Claiming the Williams Riverfront: A Cole Field Bike Path and Riverwalk Accessibility Study



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Julie Jung MaryKate O'Brien Claire Swingle Hannah Van Wetter

Clients:
Todd Holland
Tim Kaiser
Lauren Stevens

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I. Acknowledgements

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We would also like to thank our clients, Lauren Stevens, Todd Holland and Tim Kaiser, who provided the motivation for our project as well as assistance and guidance throughout the semester. Our interviewees contributed valuable information to our project: especially Andrew Groff of the Williamstown Planning Board; Rebecca Williamson of Greenman-Pedersen Inc.; Drew Jones, Dave Fitzgerald, Fred Puddester, and Ralph Bradburd of Williams College.

Lastly, thank you to the 498 members of Williams College community, whose responses to our Riverwalk Survey were vital to the success of our project.

II. Introduction

The construction of the planned bicycle pathway connecting Cole Avenue to Syndicate Road in Williamstown, MA will fill the community's need for a safe, well-maintained bicycle and pedestrian pathway that connects North Adams and Williamstown. this. By connecting these two proximal but very distinct communities through an extension of the Ashuwillticook Rail Trail, the Town of Williamstown and the city of North Adams hope to create a safer and more appealing pedestrian and cycling option which can be used for commuting, recreation, leisure, and tourism.

It is a little known fact that Williams College owns over a mile of natural trails abutting the Hoosic River behind Cole Field. The riverwalk behind the Cole Field Athletic Complex is currently critically underutilized. Due in part to the stigmatization of the Hoosic River as a dumpsite and as it was subject to runoff from the mills in the Williamstown and North Adams area in the 1940's, many members of the Williamstown community do not consider the Hoosic as a luxury of nature. However, given some attention and remediation, the area has plenty of potential to become a wonderful amenity to the community

Our project specifically focuses on two possible ways to enhance the land bordering the Hoosic River surrounding the Cole Field Athletic Complex: improvements to a riverwalk trail system and the addition of a segment of the bike path that will connect Williamstown to North Adams.

A. Project Goals

Over the course of our project, we consulted with three different clients, each with distinct goals. One of our clients, Tim Kaiser, is the Director of Public Works in Williamstown. Tim's primary goal is to devise a functional, attractive, and popular route for the Mohawk Bike Path, which will connect North Adams and Williamstown, to take as it goes from Cole Avenue to Syndicate Road - crossing the flat recreation area of Cole Field. The larger goal of the Mohawk Bike Path is to promote recreation and tourism in the Berkshires, add to the quality of life in the region, be an attractive destination for recreation, and provide alternative means for transportation between North Adams and Williamstown. We hope that our segment of this path aids in the achievement of these goals and the ultimate success of this path.

Our second client, Todd Holland, represents Williams College Facilities. Todd is primarily interested in improved implementation of a bike and pedestrian byway on campus. He has identified the need for at least one east-west and one north-south route to be used specifically for bicycles on campus. While the scope of our project does not include a completed plan for additional bike paths on campus, it is important to keep in mind how the bike route that we plan through the Cole Field area will connect to other routes and serve as an artery as well as a destination.

Our third client, Lauren Stevens, is on the board of directors of the Hoosic River Watershed Association (HooRWA). Lauren is interested in how the Hoosic River can be better utilized by the campus and the community. His primary goal is to manage the introduction of an improved trail system hugging the Hoosic Riverbank by attracting more attention to the area and improving the relationship between the people and the space. A very tangible goal of Lauren's is

to put the Hoosic River on the map - quite literally - as the college owns over a mile of riverfront yet neither the river nor its points of access appears anywhere on the college maps.

Through means of a survey, we also determined what the community would like to have improved regarding the riverwalk. The responses strongly suggested increased access to the river and the walking trails, maps of the trail, and improved signage. There was also a demonstrated interested in the addition of fire pits and picnic tables, and more information about the ecology of the area. The responses highlighted the importance of keeping the area as natural as possible, and we agree that that is essential.

Thus, our two separate but related project goals are to 1) map a feasible bike path route in the Cole Field recreation area; and, 2) to improve the access to and the amenities of the riverwalk, in order to begin changing the community culture surrounding the area's use. We hope that the bike path and the river walk will complement each other, to better take advantage of the wonderful natural resource area that is currently so underutilized.

III. Cole Field Bike Path

A. *Site History*

The long duration of this project has led to the accumulation of several reports regarding the development of the Mohawk Bicycle and Pedestrian Trail. Our main document of reference is the Berkshire Regional Board Planning Commission Mohawk Bicycle and Pedestrian Trail Feasibility and Investment Study published on March 31, 2010. The study comprehensively

analyzes the route options from North Adams to Williamstown, including through the Cole Field area, creating both preferred and alternate routes. As cited in the BRPC Report, the Hoosic River Watershed Association began relative feasibility studies of the bikeway routes as early as 1999, proposing three alternate routes into Williamstown (BRPC Report, 2010). In 2006, the Berkshire Regional Planning Commission received a grant from the National Scenic Byway Grant Program, a step that can now be considered "Phase 1" or the initial steps to gauging public interest and mapping potential routes. For the last ten years, the Berkshire Regional Planning Commission, along with the Towns of Williamstown and North Adams, have extensively mapped the on-field sites, conducted surveys of the local populations, and ultimately divided the North Adams to Williamstown corridor into seven separate sections. The scope of our project, therefore, lies entirely within "Section 1: Syndicate Road to Cole Avenue, approximately 5,100 linear feet". The Cole Field Athletic Complex borders the Hoosic River for about 1,500 feet, all of which sits within a Federal Emergency Management Agency (FEMA) 100-year flood zone. On August 27, 2014, the town filed a Request for Qualification report to review the hiring of Green-Pedersen Inc. Engineering to perform preliminary and final designs of the Mohawk Bicycle/Pedestrian Trail (BRPC Report). This timing creates a great opportunity for our work to have an impact in the end result of the Cole Field Greenway and Bike Path. Initially, the project is funded by the National Scenic Byway Grant Program with an approved maximum commitment of \$302,706.61, to cover primarily permitting and at least the twenty-five percent design plan - in the spring of 2015, with eventual construction set to begin in July of 2016.

In addition to compiling prior reports related to the bike path project, our group has met with influential clients to understand the complexities surrounding the plan. Andrew Groff,

Williamstown planner, provided valuable information regarding the Massachusetts Wetland Protection Act and certain qualifications necessary to advance the project, specifically a Notice of Intent to the Conservation Commission for the disturbance of the wetland buffer region (Regulation at 310 CMR 10.53 (6) establishes a "limited" project, giving Conservation Commission discretionary authority to allow the "construction, rehabilitation, and maintenance of footpaths, bike paths, and other pedestrian or non-motorized vehicle access to or along riverfront areas"). Lastly, and more indirectly related to our project, the Purple Bike Coalition in conjunction with Williams College Facilities has conducted a Bike Route Study on campus in the recent past. This study focused on bike accessibility and safety along Route 2 and other main roads. Although this study does not pertain to our specific project, it is important to consider the path as part of larger bicycle-friendly campus and as a potential artery along the bike path.

B. Site Description

The Cole Field area has about 10 acres of cleared athletic fields and 10 acres of woodland area. It is the bounded Cole Avenue to the east, the Hoosic River to the north, Syndicate Road to the West, and Stetson Road to the South. The proposed starting point of the portion of the bike path through the Cole Field area is located on the east side of Syndicate Road, approximately 30 meters south of the intersection of Route 7 and North Street. The wide sewer easement area has already been cleared so that tree roots do not grow to interfere with the pipes (Figure 1). We plan for the bike path to continue following along the edge of the Taconic Golf Course driving range,

where there is definitely room for a 10-foot wide path with minimal interference to the driving range, and little need to clear the edge habitat wildlife species that make their home there.



Figure 1: Sewer easement area, which links to Syndicate Rd.

Along the Williams College softball field, a small stretch of established 10-foot wide paved path can be appropriately fitted and incorporated into the new bike path. From observations, we can see tire marks in the grass from vehicular and bimodal travel. We would like to follow this "naturally" occurring route, which circumvents the raised berm. In order to comply with the FEMA 100-year floodplain regulations, the restroom structure needed to be built on an elevated earthen bank (Figure 2). If we use pervious pavement in these regions, we wouldn't have to fill in and raise the land for our bike path (Stevens).



Figure 2: The restroom structure, built on an elevated berm in compliance with FEMA 100-year floodplain regulations.

For the next stretch, there is a line of newly planted maple trees that our path can follow. The Hoosic River flows adjacent, just on the other side of the trees (Figure 3). Along this stretch, there are two ways to access the Hoosic River via established paths through the trees. The Williamstown community uses these sandy areas as recreation areas to enjoy the river and for their dogs to swim. In addition, the Williams Outing Club (WOC) uses these as put-ins for canoeing and kayaking events and would benefit greatly from improved access via the proposed path.

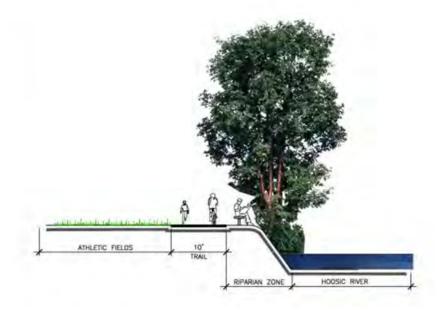


Figure 3: Potential trail location between the Williams College athletic fields and the Hoosic River (Mohawk Bicycle/Pedestrian Feasibility and Investment Study, March 2010, pp. 10).

The proposed plan for this bike path involves relatively few obstructions. The only ones that we identified that may involve some clearing and leveling are located just on the north side of the Williams College baseball field (Figure 4). Additionally, one of the lots on Cole Avenue, across from the Photech site that will ultimately connect our area to the greater North Adams to Williamstown connection, Flamingo Motors, is private property. We plan to avoid this area by using instead access through Cal Ripkin Field, which is owned by the college, and will avoid any land settlements or agreements with Flamingo Motors. Beyond that, however, the path could easily reach the Cole Avenue extension from North Adams via the existing Stetson Rod.

Figure 4: Some necessary clearing on the north side of the Williams College baseball field.



Figure 5: "Uncapped Landfill Route"



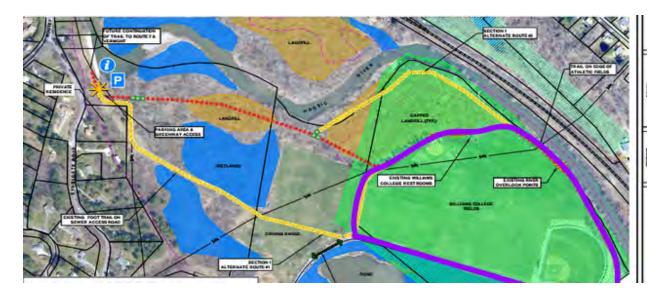
This proposed route was originally discussed in the Mohawk Bicycle/Pedestrian Feasibility and Investment Study presented by the Berkshire Regional Planning Commission in 2010.

Figure 6: "Through Driving Range Route"



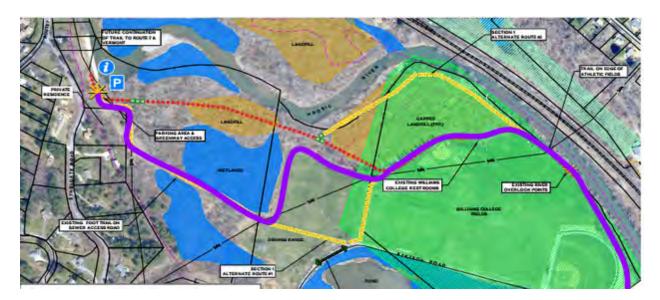
This route was suggested as an alternate in the Mohawk Bicycle/Pedestrian Feasibility and Investment Study.

Figure 7: "Loop Route"



Due to the dissent of community members whose homes are along the proposed routes that cut through the sewage easement path, it was suggested that a possible route end before crossing the golf course and entering any undisturbed land. This proposed route will utilize a majority of the paved areas around Cole Field which will preserve the natural environment, but will not allow for the future extension of the bike path into areas of Vermont which is the main goal for the Ashuwillticook Rail Trail.

Figure 8: "Around Driving Range Route"



The final proposed route is the result of a combination of the Berkshire Regional Planning
Report and our research of the area. This route provides a connection to Syndicate Road, while
attempting to avoid the Taconic Golf Course Driving Range and uncapped landfill.

D. Land Use Matrix and Evaluation

Due in a large part to the fact that the Town of Williamstown already has secured initial funding for our project, we are highly optimistic about achieving our goal of the Bike Path. As we will explain in greater detail below, we have identified four routes that will accomplish the goals of the bike path extension and compared them to a "no disturbance of area" control group.

An evaluation matrix was produced to analyze all possible routes for the Cole Field Bike Path. The five possible routes include: the "uncapped landfilled route" which was proposed in the 2010 Berkshire Regional Planning Report and is the current route preferred by

Greenman-Pedersen Inc, the route "through the driving range" which was the BPR 2010 report's alternate route, A "no disturbance of area" assessment which can be used as a control to consider the potential opportunity costs of not having a bike path, the "Loop Route" which was proposed by a dissenting neighbor after expressing his displeasure and concern about having a bike path that would disturb a sensitive ecological area; and lastly the route "around the driving range" which our group views as the most feasible and desirable path.

The matrix is divided into factors based on the environmental impacts of each route, safety, community accessibility, technical feasibility, and cost. Each category was assigned a numerical value ranging from 1-5, 1 being aspects that are more favorable and 5 being least favorable. For example, a 1 for environmental impact would indicate a low impact and therefore a favorable aspect; whereas, a 5 for community accessibility indicates that the area is inaccessible and unfavorable. Based on the values assigned to each category, a total score was calculated the best possible route. The lowest cumulative score - 11 for the route "around the driving range"- was determined to be the most desired route.

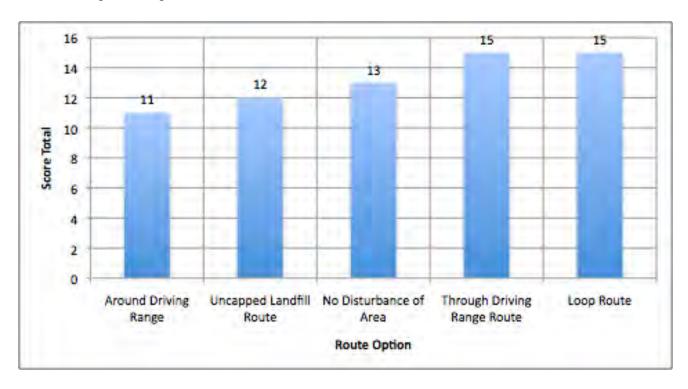
Table 1: Evaluation matrix comparing the five proposed routes for the Cole Field Bike Path

ROUTE OPTIONS 1=most recommended 5=least recommended	ENVIRONMEN TAL IMPACTS 1=low impact 5=high impact	SAFETY 1=safe 5=dangerous	COMMUNITY ACCESSIBILITY 1=accessible 5=inaccessible	TECHNICAL FEASIBILIT Y 1=feasible 5=infeasible	COST \$=low cost \$\$\$\$\$=high cost
"No disturbance of area" (3)	Pro: No disturbance of natural area Con: None	Pro: Non-existent use by bikers means no accidents	Pro: None Con: Will not increase accessibility for community members	Infeasible Funding and plans are in place	\$

		Con: None			
Total: 13	1	1	5	5	1
"Uncapped Landfill Route" (2)	Pro: Follows the natural area of the riverbank Con: (i) Wetland Disturbance (ii) Compensatory Storage (ii) Tree Clearing	Pro: Avoids driving range Con: Ends at Syndicate Road	Pro: (i) Accessible via Cole Ave & Southworth St (ii) Increases accessibility to Hoosic River and Nature Trails (iii) Avoids sewage line with tendency to flood Con: (i) Interferes with natural aspects of walking path	High feasibility because GPI support	\$\$\$\$ (i)Tree clearance (ii) Pavement pouring (iii)Landfill capping* *may be required (iv)Stream Crossing
Total:12	4	2	1	1	4
"Through Driving Range" (4)	Pro: (i) Avoids uncapped landfill (ii) Minimal tree clearing (iii) Sewage easement already leveled Con: Sensitive areas near sewage easement path	Pro: Openly visible path Con: (i) Ends at Syndicate Rd (ii) Cuts across driving range	Pro: (i)Easily accessible from Cole Ave & Southworth St (ii) Flat pre-maintained route Con: (i) Ends at Syndicate Rd (ii) Dissenting neighbors (iii) Eliminated recreational use of field beyond just that of Driving Range (IM sports, WUFO) (iv) Sewage easement flood frequently	Medium Feasibility GPI's alternate route	\$\$ Pavement
Total:15	3	4	3	3	2
"Loop Route" (4)	Pro: Avoids all sensitive areas (uncapped landfill & sewage easement) Con: None	Pro: Avoids wooded areas; open visibility Con: Stetson Rd. busy area due to cars (esp. during games)	Pro: (i) Easily accessible from Cole Ave & Southworth St (ii) Avoids floodplain Con: (i) Steeper grade hill (ii) indeterminate end point (iii) Use of Stetson Road would create conflict between bikes and game traffic on busy Saturdays or Sundays	Low Feasibility Does not work with the clients goals of using this route as a connection to Vermont	\$\$ Pavement

Total:15	2	4	3	5	2
"Around Driving Range" (1)	Pro: (i) Avoids uncapped landfill (ii) Minimal tree clearing (iii) Sewer easement already leveled Con: (i) Addition of net to protect users from golf balls (ii) some clearing and leveling along edge	Pro: Avoids cutting through Taconic Driving Range Con: (i) Net needed (ii) Ends at Syndicate Road	Pro: Easily accessible from Cole Ave & Southworth neighborhoods, college Con: (i) Dissenting neighbors (ii) Sewage easement floods frequently	High Feasibility	\$\$\$ Pavement Construction of protection net
Total:11	3	4	1	1	2

Table 2. Graphical Representation of Total Scores



E. Meeting and Interviews

i. <u>GPI Informational Interview</u>

In order to further assess the proposed plan of the bike path, we were able to get Rebecca Williamson, a representative for the contracted company, Greenman Pedersen Inc. (GPI), on the phone. In what proved to be a very interesting conversation, we were startled and shocked to discover that the plan that they are intending to follow is that from 2010, put forth by the Berkshire Regional Planning Board and Malone & McBroom. What is most alarming about this intention is its inherent environmental impacts of cutting across the middle of the uncapped landfill. According to Williamson, the steps taken to "cap" this uncapped landfill are numerous, and will be very difficult to do in keeping with the environmental restrictions of the FEMA 100-year Floodplain. The process for capping a landfill stipulates that the entire site is tested every 50 feet and at each test site, there must be 2 feet of material covering the existing landfill base. What this means at our site, because of the compensatory flood plain that must be taken into account, is that any time we add up to 2 feet of material to cap the landfill, that must be taken away from another site within reasonable distance in order to maintain the flood plain. Unfortunately, it was very evident that through talking to Williamson, GPI, although the hired company to do the project, has not been to Cole Field nor critically assessed the site plan - we believe that if they had done so, their conclusion would be very different. In order to come to terms with this rather befuddling and unclear conversation, we have decided to go ahead with our proposal as if the path would follow the route that we have selected as preferable to both the stated routes. In addition, we met with Andrew Groff in order to determine - from the town planning perspective - the true pros and cons of capping the uncapped landfill and altering and

clearing the area for construction of the bike path. Overall, it was an excellent step for us to be able to talk to Williamson on the phone and as she and GPI move forward and enter into an official contract with the Town of Williamstown, we hope to be involved with their planning and primary stages of construction in the coming months.

ii. Ashuwillticook Rail Trail: North Adams/Williamstown Extension Community Meeting

On October 29, 2014 the City of North Adams and the Berkshire Regional Planning

Commission hosted a community meeting at Greylock Elementary School to present the plans

for the North Adams/ Williamstown Extension to the Ashuwillticook Rail Trail. This was a

great opportunity to get a sense of public interest in the project and observe how planners

effectively present ideas to a community with potentially negative views of the plans. Although

it is not predicted that the Williamstown extension of the rail trail will receive negative feedback

from residents (primarily because most of the land being targeted for the trail is public or college

owned land) it is still an important aspect of planning to consider. Lauren Gaherty, senior

planner for the Berkshire Regional Planning Commission, carefully presented the proposed plans

to the town members in a way that emphasized the fact that these plans were not final and that

feedback from the residents of North Adams was highly encouraged. By creating an open forum

for discussion it created an environment where the community members could freely express

their concerns and potentially assist to providing way to improve the current plans.

As with any new proposals in a community there were some dissenters and critics. With bike paths the main concerns are increased neighborhood traffic, which can lead to noise nuisances, crime, graffiti and litter as well as concerns about property value depreciation. One approach that Lauren used to convince potential dissenters of the benefits of the bike path was the use of statistical evidence. Based on public surveys and case studies of established routes along the Ashuwillticook Rail Trail, data was compiled to show that most residents favor the trail. Specifically, 78% reported being satisfied with the installation of the trail in their neighborhood. A poll was also taken to see if residents believed their property values were affected by the path. The results reported that 38% predicted the value of their home was unaffected, 28% were unsure, and 24% believed the bike path increased the the value of their home.

Aside from community engagement, the plans for the Ashuwillticook extensions focused on important planning goals that can be applied to the Williamstown extension as well as our plans for the Cole Field Riverwalk. The key points of focus when planning the bike path were divided into 2 categories: what the people want and feasible design goals. First, based on public polls and case studies of other bike paths it was concluded that most residents consider safety as the number one priority in any plans surrounding their community. Second, the new path needs to be accessible and third, residents prefer paths with scenic views that are separated from main roadways. The feasible design goals focused more on land regulations including; avoiding wetland areas, minimizing street and river crossings, targeting leveled terrain, and avoiding private property. It is important to use this criteria when analyzing the proposed plan by GPI for the Williamstown extension to ensure that the best possible route for residents and the town land

is being used. Currently, our preferred route differs from the one GPI presented in their plan; therefore, it will be a goal of ours to express our concerns to the client and provide our rationale for changing the proposed route.

F. Law and Policy

The construction and planning of the Bike Path, particularly in the Cole Field area, falls entirely within legal determination of the Wetlands Protection Act. What this means, therefore, is that the Town of Williamstown must file a Request for Determination of Applicability (RDA) to the Conservation Commission, which will certainly come back as positive, signaling that a Notice of Intent must also be filed. In the timeframe of Greenman Pedersen Inc., they plan to file this Notice of Intent along with a 75% design of the bike path, or approximately six months after they are formally contracted and begin the flagging and planning of the area. However, the Bike Path is considered as a "Limited" project - not an exemption from filing as an application is still necessary, but under different considerations because it is a path in a riverfront area. The 310 CMR 10.53(6) in the Environmental Handbook for Massachusetts Conservation Commissioners establishes a "limited" project allowing the "construction, rehabilitation, and maintenance of footpaths, bike paths, and other pedestrian or non-motorized vehicle access to or along riverfront areas." Our bike path construction, then, falls within this "limited" project within the Wetlands Protection Act. What this means for the construction of the path itself is that the path cannot be in another resource area (which ours is not), the design must be compatible with the character of the Riverfront Area (which we believes ours does as it mirrors the natural contours of the area),

adverse impacts must be minimized, and the maximum paved width must be ten feet. Ultimately, our plans for construction of the bike path, while they do fall within a wetlands area protected by the Wetlands Protection Act, are considered differently and therefore this legality is not a barrier, but merely something to be aware of. Additionally, this area falls within a FEMA 100-Year Floodplain - something that is not relevant except for in considering Compensatory Storage of the area which, in the "uncapped landfill route", needs to be considered. In Greenman Pedersen Inc follows their preferred route across the uncapped landfill, they will need to take the necessary steps to cap the landfill - that is the addition of 2 feet of material over the entirety of the landfill to be tested every 50 feet. This is highly concerning from both a legal and an environmental perspective, however, as it falls directly into the definition of compensatory storage of a Wetlands Area, that any fill or displacement of the 100-Year Floodplain must be balanced somewhere else within the same floodplain. Additionally, the federal funding that is in place for the construction of the bike path mandates that the path not exceed a 5% grade at any point. While this is completely feasible throughout the rest of the site, we worry that if 2 feet of material is added to the uncapped landfill, it will exceed that grade and therefore be ineligible for the grants and fundings. Although we believe this to be reason alone not to follow the "uncapped landfill route", if the contractors are not convinced, the protection of this area by the Conservation Commission can aid in slowing or preventing altogether this damaging action to the floodplain.

G. Economic Considerations

As the Bike Path is an extension of the greater path to connect North Adams to Williamstown, the initial public funding for this project has been approved and accounted for by the Town of Williamstown as a part of the Massachusetts Scenic Byway Grant. They have hired Greenman Pedersen Inc. as the contractor for the project and while we are awaiting official acceptance of this hiring, preliminary funding is in place and construction is set to begin in July 2016. The funding for this greater project as it connects North Adams to Williamstown is approved under the Massachusetts National Scenic Byway grant with an approved maximum commitment of \$302,706.61. This money will cover the initial permitting and a 25 percent design plan, the first steps forward for GPI as they extend the bike path. Ultimately, the estimated total cost for this project is 4.7 million dollars, with the Town of Williamstown expecting the remainder of the money to come from a federal transportation improvement plan.

H. Recommendations

Overall, our recommendations to the Town of Williamstown and Greenman Pedersen

Inc. concerning the construction of the bike path through the Cole Field recreation area are

defined within our Evaluation Matrix shared above. We believe that in considering

environmental impacts, safety concerns, community accessibility, technical feasibility, and cost,

the route which we have labeled as "around the driving range" is the best possible option for this

area. Additionally, and perhaps most importantly, this route enables us to maintain the walking

paths abutting the Hoosic River as a natural amenity - something that was highly recommended

by local respondents to our survey. We are enthusiastic about our assessment criteria and believe

that our research presents a very clear picture moving forward with the plans through GPI and into the future construction.

We were, however, met with a concerningly large amount of dissent from a neighbor of Syndicate Road, and it was brought to our attention that most of this Cole Field Area does fall within an Endangered Species Habitat, something that will be closely examined by the Conservation Commission upon initial permitting of the area. What this may mean is that, although the main goal may be to connect this portion of the bath to Vermont, the sewage easement route that would extend the path to Syndicate Rd., may not be the most advantageous option. We believe that in presenting the environmental cons of this route and in introducing the "Loop Route" as a viable option for exiting this area, we have acknowledged - to the best of our abilities - the limitations of this route while completing and effectively presenting our clients goals.

IV. Cole Field Riverwalk

A. Site History

This land along the banks of the Hoosic River used to be property on a floodplain farm until it was bought by the college (Lauren, must meet with Hank to confirm dates). The trails were originally probably forged by fishermen in order to gain better access to the river, and then in the 1980s, a Boy Scout Troop set about to clear and maintain them. Since then, HooWRA has maintained the trails. Additionally, from 1960 to 1972, a great portion of this space was used as a "rubbish disposal area by sanitary landfill method" (Brooks et al., 2005). For over a decade, until

the Sanitary Landfill Study Committee approved a sanitary landfill for a different nearby location, the community used this "white dump" as a place for cast-off refrigerators, stoves, and washing machines (Brooks et al., 2005). Still, we can see remnants of this old land use; there are still test wells scattered in the forest that have historically been used to check groundwater for pollutants from the landfill (Figure 5).



Figure 5: Test well that has been historically used to check ground water for pollutants from the landfill.

For as long as the college has been in existence, it has connected fairly directly to the Hoosic River due in a large part to its intimate proximity. In 2011, Hurricane Irene greatly damaged the Cole Field Recreation area due to significant flooding, the depositing of many large items from surrounding areas (tires, shopping carts, and trash - to name a few). This, coupled with the negative relationship that the town and the school has with the river due to the extensive pollution that began during the Industrial Revolution and was largely unchecked until the 1960s. This has therefore led to the under-utilization of this area as a valuable amenity to the college. In

recent years, the Hoosic River Watershed Association (HooWRA) has attempted to reverse this negativity by hosting events increasing awareness and accessibility to this unique natural area. Ultimately, the land that borders the Cole Field area and the Hoosic River is rich in biodiversity and presents a safe, easy, and accessible way to interact with the nature that easily borders the college.

B. Site Description

The trails that we reference in this report are located behind the softball field, at the end of the paved path that runs adjacent to the Men's and Women's Soccer fields is one of the two entrances to this area. There are at almost ten additional acres of wooded and wetland area that lie behind the bordering treeline and the Hoosic River with approximately 6,300 feet of walking trails. The entrance to the trail system definitely requires some clearing, clearing, and signage to inform community members of its existence. In addition, we want to create another access point along the lightly trodden path connecting the bike path along the Taconic Driving Range. On the west side of this added entrance, a few trees would be cleared toward the stream heading into the Hoosic from Eph's Pond to provide a beautiful and accessible view of the water from the bike path. This new entrance leads directly to a broken culvert pipe that leads to pools of stagnant and dirty water nearby (Figure 6). We recommend the repair of this culvert as a top priority for trail renewal. As a result, we would see a much clearer effluent from the two ponds upstream.

Another possible access point falls further down the path along the sewage easement line. Much like the access point along the Taconic Golf Range it range it requires some tree removal, but the

path is relatively flat and naturally worn down, which will require minimal work to level the area.



Figure 6: A broken culvert (left) that should, if fixed, drain the effluent from two upstream ponds into the Hoosic River. As of now, it just leads to pools of stagnant and dirty water nearly (right).

C. Survey Results

The bulk of our work since the first presentation and report has been focused on our survey disseminated to the greater Williams College community regarding the riverwalk area. The completed survey was advertised to the Williams Community via Daily Messages, postings on WSO, and emails sent to the Center of Environmental Studies (CES) listserv as well as announced to the Log Lunch community. At the time of closure, 498 people had completed the survey. Of the respondents, 341 were students, 52 were college faculty members, and the remaining 105 were college staff and a few alumni. Most remarkably, almost 60 percent of respondents did not know that Williams College owns a walking trail behind the Cole Athletic

Fields; over 60 percent had never used it and fewer than 15 percent had used it more than five times. Those that have used the trail did so primarily to be in nature and bird watch. Jogging and going to parties were also often cited. Some of the most useful information for our project came from gauging interest in different improvements.

	Question	Highly interested	Interested	Neutral	Disinterested	Highly Disinterested
Ī	Informational signage	107	193	113	16	11
	Trail map	153	204	71	12	5
	Improved trails	133	197	99	8	4
	Clearer access points	149	200	81	9	5
	Scheduled campus event (picnic, party, etc)	101	139	116	<u>57</u>	16
	Addition of fire pits, benches or picnic tables	132	148	101	40	13
	Beach access	148	143	99	26	15
	Increased access for WOC events	84	(138)	170	22	16
	Other (please specify)	4	3	49	2	5

Table 2: Responses to "How interested are you in seeing the following improvements?"

In the table above, yellow circles indicate 100-149 responses and red circles indicate responses of 150 or more. It is clear from the results that people are generally very interested in seeing improvements done to this walking trail. In particular, people are interested in informational signage, a trail map, trail improvements, clearer access points, and beach access. Additionally, the vast majority of people who responded 'other' suggested increasing awareness, improving access, and providing signage/trail marking. These suggestions correlate to the finding that the majority of respondents were unaware that the trail exists. Other responses suggested improvements that appeared multiple times included providing garbage receptacles

and weed-whacking, including removing invasive species. Importantly, several comments stressed the importance of keeping the area "unimproved" and "natural" and somewhat "mysterious." This would indeed be advisable since the people who have used the trail before have used it primarily to be in nature.

At the end of our survey we provided a section for additional comments and an overwhelming theme was the desire of the people to keep the trails natural. Based on the number of responses that stressed the beauty and naturalness of the path, we prioritized the preservation of this land highly, specially in relation to the possible bike path routes that were discussed in the previous section of this report. Furthermore, when we consider altering the trails in any way to make them more accessible we must also keep in mind the natural beauty of the trails and how much that means to the Williams Community.

Ultimately, our survey provided us with a great framework for where best to focus our improvement efforts as we were able to hone in on what the community - those that will benefit most directly from an improved trail - wanted most to see. We also realize that the survey respondents, although interested in improving the trails for the betterment of the community, do not always have the expertise and environmental consciousness that we as students of environmental planning have. With this in mind we used the survey results as merely suggestions and an important tool to gauge community involvement, but it is also important that when deciding important aspects to trail remediation and alterations we use our best judgment and consult experts on the topic.

D. Evaluation Matrix

A second evaluation matrix was created to compare different options for improving the Cole Field Riverwalk in order to prioritize efforts. The five options included in the matrix are creating a trail map, making access points to the trail clearer, improving trails (which also includes clearing invasive species), providing onsite informational storage, and fire pits/benches/picnic tables.

Each option assessed through the matrix is divided into factors based on the ease/cost of undertaking, the desirability of having that improvement, and the environmental impact. We assigned a relative cost to implementing each improvement, denoted on a scale of \$-\$\$\$, with "\$" being the cheapest. This primarily considers how much of the existing area would need to be changed and the costs of any additions to the area (such as a signpost or bench). Similarly, the environmental impact mainly looks at how much the action would alter the area, and if that alteration would be beneficial (such as invasive species removal) or more harmful (such as clearing trees for more visible entryways).

The category of desirability considers how much the action would improve the area and how much community support there is for each possible improvement, based on survey results. In order to calculate our index for survey support, we started with the number of responses that we got to the question "How interested are you in seeing the following improvements?" We scaled each *Highly Interested* response with a 5, each *Interested* response with a 3, and each *Neutral* response with a 1 and calculated the sum total for each category. We did not include values for the *Disinterested* or *Highly Disinterested* responses. From each sum total in each

improvement category, we subtracted 1000 and divided by 100 to reach a scaled value from 1 to 5 for our final index for survey support.

Table 2: Calculations for the survey support index in Table 3.

SUGGESTED IMPROVEMENT	CALCULATION OF SURVEY SUPPORT
Trail map	153*5+204*3+71=1448
Clearer access points	149*5+200*3+81=1426
Improved trails: includes clearing invasives	133*5+197*3+99= 1355
Onsite information signage	107*5+193*3+113=1227
Addition of Fire Pits/Benches/Picnic tables	132*5+148*3+101=1205

Based on this analysis, we determined that the trail map should be our first priority and created an accompanying evaluation matrix (Table 3). Indeed, we are currently working on an online map, and a GIS map. Making access points more clear, improving trails, and increasing informational signage are less of a priority within the scope of this project, but hopefully others will work on them and continue to make this area more of a part of this community.

Table 3: Riverwalk evaluation matrix comparing and determining priorities for alternative trail improvements.

SUGGESTED IMPROVEMENT 1=most recommended 5=least recommended	EASE/COST OF UNDERTAKING	DESIRABILITY (1.00-5.00)	ENVIRONMENTAL IMPACT (if applicable)
Trail Map (1)	Pro: (i) Easy to produce (ii) High need (iii) Spread awareness Con: (i) Priority of having river on paper version of map (ii) limited space allowed for print versions	Pro: (i) High demand (ii) Partnership with WOC & Williams Wellness Con: Increased use leads to decreased natural environment	Pro: Online version saves paper and resources Con: Potential for paper version
	\$	Survey support: 4.48	

Clearer Access Points (2)	Pro: (i) Minimal clearing required (ii) Increase awareness (iii) Can easily be made more welcoming Con: (i) Required funding for clearing	Pro: (i) Accessible for canoes, kayaks. etc. (ii) activity spot for community Con: Clearing of natural environment along river	Pro: (i) Removal of some invasive species Con: (i) Alteration of existing area (ii) Some clearing of trees necessary
	\$\$	Survey support: 4.26	
Improved trails (includes clearing invasive species) (3)	Pro: Possible to acquire funding Con: (i) Overwhelming amount of invasives (ii) Need for funding/ecological expertise	Pro: Easier accessibility Con: (i) Attractive exotic plants (ii) Very difficult remediation work	Pro: (i) Benefits native species (ii) promotes natural environment Con: (i) Invasive species stabilize the banks (ii) provide substrate for some birds to nest
	\$\$\$	Survey support: 3.55	
Onsite Informational Signage (4)	Pro: Contracts and examples from Hopkins Forest and Linear Park	Pros: (i) High need (ii) Adds sense of familiarity/ comfort Con: Detracts from natural environment	Pro: (i) Increases awareness of natural environment Con: (i) Addition of unnatural materials for signage (ii) Alteration of previously untouched area
	\$\$	Survey support: 2.27	
Addition of Fire Pits/Benches/Picnic Tables (5)	Pro: College owns firepits already Con: (i) cost of improvements (ii) Flooding/ destruction	Pro: Destination for events Con: Maintenance	Pro: (i) No tree clearing (ii) placed on beaches with little disturbance Con: (i) Unnatural structures interfere with habitat (ii) Potential detriment to river in case of flooding
	\$\$\$ (\$500-\$1000)	Survey support: 2.05	

Improvement #1: Trail Map

The first improvement we identified was the need for a trail map. Based on the survey support there was a high demand for providing visitors with information about the trails and surrounding environment. Because of the relatively low cost of creating a map, the low environmental impact and the high demand, creating a trail map was our top priority for this project.

In order to achieve our goal of creating a trail map we met with Kate Krolicki and Carl Strolle with the Office of Communication and Information Technology to create a digital version of our trail map. Fortunately, the timing worked so that they happen to be currently updating the online map and aim to be finished in the spring of 2015. Both Kate and Carl fully support adding the riverwalk on the map and granted us access to do so. They even hope to add other trails as the map becomes increasingly detailed. Therefore, we went down to the riverwalk areas to take consecutive GPS coordinates along the trail to map the riverwalk accurately onto this map. We overlaid GPS coordinates with several layers through GIS software, including land use and topography in an attempt to most accurately depict this area and its potential for use by the greater Williamstown area. We also added photos and site descriptions, as well as created a URL to the riverwalk part of the map specifically, and have that link available to HooRWA and Williams Wellness and any other site we decide may be relevant and important in sharing the location and accessibility.

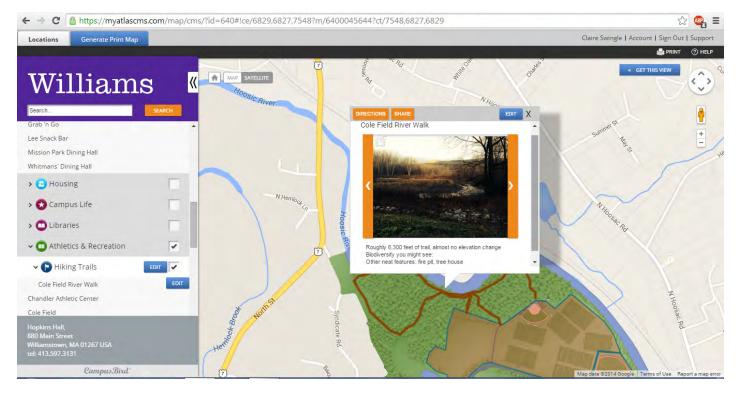


Figure 7: Screenshot of the Riverwalk section of the Williams College online map, including GPS mapped trails, a site description, and a slideshow of pictures featuring trail amenities.

<u>Improvement #2: Clearer Access Points</u>

The second necessary improvement for the Riverwalk trails are clearer access points. In its current condition the trail is overgrown and difficult to navigate. One of the greatest features of the Riverwalk trail is the access to the Hoosic river but without clear access points people are discouraged from venturing into the trails. Not only are we focusing on access points to the river, but the picture above illustrates the lack of clear path entries that must be cleared and marked for visitors to see how the get to the more wooded areas of the trail. There are numerous potential access points to the trails: one along the back side of the Softball Field, one along the lower edge

of the driving range; and one further down along the sewer easement path. By clearing these access points we can facilitate more connectivity between the trails and the bike path. Ultimately, the cost of clearer these trails is more than creating a trail map, but because of the high demand and low environmental impact this improvement is ranked high in our list of priorities.

<u>Improvement #3: Improved Trails</u>

Based on our evaluation matrix, the next most important priority is trail improvement, which includes invasive removal. If you have ever been down to the riverwalk area, you might notice that the riverfront space is currently swimming in Morrow's honeysuckle (*Lonicera morrowii*), oriental bittersweet (*Celastrus orbiculatus*), and multiflora rose (*Rosa multiflora*) (Figure 7). These species are aggressive and allelopathic, so they outcompete the growth of plants underneath and alongside them. Ultimately, we hope to remove enough invasive species in the area and wait for the seed stock of natives to grow back or reintroduce native species that would have been thriving there in the absence of invasives.

The primary "con" in terms of cost to improve these trails is the sheer volume of work to be done and the difficulty of that work. The good news, however, is that it is possible to acquire funding for invasive species remediation. The campus has ties with Kate Parsons of the Natural Resource Conservation Service (Interview with Drew). In addition, we could also contact organizations like the New England Wildflower Society, the Nature Conservancy, Mass Audubon, or the Massachusetts Natural Heritage Program for additional resources or information about possible remediation programs (Interview with Drew).

Another factor that we considered in our evaluation matrix was Environmental Impact.

One "pro" is that invasive remediation would benefit native species like goldenrods and asters, which are currently being pushed out. However, some invasive species, like Knotweed for example, can stabilize the bank. Knotweed, while being an invasive species, helps to maintain the structure of the bank, holding it in place and preventing extensive erosion and washing of the bank into the river. Other non-natives like Barberry can provide substrate in which birds can nest (Schmidt, 2004). In general the desirability score of this improvement ranks it as a third-level priority be although clearing the trails would promote easier accessibility, there are some benefits to nonnative plants and removing them would require difficult remediation work.



Figure 8: Morrow's honeysuckle (*Lonicera morrowii*), oriental bittersweet (*Celastrus orbiculatus*), and multiflora rose (*Rosa multiflora*) found extensively in the riverfront area.

Improvement #4: Onsite and Offsite Informational Signage

One of the survey's identified needs is "informational signage." An overwhelming 257 people (68 percent of survey respondents) were interested or highly interested, compared to 122

people (32 percent of survey respondents) who were neutral to disinterested (Figure 8). Currently, the extent of what is down there right now is a cubby holding an informational brochure about HOORWA; but the structure is very tiny and tough to find because it is not located at the trailhead, but slightly hidden some distance into the trail system (Figure 9). We intend to explore two main ways of providing additional signage onsite: an informational kiosk and map strategically placed at the trailhead (as in Linear Park) or several semi-permanent stands scattered along the path (as in Hopkins Memorial Forest). One benefit of providing this signage is that we have local case studies from Hopkins Memorial Forest and Linear Park to refer to. According to Drew Jones, the Hopkins Memorial Forest Manager, Pat Dunlavey was the local cartographer for both of these jobs, whom we could contact for additional information.

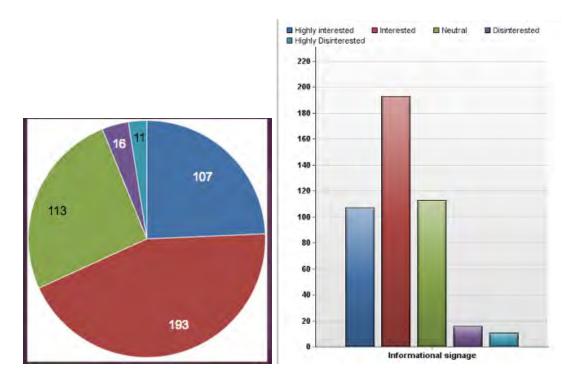


Figure 9: (a) A pie chart of survey responses to "How interested are you in the following improvement: Informational Signage?" (b) A bar graph of those same data. [Blue is Highly Interested; Red is Interested; Green is Neutral; Purple is Disinterested; Teal is Highly Disinterested.]

When considering the cons of onsite informational signage, some people may fear that the addition of unnatural materials is an unnecessary alteration of the land. Recall the comments from our survey results that emphasized the need to be conscious of overdevelopment (Appendix 3). So another option is offsite informational signage. In an attempt to attract more people to the riverwalk, we have produced a draft informational brochure to disseminate on campus, in town, and at the hoosic river watershed association (HooRWA) headquarters (Appendix 4). The brochure includes some background information about the trail, possible activities (hopefully soon to include a restored wildlife blind, which was knocked out in 2011 by Hurricane Irene), typical plant and animal species you might run across, a link to our online map, and amenities to expect soon (Appendix 4).

<u>Improvement #5: Amenities</u>

These amenities include additional fire pits, benches, and picnic tables which were also very popular with our survey respondents but involves addition of unnatural materials again and would require some maintenance in case of flooding in the area. With a survey support value of only 2.05, these amenities are less of a priority within the scope of this project, but we have still started to look into the costs of each additional bench, table, pit, etc along with the projected costs of the other four suggestions for improvements.

E. Economic Considerations

The economics of the Riverwalk, however, are a little bit trickier. While the land is owned by the college, it long ago divested itself of any real interest in the area, leading us to believe that even minimal funding for this project could be hard to come by. Through discussion with our client, Lauren Stevens, we believe that we can make a case to the college by using the positive results of our campus-wide survey as well as presenting a prioritized list of improvements to be made. We have thus met with Fred Puddester, Vice President for Finance & Administration and Treasurer at the college, and introduced our project to him with the hopes that he can help determine the feasibility of funding for such a project. Encouragingly, he seemed to like our ideas, and recognized the economic viability of our design - for very little money and investment, we could greatly improve this area as well as the use by the students and the College. Although we have identified two regional grant applications that could be used toward this project, we believe that any sensible grant authority would identify the capability of the college to fund this sort of project. In order to obtain funding from the College, Mr. Puddester recommended that we compile costs in the form of a Capital Improvement Request (CIR), or a detailed expense form and submit it to the Bursars office along with our final project - highlighting our recommended improvements, such as clearer access, signage, and the clearance of invasive species. He thinks that the College will see the high returns to cost from this area, and from making the riverfront more of a campus asset. After the initial investments are made and the trails cleared, the culvert fixed, and the signage placed, we hope that the Williams Outing Club (WOC) will be willing and able to help maintain the trails - occasionally

clearing trash, fallen trees, over overgrown vegetation. Although the funding for the riverwalk is less clear and established than that of the Bike Path, we are greatly encouraged by the potential of the school to invest and fund at least some of our river revitalization project.

F. Law and Policy

While the majority of the legal concerns regarding the Wetlands Protection Act in our project scope are centered around the construction of the Bike Path, we recognize that any changes made to the natural area in the revitalization of the Riverwalk will also require permitting. This will also include a Request for Determination of Applicability (RDA) to be submitted to the Conservation Commission. Since the changes proposed to this area are minimal, they may even fall within the category of "Exempt Minor Activities in Riverfront Areas and Buffer Zones." Alternatively the conservation commission might claim a positive determination require a Notice of Intent. Having met with Andrew Groff to discuss any further legal steps to be taken regarding the improvement of the riverfront area, including the construction of a new culvert and the clearing of invasive species, we are confident that while this area - like any within the Wetlands boundaries - will need permitting, we believe that this permitting will be easy to come by and ultimately help us achieve our end goals of improvement and remediation.

F. Recommendations

What we plan to present as the conclusion of our project is a cohesive picture of the potential that lies within the trails surrounding the Cole Field athletic area. We have designed a brochure that can be disseminated to the college through offices such as Williams Wellness, the Office of Student Life, as well as the Hoosic River Watershed Association and any other interested parties in the improvement of this area. Additionally, by compiling a detailed budget for our improvements with the help of Lauren Stevens, we would like this project to be recognized by the college as a highly feasible and high-priority item, well-deserving of attention from the Bursar's Office. Finally, we hope that through our detailed Evaluation Matrix, we can present a complete picture of all of our considerations for improvement of the Cole Field Riverwalk area, generate both through our own interviews, research, and evaluation, but also with thought toward the community survey that highlighted and identified the most important areas of improvement.

V. Conclusion

In summary, considerations in our first evaluation matrix have led us to the following final recommendation to the Town of Williamstown and Greenman Pedersen Inc.: We believe that the best possible option for this area is the "around the driving range" route because it has minimal environmental impact, minimal safety concerns, promotes community accessibility, is

technically feasible, presents the lowest cost, and complements the riverwalk nicely. While our recommended path (in purple) would hug the entire riverwalk area, providing multiple entrance ways to enjoy the natural trails (in maroon), the uncapped landfill route (in red, which ranks second in our evaluation matrix and is currently GPI's preferred route) runs right through our trail, crossing it 3-4 times (Figure 10).

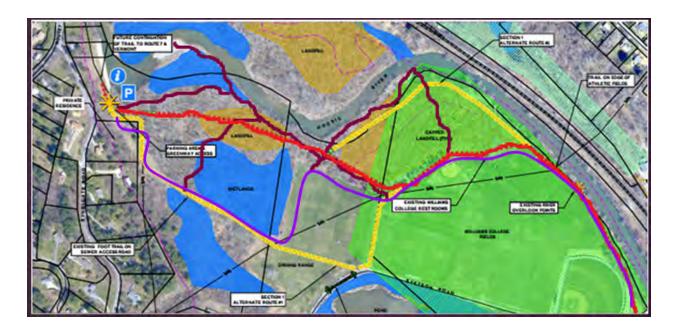


Figure 10: The map shows how the trails in maroon, the around the driving range route in purple, and the uncapped landfill route in red.

Similarly, the Norwottuck Rail Trail, located behind Amherst, also crosses sanctuary trails three times in a half mile length (Interview with Todd). However, because bicycles and horses are damaging and disruptive to the surrounding environments, these trails are enjoyable on foot only (Figure 10). In contrast, the cape cod rail trail in eastern mass connects to eight miles of trails within Nickerson State Park, but the difference here is that the bike path doesn't interfere with the ponds and walking paths within the park (Figure 11). We want the Cole Field

bike trail and walking paths to work well together and complement each other. We think that this would be better achieved by having the bike path skirt the paths (like the Cape Cod Rail Trail) rather than bulldozing over them (like the Norwottuck).

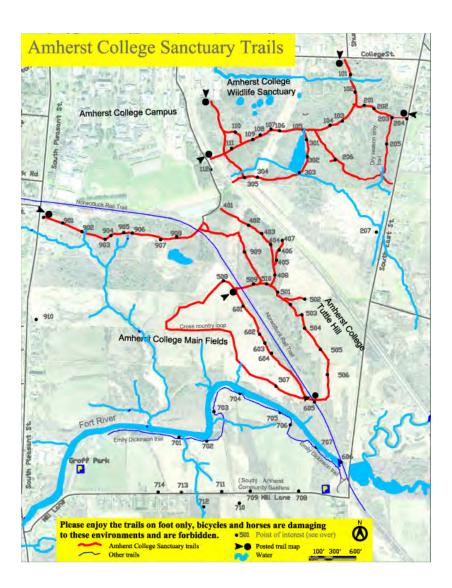


Figure 11: Map of the Norwottuck Rail Trail and its intersection with the Amherst College Wildlife Sanctuary (Image from:

https://www.amherst.edu/campuslife/wildlife-sanctuary/recreation).

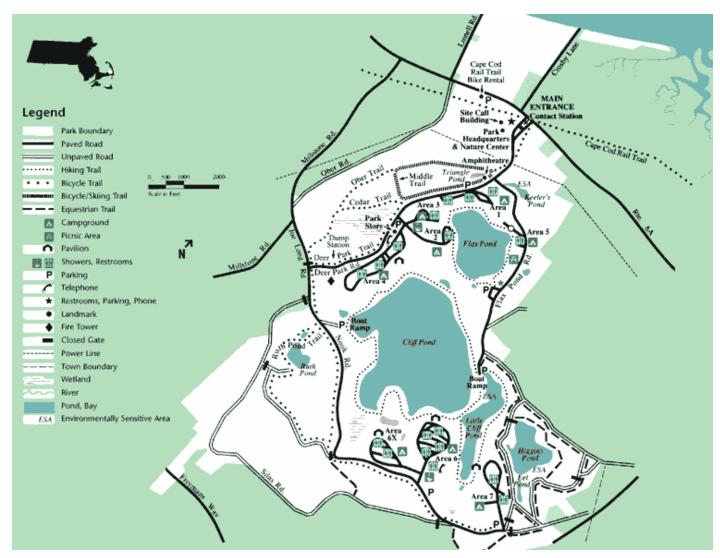


Figure 12: Map of the Cape Cod Rail Trail and its intersection with Nickerson State Park (Image from: http://www.mass.gov/eea/images/dcr/parks/trailmaps/nickcampmap.gif).

The second part of our final recommendation is a prioritized list of riverwalk improvements. In order from most to least recommended, we suggest a trail map, clearer access points, improved trails, invasive species remediation, informational signage, and added amenities as additional improvements to the Cole Field riverwalk area. Our next steps with this project include a succession plan that involves continuing and/or forming partnerships with Williams Outing Club, Williams Wellness, the Taconic Golfing Range, and HooRWA. We are also in the

process of submitting a Capital Improvement Request to the College to receive some financial assistance in realizing these improvements. Overall, we think that the Cole Field riverfront is a beautiful and incredibly undervalued area. With a little restoration and improved accessibility, this public space has great potential as a local destination.

VI. Appendices

1. Williams Record Article published November 5, 2014



Full text here:

http://williams record.com/2014/11/05/environmental-planning-class-works-on-new-local-bike-path/

2. Williams Record Article Editorial published November 5, 2014

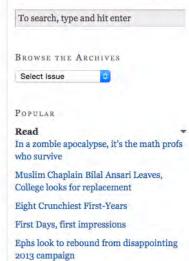


I want to ride my bicycle

NOVEMBER 5, 2014 by The Williams Record Editorial Board

We congratulate Sarah Gardner, professor of environmental studies and associate director of the Center for Environmental Studies, and the four students in her environmental planning class for successfully acquiring funds from the commonwealth to construct the bicycle path they are designing. We hope they succeed in making the path a reality. If realized, we believe their project would be a great addition to the Purple Valley.

As Gardner can attest after 13 years of work on this project, it can be extremely difficult and disheartening to weave through red tape, so we commend her for persevering and seeing her dream one step closer to fruition. Especially at a liberal arts college, it is inspiring to see that a class can have a real impact on the community at large, and hopefully this achievement will encourage other students to take on their own ventures to better society. The proposal is exemplary of the power of collaboration between members of the faculty and the student body, and we are optimistic it will set a precedent to which future faculty-student endeavors can strive.



Full text here: http://williamsrecord.com/2014/11/05/i-want-to-ride-my-bicycle/

3. Complete Qualtrics Survey Results

1. How are you associated with the College?

#	Answer	Response	%
1	Student	341	68%
2	Faculty Member	35	7%

3	College Staff	105	21%
4	Other (Please	17	3%
	specify)		
	Total	498	100%

Other (Please specify)
Alumnus
Partner organization
Alumni
Volunteer
Retired Faculty
Friend
Spouse
Faculty spouse
Family member
Faculty spouse
Community member
Staff spouse
Spouse
Fitness instructor and spouse of facilty
Emeritus Faculty
Spouse
Renter

Statistic	Value

Min Value	1
Max Value	4
Mean	1.59
Variance	0.87
Standard Deviation	0.93
Total Responses	498

2. Did you know that Williams College owns a walking trail behind Cole Athletic Fields?

#	Answer	Response	%
1	Yes	210	43%
2	No	275	57%
	Total	485	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.57
Variance	0.25

Standard Deviation	0.50
Total Responses	485

3. How frequently have you used this trail?

#	Answer	Response	%
1	Never	286	60%
2	1 time	46	10%
3	2-5 times	84	18%
4	6-10 times	22	5%
5	More than 10 times	38	8%
	Total	476	100%

Statistic	Value
Min Value	1

Max Value	5
Mean	1.91
Variance	1.68
Standard Deviation	1.29
Total Responses	476

4. What did you use this trail for?

#	Answer	Response	%
1	Jogging	56	12%
2	Leisure/Bird Watching	64	14%
3	To be in nature	102	22%
4	For class	35	8%
5	Dog walking	21	5%

6	College affiliated		9	2%
	athletic event			
7	I attended a party,		49	11%
	bonfire, picnic, or			
	other event here	_		
8	I have never used		274	59%
	this trail			
9	Other (please		23	5%
	specify)			

Other (please specify)
To access the Hoosic
HooRWA's Riverfest and associated riverworks installations
Conservation Commission
Fishing
I cleared part of it this summer.
Walking for exercise
Photography
Fishing access
To take my kids for a walk
Walking
Riverfest
To reach the river bend
River access
To go swimming in the river

Riverfest	
Biking, swimming	
Biking	

Statistic	Value
Min Value	1
Max Value	9
Total Responses	461

5. How interested are you in seeing the following improvements?

#	Question	Highly interested	Interested	Neutral	Disinterested	Highly Disinterested	Total Responses	Mean
1	Informational signage	107	193	113	16	11	440	2.16
2	Trail map	153	204	71	12	5	445	1.90
3	Improved trails	133	197	99	8	4	441	1.99
4	Clearer access points	149	200	81	9	5	444	1.92
5	Scheduled campus event (picnic, party, etc)	101	139	116	57	16	429	2.41
6	Addition of fire pits,	132	148	101	40	13	434	2.20

	benches or picnic tables							
7	Beach access	148	143	99	26	15	431	2.11
8	Increased access for WOC events	84	138	170	22	16	430	2.41
9	Other (please specify)	4	3	49	2	5	63	3.02

Other (please specify)

Water launch

Improved canoe launch

Emails of trails and access times

Info that trail exists

Advertisement

More information regarding these amenities

Trail maintenance and clean up

Labeling of trail and other trails on campus map

Statistic	Informationa 1 signage	Trail map	Improved trails	Clearer access points	Scheduled campus event (picnic, party, etc)	Addition of fire pits, benches or picnic tables	Beach access	Increased access for WOC events	Other (please specify)
Min Value	1	1	1	1	1	1	1	1	1
Max Value	5	5	5	5	5	5	5	5	5
Mean	2.16	1.90	1.99	1.92	2.41	2.20	2.11	2.41	3.02

Variance	0.85	0.70	0.68	0.70	1.21	1.14	1.12	0.96	1.14
Standard Deviation	0.92	0.84	0.83	0.83	1.10	1.07	1.06	0.98	1.07
Total Responses	440	445	441	444	429	434	431	430	67

6. Do you have any other suggestions to improve this area?

Just cutting back the bushes around the paths a bit would be great!

Not at this time.

down near Cole, as well as on college website. Maybe something is already out there???

Text Response Offer a guided "tour" so enthusiastic people can share their knowledge of the greatness Cole area holds. I like it as is! But that's because i know it's there. I support increasing access for others I wish I had known about this trail. I'll have to check it out, now! It needs to have a name that people remember. "The trail by Cole Field" is not catchy and isn't part of the Williams culture. Make it snap! Also, the relationship to the river could be emphasized. No Just publicize more with directions how to get there I hope the bike path happens! I think it is nice as an unimproved natural area No, as I had no idea it existed. So increased awareness. Rebuild the tree house please! No Let people know it's there! I had no idea but I would use it if I knew about it. No. But I should say I'm not 100% sure I was there. I think I walked there with a friend and her dog once but it was a couple of years ago and while I think it's the area you're talking about I'm not totally sure. Guided tours offered! N/A

As I said earlier, I was totally unaware of this area ever existing, so would like to see more information/signage made available

I have never heard of this trail, so if it were advertised some how so more students knew about it that would be nice.

I have often noticed a large amount of garbage, including overflowing trash bins with beer bottles and cans, and empty cans and bottles on the beach areas. I'm not sure who is responsible for this litter. Not only is it bad for the environment, river system, and wildlife, it makes the area uninviting. More than signage, trail improvement; I'd like to see some effort to address the litter issue in this trail system.

Trail markers, and maybe surprise candy that you find so it feels like a treasure hunt

It'd be nice to keep some view of the river as the area grows up!

I like the idea of being more aware of the trail and able to use it, but I would want to see more trash receptacles around the area because people tend to litter as it is

Make it known to students and encourage people to use it

Nope, but thank you!

Clearly looped trail... one can get lost, as I did with a field botany class this week when walking downstream aside the Hoosic.

Clear access

I vaguely remember it was muddy. I dislike trails that get muddy.

If signage is posted, make it educational for all users

No

I am often nervous to use the trail by myself because it doesn't feel very welcoming due to overgrowth and lack of use by other people, so I'm not sure I have suggestions, but I would love to feel safer and if that was the case, I would use it more. I realize this might be my own issue and nothing that anyone else feels, but thought I would mention it just in case.

No

Sorry, I will probably not use this trail...

No

Trashcans so people can throw their trash away in the bins and not on the ground

I haven't used the area very often so I don't have much to offer in the way of suggestions, but I hope to go more often, especially if improvements are made.

I'm worried that this area will be too cleaned and constructed upon. I'd like to keep it gnarly, a challenge to find, and overall just left sort of mysterious - it's more fun that way!

More information about it... Didn't even know it existed!

I don't want it to become over-run, so please strike the right balance between improving it and also keeping its natural feel.

Wood chips on trail. Nature trail markers and descriptions.

Advertise it more

No

No

Clear more of the wooded area of broken limbs and such - garbage, debris from the river so there are better trails and more of them

Not right now!

Advertise it more

I really like that the trails are narrow and a little difficult to find because it feels more like an adventure.

Because the beach is adjacent to a landfill which is leaking toxic chemicals, maybe access to the beach shouldn't be encouraged (even though I have, and will continue, to go swimming there).

I never knew it was there and NOW I am interested. Are dogs allowed?

No

No, do not participate

Is it part of the plan to extend the Ashuwillticook Rail Trail?

No

Distance (miles) on signage.

Announce that the trail is there?

Clear out poison ivy in general, and also clear out stinging nettle near the trail

I love to walk and didn't know this trail existed & I've been at Williams for 22 years. I would be nice to send out reminders about campus resources. Would be good for new faculty and staff as well.

No not really

Keep it wild.

Improved signage and trail maps would be great.

I didn't know about this area - but it might be interesting to reach out to new faculty/staff about this via the Williams Wellness info handed out during HR orientation.

More clearly marked trails.

If you are going to add signage and increase the community's awareness of this area you should anticipate more traffic and provide trash disposal areas so that the increased traffic does not increase trash!

Less trash from parties

I should give a caveat that I think the place I am thinking about is the place you are asking about. I'm not really sure. I took the asphalt-paved trail that goes through Cole Field, behind a small brick building that I think has toilets in it, and from there I went into the woods a litle bit on what seemed to me to be a trail through the woods, perhaps maintained, perhaps not. It got near the river. I don't remember much more. I only went there a couple of times because with all the unrestrained dogs around, my small children were not comfortable unless I kept very near them for defense. I only went back the second time because I thought that the free-roaming dogs were some kind of fluke; I didn't understand that this area is Williamstown's de facto, barrier-free dog park. How about putting up signs to let people know that they should not go there if they don't feel like dealing with strange dogs? In

my opinion, that's the least that Williams should do.

No

Signs would be excellent.

No. I have never seen it

not really.

No

I am not sure if I am thinking about the correct trail in this survey. I'm thinking about the trail that goes off to the left before the softball fields.

Have not given it much thought, so not really besides what was already asked in the survey.

More awareness

More publicity so that people know it is there to enjoy!

Make trail information more readily available as part of Williams wellness program for staff - I had no idea this trail existed until now, and I'm still not sure how I'd go about finding or using it.

Have college students host field trips for children from the local schools.

Tell people about it?

Sorry, can't say. Not familiar with the area!

Not really, Cole Field has been flooded twice in the past 10 years, due to heavy rains. If we could stop the flooding, that would be great, but how...is the question.

The west end of the trail had a lot of nettle on it, and was impassable a few years ago. It is a wonderful trail for birding in the spring and delightful to walk along the river. Thanks for your interest.

You might want to save some aspect of hurricane Sandy, etc. damage as a teaching point on climate change.

Fitness stations

Remove invasive plant species?

Get the word out that it exists! I'm sure a lot of students would love to use it for walks, jogging, bike riding, etc.

thanks for letting me know about it!

People often leave beer cans and other trash there. It would be great if we could figure out how to convince people to remove trash after their parties.

Advertising! Teach people about where these amazing pathways are! I've never heard of them!!!

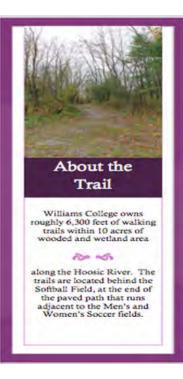
Might be fun to have some campsites down there that WOC and the Williams Community could use. Also, having grown up around here, the Hoosic River was always thought of as really polluted. To this day I don't like to so much as put a finger in it, lol! I'd love to learn more about how its been cleaned up and how safe it is to walk in it/swim?? Or if its still polluted (I know it wasn't so much the water as the river bottom).

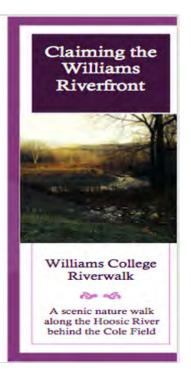
Clearing out some of the exotic species would be nice.
Bike rack
None
No
I'm not sure that I'm entirely clear which area this is. I thought the trails below Cole were very, very short, but maybe I'm thinking of the wrong place. I'd love to see a place that is open for walking and running and clean and clear though!
Nope.
Keep it a special place!! Don't market it to the people who don't take the time to find!! It's not a Wal-Mart or some tourist attraction. Please keep the special places at Williams special. No signs. No benches. If you really loved nature you would no market it the bros of the world.
Keep it wild!
Publicize it.
Have a sign depicting the map of trails at the entrance to Cole fields.
An improvement would be to increase awareness of the trail to the student body.

Statistic	Value
Total Responses	103

4. Riverwalk Brochure (Front and Back)









5. The Berkshire Eagle Article published December 1, 2014

The Berkshire Eagle



PHOTOS: Cole Field and Hoosic River hiking trails



Williams College's Cole Field gives access to the Hoosic River in Williamstown from the river's intersection with Cole Avenue north down the river. The athletic fields provide not only an athletic complex for the college but a place for people, dogs and responsible dog owners to walk with views of the mountains and trails along the Hoosic River. The annual event Riverfest, is held on the site with artists creating works in the woods along the river, often using objects from the area for their art. Photos by Gillian Jones — The Berkshire Eagle



Full text here:

http://photos.berkshireeagle.com/2014/12/01/photos-cole-field-and-hoosic-river-hiking-trails/#1

6. Capital Improvement Request Form

	A	8	C	D	E
1		Materials/Description	Cost (in dollars)		
2					
3	Bike Path	generally 10 feet wide	total: 32 LF (per l	inear foot) or 1 m	illion per mile
4	Asphalt resurfacing/Chip seal	resurface asphalt surface with Chip Seal and center line striping	0.5 SF		
5	Asphalt overlay	1" overlay of asphalt with centerline striping	1 SF		
6	Concrete	removal and replacement	7 SF		
7	Decomposed Granite (DG)	replacement of D.G.	1 SF		
8	Aggregate Sub-base (AB)	complete replacement	3 SF		
9	Concrete Containment Curb	complete replacement	15 LF		
10	Shared Lane/Bicycle Marking	complete replacement	180 each		
11					
12	Other things that cost money				
13	Capping a Landfill	capital costs for installation, construction, materials	80,000-500,000 p	er acre	
14	Lighting	poles and lighting fixtures	1500 each		
15	Concrete bridge	complete replacement	400 LF		
16	Wood bridge	complete replacement	500 LF		
17	Steel bridge	complete replacement	750 LF		
18	Doggie stations	complete replacement	1200 each		
19	Benches	custom: recycled plastic with cobble siding	1200 each		
20	Barrier posts	6" x 6" pressure treated posts	12 LF		
21	Bike Lockers	metal lockers- 2 bikes per locker	350 each		
22	Kiosks	redwood structure, cobble base, composite shingle roof	2000 each		
23	Trash cans	metal container with concrete base	500 each		
24	Fencing	Wooden Posts & Metal Cables or Tubular Steel	10-40 LF		
25	Broken Culvert	complete replacement			
26					
27	Works cited:				
28	http://www.parks.ca.gov/pages/13	324/files/how much will that trail cost fri2007.pdf			
29	http://katana.hsrc.unc.edu/cms/d	ownloads/Countermeasure Costs Summary Oct2013 pdf			
30	http://www.mde.state.md.us/asse	ts/document/factsheets/landfill_cl.pdf			

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- 3. Brooks, Robert RR., et al. 2005. Williamstown The First 250 Years, Williamstown House of Local History (Williamstown Historical Museum). Print. pp. 474-475.
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