Hampshire with 14,000 residents. The prosperity of the mills fostered arts, entertainment and culture. Today there is no manufacturing and the two remaining dams produce a small amount of hydropower, but few jobs.



Although New Hampshire has the lowest poverty rates in the nation (8.7%), Franklin's poverty rate is 12.9%—nearly 50% higher. New Hampshire has no income tax and no sales tax, but instead relies heavily on property taxes for public services. Poor communities, such as Franklin Falls with lower property values, suffer disproportionately under this scheme—the school system was recently forced to lay off 24 teachers due to budget shortfalls. Sixty-four percent of the children enrolled in public schools are on a free or subsidized lunch program, further complicating budgeting issues.

As the 13th New Hampshire City, Franklin is the smallest, the poorest, it has the lowest level of higher education, the second highest concentration of lead paint and a lot of stigma. The loss of jobs, residents, and a sense of identity impacts the downtown district which has vacancies and boarded windows.

Act II | Outdoor Adventure Sport Destination

This project envisions restoring the Winnepesaukee River as an economic engine for Franklin Falls through active recreation and sustainable-visitor driven economy. The whitewater river together with the 135 miles of nearby of hike-bike trails in the area will draw visitors from the Lakes region and greater Boston area. This will be accomplished by:

1. Physical restoration of the river—clearing out debris from former dams and resolving safety issues.
2. Creation of high performance whitewater features targeted at the downtown Mill District
3. Redevelopment of the International Paper parcel as an adventure-sport destination with eco-lodging, a waterfall, outdoor event space, parking, a mountain bike pump track, and trails.



The genius of the early mill development is the degree to which a very small amount of hydro power (by today's standards) could be harnessed to create jobs and to power the most vibrant economy in the state at the time. Today's challenge is to leverage the natural beauty of the river, its challenging Class III rapids, and its proximity to population centers into an economic engine for Franklin Falls.

In a world of themed attractions and virtual experiences, the authenticity of this project should be refreshing. Visitors to Franklin will find an exhilarating river run and a quintessential New England mill district with a unique sense of place, and one-of-a-kind stores and restaurants.

Why Franklin Falls?

Franklin Falls is well positioned to capture visitors from New England and further south. The Winnepesaukee Lake District, the largest tourist draw in the State, is short drive to the east. Boston, New England's largest population center, is an hour and a half south. Winnepesaukee Lake District visitors would be largely comprised of weekly rentals and seasonal residents that generally would require services of an outfitter in order to enjoy the river. In addition, there would be weekend trips by whitewater enthusiasts and surfers who have their own equipment and would come for high quality whitewater features. Provided that there was night lighting and features of sufficient reliability and quality, enthusiasts would even come after work for a half-day's experience.



The following table shows the travel times from Boston to the other New England whitewater destinations.

Destination	Distance (miles)	Travel (No traffic)	Rafting	WW boating	River Surfing
Franklin Falls, NH	88	1:30 hours	Yes	Yes	Yes
Deerfield River, Charlemont, MA	112	2:23 hours	Yes	Yes	No
Sacandaga River, Hadley, NY	221	3:26 hours	Yes	Yes	No
West Br. Penobscot R., ME	310	4:27 hours	Yes	Yes	No
Kennebec River, ME	225	3:30 hours	Yes	Yes	No

The Target Audience for This Project

- **Whitewater rafting** is comprised of occasional users who require an outfitter's specialized equipment and support in order to enjoy the river.

- **Whitewater boating** enthusiasts are self-equipped, skilled, and routinely travel to the whitewater destinations above to enjoy river trips. Standing waves and “holes” are especially prized, and this group will often make a special trip when a high-quality whitewater feature is running. The last 20 + years has seen an explosion of purpose-built “park and play” whitewater features on urban rivers. These collectively are known as “whitewater parks.”
- **River surfing** is a fast-growing sport in the Rockies where standing waves are being included in newer whitewater parks. The hydraulic formation for this sport is different from those used by whitewater boaters. The nearest river surfing wave in the East is located in Columbus, Georgia.
- **Mountain biking** and other adventure sports are routinely enjoyed by the groups above and may be self-equipped or require the services of an outfitter.

Flow, Drop & Access

The key ingredients for the beneficial use of a whitewater river are flow drop and access—the same ingredients sought by the first mills in 18th century. By existing water pact, the minimum flow in the Winnepesaukee River is 236 cfs—adequate for a whitewater park and play feature. Flows are frequently in the 300 to 500 cfs range, thanks to the large storage and management of Lake Winnepesaukee. Ample drop in the 1.25-mile whitewater run creates continuous Class III rapids. Physical access to the river is adequate but would need to be improved for commercial outfitting.



Of prime economic importance is visual access to the river by non-participants and strong connections from the business mill district to the river. Trestle View Park was created especially for this purpose—to allow views of the river and the iconic rail trestle.

On a scale of five paddles we rank the Winnepesaukee River:

Flow



Flow (with supplemental pumping or water releases)



Drop



Access





Project One | River Restoration

The one and a quarter-mile long whitewater run from Cross Mill Road to Trestle View Park was once populated by seven dams (not counting their predecessors). None are in existence now having been either demolished or reclaimed by the river. At low water one may see their winnowed remains—timber cribs, iron bars and stone masonry rubble. A full survey and documentation of the river and the dam remnants would be required before undertaking a river restoration as described here.

The chief purpose of the restoration would be to reduce the safety problems created by the dam remnants. Clearing the river of the most dangerous debris would enable floating the river at lower river levels common in the summer months—236 to 400 cfs. This would in turn attract river outfitter(s) who would offer river trips to visitors already in the Lakes Region who would otherwise not have a reason to come to Franklin. At low flow, an outfitter may offer unguided trips in inflatable kayaks and rafts, while at high flow (1,000+cfs) guided rafts may be more appropriate. Project proponents intend to invite rafting companies to tour the river to offer more specific guidance on the commercial viability of the Winnepesaukee whitewater run.

To support commercial rafting, both the put-in at Cross Mill Road in the Town of Northfield, and the takeout in Franklin Falls would need to be improved in order to handle increased volume.

Work within the river would require detailed mapping and documentation of the dam remnants and prioritizing their removal. Generally, the priorities would be:

1. Removal of debris piles that render the river impassable even at high flow, e.g. Coliseum rapid
2. Removal iron tie bars and loose timber cribbing
3. Removal of loose masonry rubble, especially those with flow running underneath, creating pinning and entrapment hazards.

Monitoring of dam remnants that are stable but may become dislodged in the future.

A river clean-up on this scale would be ambitious and expensive. Work methods in the river (wet vs dry), water control, documentation of historic remains, direct and indirect impacts to the environment would all have to be weighed and factored into the engineering, permitting and construction costs of the project.

Coliseum rapid at low flow. The jumble of dam debris is scarcely runnable at high water and the mill ruins are in need of stabilization.



Project Two | Trestle View Park

The Trestle View Park is a source of pride for Franklin Falls. It overlooks the river and the old rail trestle and it has a takeout for boaters. During the annual New Year’s Day release, it is populated by on lookers, boaters, and has a warming / refreshment tent. The park is located at the end of the Class III whitewater run where the river flows into the Stevens Mill Dam impoundment.

This project envisions two whitewater waves within the dam impoundment separated by a short pool. “Whitewater Parks” as they are known, are quite common in the Rockies and plains states. In the Denver, Colorado region, even common infrastructure projects such as irrigation dams, utility crossings and grade control structures are all required to be passable in whitewater boats. Communities that invested in purely recreational whitewater parks have seen significant economic benefits: visitor spending, quality of life, and ability of employers to attract and retain a young, educated and skilled workforce. In the East, a large whitewater project in Columbus, Georgia has attracted over 100,000 paying raft customers in its first three years and has resulted in a significant increase in real property valuations.

Key Features of this Project:

Safety Improvements | Safety is a major concern at the trestle bridge. Safety improvements considered include:

1. Repairs and stabilization of the masonry piers—replacement of lost mortar, removal of trees that threaten the foundation.
2. A whitewater sill designed to slow water velocities in the region just upstream of the piers, thereby reducing the hazard of pinning. Removal of loose boulders and iron from former dams.
3. The sill would have a whitewater wave / hole feature for park and play kayaking.

High Performance Whitewater Feature | A high-performance whitewater wave in the Stevens Mill pool would include adjustable vanes so that the hydraulic formation could be tuned to either a green wave for surfers or a retentive hole for kayakers. A similar wave in Boise, Idaho is run on a schedule for both user groups so they can plan their visits. An optional pumping system would recycle river water during low flow periods to boost flow in the two whitewater features.



High Visibility | Because of its adjustability, the lower wave would be a sought-after competition venue for both river surfing and freestyle kayaking. To facilitate event viewing, the south banks of the river within the park would be terraced like an amphitheater for greater spectator capacity. The private parcel on the north bank, currently an auto parts store, may attract a higher and better use.



Improved Connections and Access | Both whitewater waves would be accessible from a river edge path along the south shore. At the downstream end, there would be a higher capacity takeout for commercial outfitters and an improved path to the parking lot. At the east (upstream) end, the path would rise to the grade of the riverside trail and connect to the Trestle Bridge.

Project Challenges

To date no whitewater parks have been built in New England and would be new ground for environmental review and permitting in New Hampshire. The project would have to be designed by a licensed professional engineer and be designed with careful attention to hydraulics and impacts to surrounding properties. Fill within the floodway would require a Corps of Engineers permit which requires detailed flood hydraulic analysis. This analysis would have to either show a no impact to flood elevations or include a flood map revision. Proponents intend to seek the council of an environmental permitting firm to review this topic in more detail. The proponent's initial review of the project with permitting agencies in November 2016 suggests that the entire project should be permitted at one time and not piecemeal. To agencies, the environmental cleanup and water quality is an important priority. They were surprised to learn of the quantity of mill ruins and dam remnants still present in the river and suggested that these too could become a priority.



Project Three | International Paper Site

The International Paper Mill site is partially owned by City and partially private land, so the discussion below is general and aspirational in nature. The vision presented here would be contingent upon a full review of property ownership and possible environmental contamination. Proponents envision this site as a semi-rustic destination with eco-lodging, parking event space, historic interpretive trails, and a mountain bike pump track. Guiding principles:

Improved Connections & Parking

1. **Parking** | Parking along the northern edge of the site for re-developed International site, outfitters, and overflow parking for the downtown mill district.
2. **Trestle Bridge** | A pedestrian path mounted to or adjacent to the rail trestle would provide a strong connection from the International Paper site to Trestle View Park and to the Mill District. If found to be unfeasible, a scheme to improve and significantly widen the sidewalks along the Route 3 bridge should be considered.



3. **Sulfite Bridge** | Restore the Sulfite Bridge deck as multi-purpose trail crossing. Repair the piers to address safety issues with undercut faces and degrading stone masonry.

Interpretive Trails & Overlooks

1. **Rail Grade** | Create a multi-purpose trail on the existing rail grade from Trestle Bridge to Sulfite Bridge. Connect to the Winnepesaukee River Trail and designate a 5K walking-running loop beginning and ending at Trestle View Park.
2. **Mill Ruins Trails** | Delineate interpretive trails and exhibits among the mill ruins. Rebuild selected structures. Create an interpretive exhibit on the dams that once harnessed the river power—possibly including re-created a sections of timber crib dam and a stone masonry dam.
3. **River Overlooks and Riparian Protection** | Delineate a riparian protection zone along the slopes to the river with limited access. Designate viewing areas of the river at several locations in order to channel foot traffic to a few high-quality views. This will limit contain foot traffic and limit disruption to more sensitive areas.

Active Recreation & Events

1. **Re-created Falls** | Utilize river water or pumped water to create a natural rock falls similar to those found in the White Mountains. Include a swimming hole adjacent to the river at the base of the falls.



2. **Mountain Bike Pump Track** | Develop a free network of biking trails on the plot of land that are interwoven seamlessly to the nature and historical elements of the land. Attracting this park to paddlers and bikers alike.
3. **Open space for events** | Thin (but do not clear) a flat area within the forest for events and festivals.

Appendices

Figure 1 | Overall Plan

Figure 2 | Trestle View Park

Figure 3 | International Paper Site

Figure 4 | Trestle View Park Illustration

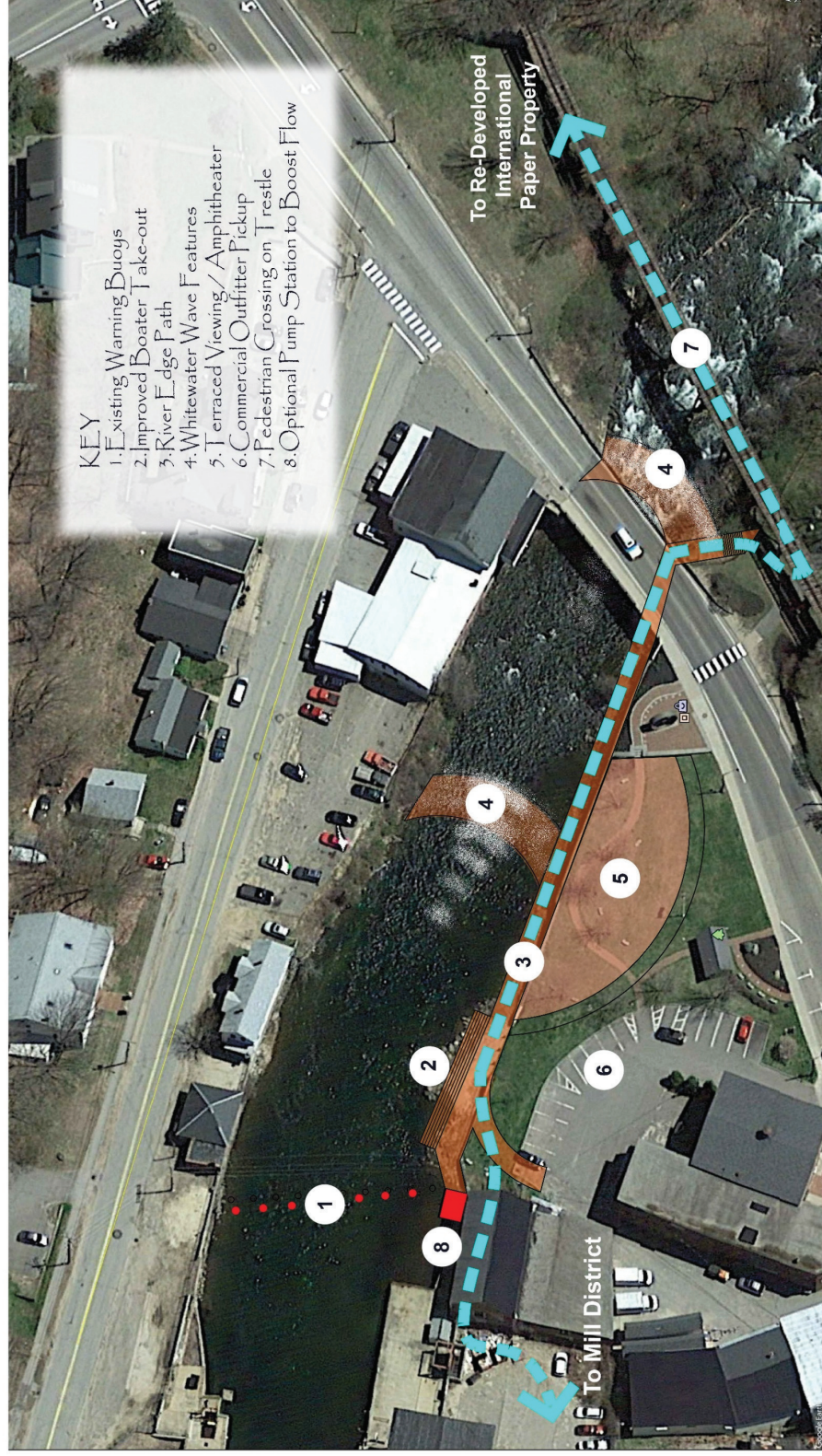
Figure 5 | Trestle Bridge Illustration

Figure 1 | Overall Plan



OVERALL PROJECT AREA
FRANKLIN FALLS TO CROSS MILL ROAD

Figure 2 | Trestle View Park



Project 2
WHITEWATER FEATURES AND VIEWING
at TRESTLE VIEW PARK

Figure 3 | International Paper Mill Site



Project 3
INTERNATIONAL PAPER PROPERTY
& LOOP TRAIL

Figure 4 | Trestle View Park Illustration



Figure 5 | Trestle Bridge Illustration



CITY OF FRANKLIN, NEW HAMPSHIRE
NHCDDFA TAX CREDIT APPLICATION
for
WHITEWATER PARK IMPROVEMENTS

Project Finance and Development

EXHIBIT R

Development Budget and Detailed Sources and Uses

**FRANKLIN WHITEWATER PARK PROJECT
COMPREHENSIVE SOURCES AND USES**

HIGHLIGHTED SOURCES ARE PENDING

PROJECT COMPONENTS:

	"A"	"B"	"C"		TOTAL
			Phase 1	Phase 2	
			Design, engineering and permitting of proposed Whitewater Park improvements.	Construction of Whitewater Park: in-river features and land-based amenities.	
SUMMARY OF PROJECT ACTIVITIES	Land acquisition and improvements at Mill City Park	Improvements to trail connections, pedestrian safety, and river crossing (Trestle Bridge).			Whitewater Park and Associated Improvements
SOURCES OF FUNDS					
Land and Water Conservation Fund	\$ 200,000		\$ 23,000		\$ 200,000
City of Franklin (Cash)					\$ 23,000
City of Franklin (TIF Bond)				\$ 300,000	\$ 300,000
Mill City Park (Cash)	\$ 166,697	\$ 28,000	\$ 15,065		\$ 209,762
Morrill's Landscaping (In-Kind)	\$ 30,000				\$ 30,000
Mink Hill Timber Framers (In-Kind)	\$ 50,000				\$ 50,000
Detzel Surveying (In-Kind)			\$ 30,000		\$ 30,000
NHDOT Transportation Alternatives Program (TAP)		\$ 512,000	\$ -	\$ -	\$ 512,000
CDFA Tax Credit Program		\$ 200,000		\$ 400,000	\$ 600,000
U.S. Economic Development Administration (EDA)			\$ 64,835		\$ 64,835
State of New Hampshire (Special Appropriation)				\$ 1,500,000	\$ 1,500,000
TOTAL SOURCES OF FUNDS:	\$ 446,697	\$ 740,000	\$ 132,900	\$ 2,200,000	\$ 3,519,597
USES OF FUNDS					
Property Acquisition	\$ 74,400	\$ -	\$ -	\$ -	\$ 74,400
Design/Engineering/Permitting	\$ 30,000	\$ 75,000	\$ 104,900	\$ 30,000	\$ 239,900
Construction	\$ 268,490	\$ 610,000	\$ -	\$ 1,920,000	\$ 2,798,490
Construction Engineering		\$ 55,000	\$ -	\$ 150,000	\$ 205,000
Materials and Equipment	\$ 10,000		\$ -	\$ -	\$ 10,000
Project Coordination	\$ 40,000		\$ 23,000	\$ 100,000	\$ 163,000
Environmental Review	\$ 5,000		\$ -	\$ -	\$ 5,000
Other - Financing Strategy	\$ -		\$ 5,000	\$ -	\$ 5,000
Other - Master Planning	\$ 18,807		\$ -	\$ -	\$ 18,807
TOTAL USES OF FUNDS:	\$ 446,697	\$ 740,000	\$ 132,900	\$ 2,200,000	\$ 3,519,597