Androscoggin Greenway Health Impact Assessment

Final Report

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Executive Summary

Background

The Androscoggin Land Trust's (ALT) Androscoggin Greenway planning initiative in Lewiston-Auburn, seeking to connect parks and trails along the Androscoggin River to each other and downtown neighborhoods and business districts, is Maine's first place-based Health Impact Assessment (HIA).

Recently, ALT has capitalized on opportunities to implement the Greenway Plan vision. ALT is leading a coalition in the cities of Lewiston and Auburn, and the towns of Greene, Turner, and Leeds to develop a model for engaging landowners, local governments, and river corridor residents in creating actionable conservation plans focused on enhancing recreational opportunities that link downtowns to natural landscapes across municipal boundaries. This project seeks, among other things, to create a land and water trail to link AndroscogginRiverlandsState Park to downtown Lewiston-Auburn.

The Greenway Plan includes three tiers of projects. Those projects in Tier One are considered the highest priority projects.

The Androscoggin Land Trust Health Impact Assessment

The goal of this HIA is to provide ALT with information about the predicted community health impact of the various projects identified in Tier One of the Greenway Plan. The Greenway Plan includes bicycle and pedestrian projects on both sides of the AndroscogginRiver in both Lewiston and Auburn. It includes trails along the river front, as well as increased bicycle and pedestrian connections throughout the downtown areas that will increase access to and from neighborhoods, business areas and destinations. For the purposes of the HIA, the bicycle and pedestrian projects identified in Tier One of the Greenway Plan were divided into four distinct projects. The four projects assessed for the HIA are described below.

The Strawberry Avenue project focuses on connecting neighborhoods to downtown by creating pedestrian and bicycle trails. The trail begins at Sunnyside Park in Lewiston and travels along the Androscoggin River through Riverside Cemetery to Tall Pines Drive. Branches of the trail also lead to BoxerIsland and Main Street. There are numerous subsidized housing complexes and senior citizen / group homes within the immediate area and a (relatively) large African and African American community.

The Riverfront Island project focuses on creating pedestrian and bicycle connections within the Riverfront Island area of Lewiston. This includes new connections to Simard-Payne Memorial Park (Railroad Park), along the river, and over both the LownBridge and Longley Bridge.

The Exit 80 project begins at I-95 Exit 80 in Lewiston and follows the existing rail corridor for 2.25 miles to Chestnut Street in downtown Lewiston. While this corridor is adjacent to some densely populated areas of the city, the topography between the residential area and the trail makes it nearly impossible to reach the trail from those neighborhoods, under the existing plan. This results in a corridor that is almost exclusively point-to-point in nature.

The North River Road project follows the Androscoggin River on the Auburn side, starting at West Pitch Park and continuing north under Veteran’s Memorial Bridge to the proposed YMCA property just north of Bradman Street and ending at Center Street. This trail passes close to some densely populated areas in Auburn, but Center Street and Union Street Bypass, four lanes and a median of heavy traffic, isolate the residential area from the trail. There is potential for active transport via this trail from the Northern Avenue neighborhood and perhaps further north from the Bradman Street neighborhood.

Methods

An HIA Team was created to conduct the HIA. In addition, an HIA Advisory Committee consisting of key community partners and others interested in HIA was formed to provide feedback and community representation for the HIA.

Through a full day workshop, community input was used to identify health indicators to be included in the analysis. The indicators included: access to fruits and vegetables, services and parks; physical activity; nutrition; bicycle and pedestrian injuries; social capital; obesity; diabetes; cardiovascular disease; and mental health. A rapid HIA was conducted using relevant literature, previous HIAs, and expertise from the HIA Team and Advisory Committee.

Results

For most of the reviewed indicators, a positive effect on health was determined. However, a more positive effect is predicted for the RiverfrontIsland and Strawberry Avenue projects than the Exit 80 and North River Road projects. There were no negative effects on health identified.

Recommendations
Because the HIA showed an overall positive effect on health for each of the Tier One projects, the recommendations are designed to increase use of the trails and thus maximize community health benefits. There is one overall recommendation and several additional recommendations to increase use of the trails.

Overall Recommendation

1. Focus first on the development of the Riverfront Island project and the Strawberry Avenue project, rather than the Exit 80 project or the North River Road project.

Trail Access and Safety Recommendations

1. Consider specific opportunities for improved pedestrian access to the proposed trails, which will lead to improved pedestrian safe access to the proposed trails and improved health by a greater proportion of the community. Two projects have particular access issues.
2. Implement design standards for the trails which increase perceptions of safety and visibility and address user comfort and accommodation. Further, trails should be ADA-compliant where possible, particularly in those areas in close proximity to residential areas, and specifically near senior housing.

Trail Promotion Recommendations

1. Use informational outreach to increase awareness of the Greenway among community members.
2. Consider infrastructure and policies which allow for year-round bicycle and pedestrian use.
3. Consider the social and cultural needs of all community members when promoting the trails.

Social Capital Recommendations

1. Increase social capital and community pride by integrating natural and cultural history interpretation into the design of the trails.
2. Increase community capital by implementing programs that create community ownership of the trails.

1.0 Introduction

1.1 Section Overview
This section of the report describes the history of the Health Impact Assessment (HIA) and provides overviews of both the Greenway Plan and the HIA process. A glossary of terms for this report is in

Appendix A.

1.2 Bringing Health Impact Assessment to Maine

The Maine Health Impact Assessment Initiative (MeHi) is a collaboration of individuals representing public and private public health organizations with a commitment to bringing the practice of HIA to the state of Maine. MeHi was formed in 2010 and is convened by the Maine Center for Disease Control and Prevention (Maine CDC). Members of MeHi have received training on HIA from either the federal CDC or Health Resources in Action (based in Boston, MA). MeHi has been actively pursuing funding opportunities that would bring resources into the state to conduct Maine's first place-based HIA. One HIA on proposed legislation had previously been conducted in Maine,(1) by an out of state organization.

In the spring of 2012, MeHi partnered with the Maine Network of Healthy Communities (the Network), which was awarded a training / capacity building grant from the Association of State and Territorial Health Officials (ASTHO). The Network served as the fiscal agent for the grant. The primary goal was to build capacity for HIA in Maine via training and performance of an HIA by collaboratively implementing an HIA with members of MeHi, a selected community, and other partners with an interest in HIA. From a community health perspective, ASTHO's primary interest was environmental health outcomes, but the organization allowed for the inclusion of those health outcomes of interest to the community chosen for the HIA because it was argued that the ways in which built environment is designed can provide opportunities to realize co-benefits among healthy behaviors, mental health, and environmental quality.

MeHi partnered with the Androscoggin Land Trust (ALT) to conduct an HIA in Lewiston–Auburn, Maine. The ALT has developed a long-term plan for the development of a greenway along the Androscoggin River, which serves as the common boundary for the cities of Lewiston and Auburn. The Plan calls for the development of new trails and extension of existing bicycle and pedestrian facilities (e.g. bike lanes and sidewalks) to create a network of pathways that link residential and commercial parts of the downtowns to a recreational trail along the river.

ALT has prioritized the implementation of these projects into three tiers, with those in the first tier (Tier One) having the highest priority for development. However, there remain decisions to be made about how to implement the development of the various projects that comprise Tier One.

The goal of this HIA is to provide ALT with information about the predicted community health impact of the various projects identified in Tier One of the Greenway Plan. ALT will use this information as it begins implementation of its long-term plan.

1.3 The Androscoggin Greenway Plan

In the 1990s, ALT and the National Park Service's River and Trails Program, in cooperation with the Cities of Lewiston and Auburn, the Androscoggin Valley Council of Governments, Androscoggin River watershed residents, landowners, businesses, and other towns and government agencies, developed an ambitious vision for the future of the Androscoggin River and its landscape.(2)

ALT, as the facilitator of this project, outlined this vision in Androscoggin Greenways: Benefits of a River Corridor, a booklet published in 1996, stating its geographic focus as the river's course from the Twin Bridges in Turner and Leeds downstream through Lisbon and Durham. It identified the primary goals as: "Preserve open space along the Androscoggin River and its tributaries; revitalize the urban

waterfronts of Lewiston-Auburn and Lisbon; create access to the river and its tributaries for recreation and transportation; and provide a riverfront setting for community life." ALT and their partners have worked to implement this vision through a variety of free-standing projects. Thus far, these projects have produced expanded riverfront trails in downtown Lewiston-Auburn, creation of the Androscoggin Riverlands State Park (the towns of Turner and Leeds), conservation of the David Rancourt River Preserve (Lewiston) and the Hallelujah Farm and Katherine M. Breton Memorial Preserve (both in Lisbon), Androscoggin Riverlands Expansion (Turner), the River Rise Farm and Forest (North Turner), and Lisbon Island (Lisbon).(2)

Recently, ALT has capitalized on opportunities to move beyond their former piecemeal approach to implementing the Greenway Plan vision. With major support from the Environmental Funders Network's Quality of Place Initiative and the Davis Conservation Foundation, ALT is leading a broad-based coalition in the cities of Lewiston and Auburn and the towns of Greene, Turner, and Leeds. The coalition is developing a model for engaging landowners, local governments, and river corridor residents in creating actionable conservation plans focused on enhancing recreational opportunities that link downtowns to natural landscapes across municipal boundaries. The coalition seeks, among other things, to create a land and water trail to link Androscoggin Riverlands State Park to downtown Lewiston-Auburn.(2)

The development of the Greenway Plan included five walking audits that were completed with ALT's engineering consulting firm. These walks were a series of walking loops that serve to connect key neighborhoods or business centers in the heart of the community to the river corridor. A total of 45 participants joined in the walks. Further, a public workshop was held in January 2012. At the workshop, participants engaged in a prioritization process, dividing all the proposed Greenway work into three tiers. Tier One was designated as the highest priority projects, but no further prioritization within the tier was assigned.

1.4 The Health Impact Assessment

HIA is a systematic, structured practice that uses the best available theory and evidence to make reasoned judgments on the prospective health impacts of proposed policy decisions, projects, plans, or programs undertaken by government or the private sector. HIAs include a broad definition of health and health determinants, application to policy making in all sectors, involvement and engagement with decision makers and affected stakeholders, explicit concern with vulnerable populations, and a commitment to inclusion and transparency. The two primary outputs of HIAs are: 1) an analysis of health impacts; and 2) decision alternatives and mitigation strategies to ensure that decisions consider health.(3)

The HIA process is outlined in Figure 1.

Figure 1. Health Impact Assessment Process
Source: World Health Organization: http://www.who.int/hia/tools/en/

There are several types of HIAs. Due to time and resource constraints, this HIA was designed as a Rapid HIA.

2.0 Background

2.1 Section Overview

This section of the report provides information on the HIA community, including history, demographics, and health information, which serve to frame the context of the HIA.

2.2 Lewiston-Auburn and Androscoggin County

The cities of Lewiston and Auburn sit within Androscoggin County in central Maine. The county is situated in south central Maine and is bordered by Cumberland County to the south, Oxford County to the west, Franklin County to the north, and Kennebec and Sagadahoc Counties to the east. Androscoggin County contains roughly 8% of Maine's 1.27 million residents. Although Maine is a very rural state with only 41.3 persons per square mile as compared to the national population density of 79.6 persons per square mile, Androscoggin County contains Maine's second and fifth largest cities: Lewiston and Auburn, respectively. The rest of the county is comprised of small rural towns covering a total of 470 square miles and an average population of 220.7 persons per square mile.(4) The population of the area is in excess of 60,000 people—nearly 40,000 in Lewiston and over 20,000 in Auburn. Growth in the region has also continued in the neighboring towns.(5)(6)(7)

The city of Lewiston was incorporated in 1795 and Auburn followed with its incorporation on the other side of the Androscoggin River in 1842. Textiles and shoes served as the basis of the economy for decades, but competition from the south and abroad led to the closure of most of the mills and factories in more recent years. The cities are working hard to transform their downtown areas from vacant textile mills and abandoned shoe factories to a region known for progressive health care, tourism, high-precision manufacturing, telemarketing and financial services.

Located across from each other on the Androscoggin River, the twin cities of Lewiston and Auburn are the central hub of the region and are often thought of as one entity "Lewiston-Auburn" or "L-A." Lewiston and Auburn are home to a large Franco-American population as well as an increasing number of Somali and Sudanese refugees and immigrants.

According to Phil Nadeau, Deputy City Administrator with the City of Lewiston, "Our new immigrant residents continue to attract the interest of news media and academics from around the world. These former refugees, now over 3,000 ethnic Somali and Somali Bantu who have arrived from many parts of the country, have changed the social and cultural landscape of our community in ways that will be

experienced for many generations. The arrival of these new Mainers marks another significant chapter in Lewiston's storied immigrant history."(4) The uniqueness that these populations bring to Lewiston-Auburn can be seen in the race and language indicators found in Table 1.

Table 1. Census Data, Lewiston, Auburn, Androscoggin County and Maine, 2010

Characteristic	Lewiston	Auburn	Androscoggin County	Maine
Gender				
Male	48.1%	48.3%	48.9%	48.9%
Female	51.9%	51.7%	51.1%	51.1%
Age				
Under 5	7.2%	6.1%	6.4%	5.2%
Under 18	22.1%	22.1%	22.6%	20.7%
65 Years & older	15.5%	15.2%	14.1%	15.9%
Race				
One Race	97.4%	97.9%	98%	98.5%
White	86.6%	93.7%	92.8%	95.5%
Black / African American	8.7%	2.5%	3.6%	1.2%
Language Spoken at Home				
English Only	79.3%	86.9%	86.8%	92.9%
Language Other than English	20.7%	13.1%	13.2%	7.1%
Percentage of Population with a Disability				
5-20	Unavailable	Unavailable	11.2%	9.0%
21-64	Unavailable	Unavailable	21.1%	19.2%

Source: 2010 U.S. Census

Androscoggin County has a higher unemployment rate and a lower median household income when compared to the state average (Table 2). The proportion of individuals and families (particularly children) living in poverty is higher than the state average (Table 2).

Residents in Lewiston-Auburn tend to drive (either alone or in carpools) rather than use public transport or walk. In Androscoggin County, residents spend, on average, 22 minutes traveling to work. The percentage of Lewiston workers bicycling or walking to work (9.3%) was more than double that of Androscoggin County or State workers (4.3% and 4.2% respectively). The percentage of Lewiston workers using public transportation to get to work was 1.9%, more than double that of Androscoggin County (0.9%) or the State of Maine (0.8%) in 2000.

Table 2. Community Characteristics, Androscoggin County and Maine

Characteristic	**Lewiston**	**Auburn**	**Androscoggin County**	**Maine**
Employment Status*				
Employed	56.0%	60.1%	60.8%	60.7%
Unemployed	6.0%	5.2%	5.2%	4.2%
Household Income*				
Median Household Income	$36,743	$41,649	$44,470	$46,933
Families in Poverty*				
% Families below poverty	16.0%	8.4%	9.7%	8.4%
Children less than 5	42.3%	26.9%	26.5%	19.1%
Children less than 18	29.9%	13.8%	17.2%	14.7%
Using Food stamps/SNAP benefits			17.3%	13.6%

in past 12 months				
Female Head of Household (% below poverty level)	47.9%	27.4%	34.5%	30.6%
Individuals in Poverty*				
% Individuals below poverty level	21.7%	12.9%	14.3%	12.6%
% Individuals under 18 years	35.8%	15.5%	20.0%	17.0%
% Individuals 18 years and over	17.7%	12.1%	12.6%	11.4%
Commuting to Work				
Drove alone	72.4%	79.0%	78.0%	78.6%
Carpooled	13.1%	14.3%	13.4%	11.3%
Public transportation (including taxicab)	1.9%	0.9%	0.9%	0.8%
Biked or walked	9.3%	3.1%	4.3%	4.2%
Motorcycle	0.9%	0.6%	0.7%	0.7%

or other means				
Worked at home	2.3%	2.2%	2.6%	4.4%
Mean travel time to work (minutes)*	20.3	19.3	22.9	22.8

*Source: 2010 U.S. CensusSource: 2000 U.S. Census

2.3 Androscoggin County Health Profile

The Robert Wood Johnson Foundation (RWJ) collaborates with the University of Wisconsin Population Health Institute to implement the County Health Ranking and Roadmaps program. The County Health Rankings illustrate what is known when it comes to what's making people sick or healthy. The rankings are based on a model of population health that emphasizes the many factors that, if improved, can help make communities healthier places to live, learn, work and play. There are two rankings: health factors and health outcomes.

Health factors in the County Health Rankings represent what influences the health of a county. RWJ measures four types of health factors: health behaviors, clinical care, social and economic, and physical environment factors. In turn, each of these factors is based on several measures. Health behavior factors include alcohol use, tobacco use, sexual activity, diet and exercise. Clinical care factors include quality of care and access to care. Social and economic factors include education, community safety, employment, family and social support, and income. Physical environment factors include environmental quality and built environment.(8) Androscoggin County's results for health factors are found in Figure 2 and Table 3.

Health outcomes in the County Health Rankings represent how healthy a county is. There are two types of health outcome measurements: how long people live (mortality) and how healthy people feel while alive (morbidity). Androscoggin is rated 11th (of 16 counties) in Maine (Figure 3 and Table 3).(8)

Figure 2. Ranking of Maine Counties on Health Factors, 2012

Figure 3. Ranking of Maine Counties on Health Outcomes, 2012

Table 3. County Health Rankings by Health Outcomes and Health Factors, Maine, 2012

County	**Mortality**	**Morbidity**	**Health Behaviors**	**Clinical Care**	**Social & Economic Factors**	**Physical Environment**
Androscoggin	*11*	*12*	*13*	*4*	*12*	*14*
Aroostook	9	13	11	11	9	12
Cumberland	2	3	1	1	1	9
Franklin	7	6	7	7	11	3
Hancock	3	1	4	3	7	5
Kennebec	8	7	9	2	5	13
Knox	10	2	5	9	8	1
Lincoln	6	9	3	5	4	10
Oxford	15	15	12	14	13	6
Penobscot	12	11	10	10	6	16
Piscataquis	14	14	14	6	15	2
Sagadahoc	1	4	2	12	2	15
Somerset	13	16	16	15	14	8
Waldo	4	8	8	13	10	4
Washington	16	10	15	16	16	7

York	5	5	6	8	3	11

2.4 The Androscoggin River

Forty years ago the Androscoggin River in New Hampshire and Maine was one of the ten most polluted rivers in the country, a condition that helped to inspire the federal Clean Water Act of 1972. In the decades since, the Androscoggin has experienced a revitalization. This water quality transformation is enhanced by the addition of large land tracts to the Umbagog National Wildlife Refuge and the White Mountain National Forest, a new state park nearby the cities of Lewiston and Auburn, a heavily used bicycle and pedestrian pathway near the river's mouth in Brunswick, and a well-used water trail along the river's entire length. Today, communities along the river are grateful to recognize the river's even greater conservation, access, and recreational, educational, and economic benefits. As these communities transition from forest products and other manufacturing to a more diverse economy characterized by technology and services, their economic prospects are enhanced by amenities that will attract new residents, skilled workers, businesses, and tourists.

Recent and robust partnerships among public, private, nonprofit, and philanthropic interests have emerged that offer the prospect of strengthened conservation, stewardship, recreational opportunity, and job creation throughout the watershed, along a growing, continuous network of water, biking, hiking, and pedestrian trails that reconnect the river to underserved urban and rural communities.(9)

3.0 The Greenway Plan

3.1 Section Overview

This section provides detailed information on the Greenway Plan and the specific portions of the proposal that were assessed as part of the HIA.

3.2 Tier One Projects

The goal of this HIA is to provide ALT with information about the predicted health impact to the community of the various projects of Tier One of their Plan.

For the purposes of the HIA, the bicycle and pedestrian projects identified in Tier One of the Greenway Plan were divided into four distinct projects. In dividing the work into four projects, logical boundaries and divisions were considered, but it is important to note that implementation of the plan may not follow the divisions used in this assessment, and in fact, Tier One is considered a single project by the ALT.

The complete Greenway Plan is shown in Figure 4. Tier One projects are shown in green. The Greenway Plan includes bicycle and pedestrian projects on both sides of the Androscoggin River in both Lewiston and Auburn. It includes trails along the river front, as well as increased bicycle and pedestrian connections throughout the downtown area that will increase access to and from neighborhoods, business areas and destinations.

Figure 4. Androscoggin Land Trust Greenway Plan

3.3 Strawberry Avenue

The Strawberry Avenue project focuses on connecting neighborhoods to downtown by creating pedestrian and bicycle trails. The trail begins at Sunnyside Park in Lewiston and travels along the Androscoggin River through Riverside Cemetery to Tall Pines Drive. Branches of the trail also lead to Boxer Island and Main Street. There are numerous subsidized housing complexes and senior citizen / group homes within the immediate area and a (relatively) large African and African American community.

Figure 5. Strawberry Avenue Project Map

3.4 Riverfront Island

The Riverfront Island project focuses on creating pedestrian and bicycle connections within the Riverfront Island area of Lewiston. This includes new connections to Simard-Payne Memorial Park (Railroad Park), along the river and over both the Lown Bridge and Longley Bridge.

Figure 6. Riverfront Island Project Map

3.5 Exit 80

The Exit 80 project begins at I-95 Exit 80 in Lewiston and follows the existing rail corridor for 2.25 miles to Chestnut Street in downtown Lewiston. While this corridor is adjacent to some densely populated areas of the city, the topography between the residential area and the trail makes it nearly impossible to reach the trail from those neighborhoods, under the existing plan. This results in a corridor that is almost exclusively point-to-point in nature.

Figure 7. Exit 80 Project Map

3.6 North River Road

The North River Road project follows the Androscoggin River on the Auburn side, starting at West Pitch Park and continuing north under Veteran's Memorial Bridge to the proposed YMCA property just north of Bradman Street and ending at Center Street. This trail passes close to some densely populated areas in Auburn, but Center Street and Union Street Bypass, four lanes and a median of heavy traffic, isolate the residential area from the trail. There is potential for active transport via this trail from the Northern Avenue neighborhood and perhaps further north from the Bradman Street neighborhood.

Figure 8. North River Road Project Map

4.0 Scoping

4.1 Section Overview

This section of the report details the “scoping phase” of the HIA—specific planning tasks and key activities.

4.2 HIA Planning

One of the first tasks of the HIA was to develop a timeline including all anticipated tasks and deadlines for when they needed to be completed in order to continue moving the work of the HIA forward (Figure 9). A detailed timeline can be found in Appendix B.

Figure 9. HIA Timeline

Two groups were established: the HIA Team and the HIA Advisory Committee. MeHi members formed the basis of the HIA Team, and Lewiston-Auburn community members, and others interested in learning how to conduct an HIA, were invited to participate in the HIA Team or Advisory Committee. Individuals tasked with leading HIA activities were:

Meeting Coordination: Rebecca Drewette-Card
Lead Report Author: Rebecca Drewette-Card
Communications: Douglas Beck
Data Analysis: Sarah Levin Martin
Evaluation: Michelle Mitchell

The Advisory Committee was formed for members of the Lewiston-Auburn community to provide feedback and community input into the results of the HIA.

4.3 HIA Workshop

In order to increase capacity and awareness of HIA in Maine, and to gain as much input into the process as possible, the HIA Team hosted a workshop on May 30, 2012. The group cast a wide net when inviting participants to the workshop.

In total, 84 individuals received the workshop invitation (Appendix C). With each invitation, recipients were asked to please forward the invitation to any and all they felt might be interested in this work and in being trained or becoming more familiar with HIA. This generated at least two additional interested parties for the workshop. A total of 22 individuals attended the workshop. It should be noted that due to the compressed time frame for this work to be performed there were many who expressed interest in participating but who were unable to attend on the short advanced notice afforded (8 days).

In order to maximize time and resources for the HIA, a large part of the agenda (Appendix C) focused on identifying the health indicators to be included in the assessment. The group identified health indicators within several categories: health, transportation, employment, environment and social. Once potential indicators were identified, the group voted on the indicators of highest interest to them, to narrow down the list.

While it is likely that any HIA will involve consideration of environmental health aspects, the characteristics of this particular project meant that environmental health was not ranked as a primary concern of the HIA. Because stakeholder engagement is a central element of the HIA process, the HIA Team did not want to artificially introduce an environmental set of priorities. Nonetheless, there are general environmental co-benefits associated with this project, as was mentioned above (see section 1.2). The following indicators, which fell within five categories, were identified during the workshop (with votes):

- **Health**: physical activity (14 votes) and access to fruits and vegetables (8 votes), recreation (4 votes), and mental well-being (3 votes).
- **Transportation**: access to destinations and services (13 votes), and bicycle/pedestrian injuries (3 votes).
- **Employment**: employment opportunities (10 votes), and number of new businesses (1 vote).
- **Environment**: access to open park space (10 votes), and air quality (4 votes).
- **Social**: social capital (6 votes), perceived safety (6 votes), number of law enforcement calls (1 vote).

A new category, “access,” emerged during analysis.

Given the aims of the HIA (i.e. to increase capacity and experience in conducting HIAs), all workshop attendees were given the opportunity of gaining knowledge and experience through participation in the HIA Team (described above) or the Advisory Committee (described above) (Appendix D).

Interestingly, while there were workshop participants who indicated an interest in participating in the HIA, ultimately the HIA Team was composed of the original MeHi Team members. The nature of the timing (e.g. summer, funding challenges associated with the HMPs) and the timeframe (e.g. significant work happening within a short period of time) of the HIA made it challenging for additional individuals to participate on the HIA Team. However, all workshop participants continued to be informed of progress via the Advisory Committee.

4.4 Boundaries of the HIA

In considering the health impact of the Greenway Plan, the geographic and social boundaries delineate the extent of the impact. The geographic boundaries of the HIA considered the impact of the trails on the population within a half mile of each trail, based on evidence showing that proximity to trails increases physical activity,(10)(11) and people outside of a perceived achievable distance are unlikely to take advantage of the resource.

Three of the proposed projects (Riverfront Island, Strawberry Avenue and portions of Exit 80) are within the urban environment and, taking into account up to a half mile radius proximity for each, have the potential to impact a large segment of the Lewiston-Auburn population. The majority of those living within these areas are low to moderate income. Some of these areas also have a growing immigrant Somali population.

The North River Road project is the only trail located entirely in Auburn and, due to its location, also the

only trail that transects low density residential areas with a fairly high level of commercial / retail development. Its situation east of the Route 4 corridor further isolates it from more densely populated areas of Auburn.

5.0 Assessment

5.1 Section Overview

This section provides the details of the assessment portion of the HIA. This includes a literature review, the pathways that were developed for each project and analysis for each of the health indicators in the HIA.

5.2 Health Indicators

As previously described (section 4.3), health indicators for inclusion in the assessment were selected by participants of the HIA workshop.

The need to address disparate populations--including older adults, those living in poverty, low-income residents, and the immigrant populations—was discussed at the HIA Workshop and at subsequent HIA Team meetings.

Diagrams (Figures 10-14) were developed to consider the effect(s) of the selected indicators on health outcomes. Based on data already collected, a few additional outcomes were added (e.g., active commuting). These data were drawn from a report describing walking audits from November 1, 2011(12) and from a report from a January 5, 2012 public meeting.(13)

A logical pathway was used to visually map out the potential health impact that the Tier One Greenway Plan would have (Figure 10).

Figure 10. LogicalPathwayfor the Androscoggin Greenway Plan: Tier One Projects

This overall logical pathway was used as a basis to document and compare the potential health impact of each project, as shown in Figures 11–14. Additional pathways were developed for each of the four projects. In some cases, multiple projects had the same pathway. In these pathways, the red + and 0 signs indicate scores given to the listed indicators, which will be described in section 5.4 of the report.

Figure 11. Logical Pathway for the Strawberry Avenue Project

Figure 12. Logical Pathway for the Riverfront Island Project

Figure 13. Logical Pathway for the Exit 80 Project

Figure 14. Logical Pathway for the North River Road Project

5.3 Baseline Data
Baseline data were found for all the health indicators in the HIA.

Table 4. HIA Baseline Data

Indicator	**Baseline Data**	**Data Source**
Access to Destinations	Public input regarding need for signage, connections etc. from Walking Audit (Nov 2011) and from Public Meeting (Jan 2012)	Count of # of way finding signs available
Mileage of Sidewalk / Trail	Baseline N/A	ALT records of new mileage compared with existing mileage

Physical Activity (PA)	24.3% (±4.8) report no PA in past 30 days	SMART BRFSS* 2010
Recreation	N/A	Department of Recreation records for a partial count of public places for physical activity (e.g. parks, trails)
Active Transportation	Lewiston: 7% walk; 1% public bus; 2% bike, motorcycle or taxi. Auburn:3% walk, 0% bus, 1% bike, motor or taxi	Census data: http://transportation-modes-city.findthedata.org/ (accessed July 2012)
Access to fruits and vegetables	1. of farmers' markets (Lewiston: 2, Auburn: 1, Androscoggin County total: 10)	Farmer Report. 2012. (http://www.maine.gov/dhhs/mecdc/local-public-health/wic/documents/QRYMarketReport.pdf)
	% of restaurants in county that are fastfood restaurants(41%) % of population who are low income and do not live close to a grocery store (Limited access to healthy food) (11%)	Maine Department of Agriculture. 2012. (http://www.getrealmaine.com/index.cfm/fuseaction/farmersMarkets.directory) County Health Rankings & Roadmaps 2012 (countyhealthrankings.org)
Nutrition (Fruit and Vegetable Intake)	1. of daily servings of fruits and vegetables	Community survey (or SMART BRFSS, if it becomes available)
Bicycle/Pedestrian Injuries	8 bike crashes, 25 pedestrian crashes for Lewiston (1yr: 2011). 10 bike, 22 pedestrian for Auburn (1.5 yr: Jan'11- June '12)	Municipal records (Lewiston Police Department and Auburn Police Department)
Social Capital	Issues identified by public include substance abuse and mental health	Androscoggin County Profile, 2007 (from focus groups, business survey and interview data): http://74.52.15.66/~healthy/wp-content/uploads/2008/09/county-profile.pdf (accessed July 30, 2012)

Perceived Safety	N/A	Community survey
Employment Opportunities	3,307 jobs created in Androscoggin County in Q2 of 2010. (see economic profile table below)	Workforce Data, Androscoggin County 2010. http://www.maine.gov/labor/cwri/county-economic-profiles/countyProfiles.html
Mental Well-Being	Adults in the community reported: 15.5% (±3.8) fair/poor health status; 20.3%(16.1-24.4) were limited in any way; 10% had 11+ days mental health not good. 5% needed mental health treatment but did not get it	SMART BRFSS* 2010 SMART BRFSS* 2010 OneMaine Health Collaborative 2010
Obesity	26.9% (±4.9) adults in the community	SMART BRFSS* 2010
Diabetes	9.5% (±2.6) adults in the community	SMART BRFSS* 2010
Cardiovascular Disease	Of adults in the community: 5.5%(3.3-7.6) reported having a Myocardial Infarction; 6.1%(3.9-8.2) reported having cardiovascular disease.	SMART BRFSS* 2010

*Percentage of adults reporting selected health risks- Lewiston-Auburn,ME Metropolitan Statistical Area (MSA), BRFSS2010. (http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp)
Adults who are limited in any activities because of physical,mental,or emotional problems (%yes)
Employment data (from:http://www.maine.gov/labor/cwri/county-economic-profiles/countyProfiles.html)

5.4 Rating System (- -, -, 0, +, ++)
For each of the four project areas, we rated the potential effect of the project on the health outcomes identified. These ratings were based on previous evidence from the literature, from other similar HIAs and on subjective judgments from the HIA Team.

Table 5. Rating System Description

Symbol	**Rating**

- -	Notable negative change
-	Small negative change
0	No change
+	Small positive change
++	Notable positive change

5.5 Physical Activity

It is well-documented that improving the built environment to increase opportunities for active transportation can increase physical activity. For two projects (the Riverfront Island project and the Strawberry Avenue project), the ++ rating was assigned, given the evidence summarized in the Guide to Community Preventive Services(14) (“the Guide”) and other documents, because they seemed well-suited to increasing physical activity.(15) For the two river trail projects (Exit 80 and North River Road), the + rating was assigned as building a trail in and of itself may not draw individuals to increase their physical activity level, but may draw already active individuals to these recreation destinations. However, building a new trail and including informational outreach to attract people to the trail is a proven effective strategy for increasing physical activity recommended in the Guide. To maximize the potential effect of the trail projects, the HIA Team would recommend investing in informational outreach as well.

The 2008 Physical Activity Guidelines(16) summarizing of the health benefits of physical activity can be found in Appendix E. As shown in the Guidelines, the relative risk of dying prematurely from the leading causes of death is lower among those who are physically active compared with those who are inactive.

When considering physical activity, it is useful to distinguish the purpose of physical activity as a way of transportation or as a means of recreation. Active transportation involves the use of physical activity as a means of travel. Studies have shown that trail users are more likely to achieve physical activity recommendations(17)(18). Furthermore, utilizing public transit is associated with increased walking.(19) The public transit system in Lewiston-Auburn is citylink. Each of the four Tier One projects analyzed by the HIA can be accessed by current citylink fixed-route bus routes.

The HIA Team proposes that the two river trail projects (Exit 80 and North River Road) will not increase active transport as much as the two more downtown locations (Riverfront Island and Strawberry Avenue), but will to a limited degree (hence the + rating for the North River Road and Exit 80 projects, and ++ rating for the Strawberry Avenue and Riverfront Island projects). No negative outcomes were determined.

When considering increasing physical activity as a recreational activity, research shows almost one-third of people report being active in public parks,(20) and the closer someone lives to a park, the more likely they are to utilize the park. One study found that people living within one mile of a park are four times more likely to visit the park one or more times per week than those living further.(21) Supervised activities and more amenities (e.g., courts, lighting, and playground equipment) increase park use.(21)

If properly signed and amenities added, the proposed creation of a new Canal Park and the close

proximity of the existing parks have potential to increase recreational activity (and increase social capital – see below). Since the supervised activities and amenities are not known, a + rating was given, although there is potential for ++ ratings for each of the four project locations. No negative outcomes were determined.

5.6 Increased Nutrition

Fruit and vegetable access is not decisively linked to fruit and vegetable intake.(32) However, having no access to affordable fruits and vegetables is a notable barrier to eating a healthy diet.(33) Furthermore, where coupons or other programs are offered to incentivize farmer's markets, fruit and vegetable intake has been shown to increase. (34)(35) Where the projects proposed connections link to farmer's markets, a + rating was assigned.

While fruit and vegetable consumption was chosen as the measure for this indicator, it is important to note that there are additional measures which could also be used, such as dairy or whole grain consumption. Further, this analysis doesn't examine access to unhealthy foods, which could increase with the implementation of the Tier One projects, particularly the North River Road project.

5.7 Decreased Bicycle and Pedestrian Injuries

A bike lane or bike path is the safest place for people to cycle.(29) In a study in California, evidence supports the notion that improving the streets and street networks to better accommodate bicycles may lead to an environment that can enhance overall safety for all road users.(30) There is some corroborative evidence for pedestrians.(31) The improvements and added trail footage should improve bicycle and pedestrian safety, both actual with regard to risk of injury, and perceived safety, in terms of safety from vehicular traffic. The HIA Team rated all four projects with a + rating for potentially decreasing injuries.

5.8 Social Capital

Social capital represents connectedness within a community and therefore interaction with others is a key element of social capital. Building sidewalks and crosswalks and increasing access to destinations (especially parks) can help build social capital by providing opportunities to walk and participate in social activities. Social interactions can increase longevity, improve mental health, and reduce crime (which would mitigate issues around actual and perceived safety).

Evidence provides for a positive rating for all four projects (+ rating), though the Riverfront Island and Strawberry Avenue projects (++ rating) have stronger evidence given that mixed-use development patterns are associated with a greater sense of community compared to single-use residential neighborhoods.(22) No negative outcomes were determined.

Improved social capital is associated with higher levels of physical and mental well-being.(23) Physical activity is associated with decreased depression and anxiety (moderate evidence according the latest physical activity guidelines); hence a + rating for each project was assigned.

With respect to access to parks, green space (e.g., parks) can offer benefits.(24)(25)(26) The projects that connect people to parks will likely increase the use of parks. Parks provide a place where neighbors and residents of the same community can get together (i.e., increase social capital). Given the number of parks, the addition of trail mileage where there was none, and the proposed new park (Canal Park), the Riverfront Island and Strawberry Avenue projects received ++ ratings, and the North River Road and Exit 80 projects received + ratings.

The HIA Team hypothesized that a revitalized riverfront would have a positive impact on the local economy. In Washington DC, the Capital Riverfront is a fine example of what can be done.(36) A conceptual model was provided in a thesis,(37) but the HIA Team felt more evidence was needed before a positive rating could be assigned and accordingly assigned a 0 rating.

The amount of walking someone does is associated with the actual or perceived safety.(27) Fear, or lack of perceived safety, is associated with reduced levels of physical activity, especially in women over 65 years and non-white population.(28) Amenities, such as lights, can be included as part of the proposal in order to increase perceived safety. Because the existing plan does not include the level of detail to include specific efforts to mitigate crime issues, a 0 ranking was assigned.

5.9 Health Outcomes (Obesity, Cardiovascular Disease, Diabetes)

The health effects of physical activity have been studied extensively (Appendix E). There is strong evidence for the outcome indicators selected. Though the evidence is strong, the HIA Team assigned a + rating for each health indicator, given the volume of increase of physical activity expected and the distal location of these chronic conditions on the diagrams. No negative health outcomes were determined.

5.10 Limitations

The following limitations are noted.

The literature cited includes only a subset of the literature available on each topic. The HIA Team selected references without bias toward positive or negative findings, though it is possible that sentinel studies are mistakenly absent. The HIA Team performed this HIA as a “rapid HIA” and time was of the essence which limited the team’s ability to conduct a more thorough review of the literature.

In keeping with a rapid HIA, the HIA Team did not collect any primary data, but relied on secondary data, where available (e.g., the Walkability Audit and the Public Meeting).

The HIA Team provided baseline data for each indicator, and its data source, but did not create statistical models to predict the degree of change possible. Instead, the Team relied on prior HIAs (primarily the East Bay Greenway HIA(38) and the Mass Transit HIA from the University of California at Los Angeles (39)) and the knowledge and expertise of the HIA Team and Advisory Committee to estimate change possible.

5.11 Conclusion

Overall, the Greenway Plan will result in increased bicycle and pedestrian connectivity within the community. It is envisaged that the increase in connectivity will provide community members with greater access to fruits and vegetables, services, and parks, and increase the overall trail mileage. Literature and experience has shown that, over time, improved access and increased trail mileage results in increased physical activity, nutrition, decreased bicycle and pedestrian injuries and enhanced social capital. The long term impact of these positive health outcomes is improved health and mental wellbeing.

For most indicators collectively determined by the HIA Team and Advisory Committee, positive health changes are expected by completing the Tier One projects. The analysis suggests that the Riverfront Island and Strawberry Avenue projects will have a greater community health impact than the North River

Road and Exit 80 projects (Table 6).

Table 6. Summary of Expected Health Impacts by Project

6.0 Recommendations

6.1 Section Overview

This section provides the details of the HIA recommendations.

Based on the literature, previous HIAs and the knowledge and experience of the HIA Team, the following recommendations are proposed. Because the results of the HIA show overall improved community health with the implementation of the proposed trails, the recommendations provided in this report aim to increase community use of the trails, in order to maximize those community health benefits.

It is important to note that health benefits were the only factor considered for the development of the recommendations. It is assumed that the final decision making process will consider many different aspects such as economics, feasibility and strategic direction. In addition, the HIA Team assumed that it is not feasible to implement all projects simultaneously and therefore provides recommendations for prioritization. These recommendations are not intended to discount any project, but to highlight where positive health outcomes can be maximized.

Draft recommendations were presented to the Advisory Committee at a meeting on July 5, 2012. Revisions to the draft recommendations were made based on feedback provided at that meeting.

6.2 Overall Recommendations

1. Focus first on the development of the Riverfront Island project and the Strawberry Avenue project, rather than the Exit 80 project or the North River Road project.

The Riverfront Island and Strawberry Avenue projects will have the greatest positive impact on community health as proposed. The Exit 80 and North River Road projects have less positive health impacts due to their more isolated nature. This does not mean that the Exit 80 and North River Road projects should not be pursued, just that they should be a lower priority.

6.3 Trail Access and Safety Recommendations

The following recommendations pertain to all trail projects, unless otherwise specified. They were determined using available literature and best-practices and are aimed at maximizing the positive health outcomes.

1. Consider specific opportunities for improved pedestrian access to the proposed trails, which will lead to improved pedestrian safe access to the proposed trails and improved health by a greater proportion of the community. Two projects have particular access issues.
Assuring pedestrian and bicycle facilities exist to connect neighborhoods to the proposed trails will increase access to those facilities for community members. This would include sidewalks, crosswalks, bike lanes, and similar facilities.

Specifically, opportunities exist for increased and/or improved pedestrian crossings to the North River Road project across Center St. and Union St. Bypass, and for trail extensions along the Exit 80 project to nearby neighborhoods.

While painted crosswalks exist across Center St. and Union St. Bypass, significant opportunities remain to make the pedestrian crossings safer and more convenient, including more frequent crosswalks, traffic-calming measures, and amenities to make crossing safer for vulnerable populations (e.g. pedestrian islands).

In the neighborhoods adjacent to the Exit 80 project, existing desire lines—paths created due to repeated use by pedestrians, indicate that some individuals are currently walking from the neighborhoods down to the rail corridor.

2. Implement design standards for the trails which increase perceptions of safety and visibility and address user comfort and accommodation. Further, trails should be ADA-compliant where possible, particularly in those areas in close proximity to residential areas, and specifically near senior housing.
This could include paved surfaces, ramps where necessary, lighting, benches, and other amenities. Further, it could include assuring that foliage is cut back well from the trails, or the presence of law enforcement or community watch groups to assist with issues such as sex and drug use along the trails. Addressing these issues successfully will lead to increased trail use, and further increase safety along the trails.(40)(41)

6.4 Trail Promotion Recommendations
The following recommendations pertain to all trail projects, unless otherwise specified.

1. Use informational outreach to increase awareness of the Greenway Plan among community members.
This could take the form of way-finding signs (which were previously identified as a need by community members), maps, public announcements, and programs. Articles in LA Magazine could be utilized. Social media could be used to promote the trails to the community (e.g. ALT's Face Book page and/or those of the two cities). Further, the community may need to initiate a campaign to make connections for community members, such as how they can access the trails to get to where they need or want to go.

2. Consider infrastructure and policies which allow for year-round bicycle and pedestrian use.
This could include priority plowing after winter storms, bike patrol by law enforcement, and/or commitment to ongoing maintenance by municipalities or private groups.

3. Consider the social and cultural needs of all community members when promoting the trails.
The Lewiston-Auburn community is diverse and messages that resonate with some community members may not be appropriate for others. Trail promotion messages should consider age, physical ability, and cultural difference.

6.5 Social Capital Recommendations
The following recommendations pertain to all trail projects, unless otherwise specified.

1. Increase social capital and community pride by integrating natural and cultural history interpretation into the design of the trails.
This could include story boards, a walking museum, artwork from local artists and other items of interest.

2. Increase community capital by implementing programs that create community ownership of the trails.
Programs can take many forms including an adopt-a-trail program and walk/run events.

7.0 Dissemination

7.1 Section Overview
This section of the report provides a recommended dissemination plan for the sharing of the HIA results.

7.2 Dissemination Plan
The success of any HIA depends on effective dissemination. In keeping with the dual purpose of this HIA, the dissemination is aimed at increasing the following: 1) awareness and knowledge about HIAs; and 2) awareness of the results of this HIA to ensure the adoption or implementation of recommendations.

Beyond this report, the HIA Team recommends the following additional dissemination formats to the ALT. These recommendations are based on a discussion with the HIA Advisory Committee in early July 2012.

- A one-page summary for each project. This would include the following:
    - A brief summary of what an HIA is;
    - A map detailing the specific project; and
    - The applicable recommendations.
- A PowerPoint presentation that includes all the one-page summaries.

The Advisory Committee also indicated a preference that photographs be included where possible in the dissemination materials.

The Advisory Committee identified the following key audiences for dissemination materials:

- Lewiston / Auburn public health community;
- City Planners;

- The ALT members; and
    - It was suggested that a presentation could be used as a primer to an existing workshop planned with city planners.
- Lewiston / Auburn pedestrian and bicycle committee.

8.0 Monitoring and Evaluation

8.1 Section Overview

This section provides a recommended monitoring and evaluation plan to track the decision outcomes from the HIA.

8.2 Monitoring and Evaluation Plan

Ideally, an HIA should include a follow-up monitoring plan to track the decision outcome (outcome evaluation) as well as the effect of the decision on health impacts (impact evaluation).

Short term monitoring / evaluation is focused on tracking the decision making process and assessing the impact that the HIA had on the decisions. This is achieved by administering the attached survey (Appendix F) once decisions have been finalized.

Long term monitoring / evaluation assesses whether the anticipated positive effects on health, well-being and equity were enhanced. This is done by tracking the indicators using existing data sources. A worksheet detailing the indicators, data sources and baseline data is attached (Appendix G). Completing this worksheet annually or bi-annually will allow ALT to assess the accuracy of predications made during the HIA.

9.0 Appendices

Appendix A: Glossary of Acronyms and Terms

Acronyms

ACET	Active Community Environment Team
ALT	Androscoggin Land Trust
ASTHO	Association of State and Territorial Health Officials
BRFSS	Behavioral Risk Factor Surveillance Survey
CTG	Community Transformation Grant
HIA	Health Impact Assessment
HMP	Healthy Maine Partnerships
L-A	Lewiston Auburn

MeHi	Maine Health Impact Assessment Initiative
RWJ	Robert Wood Johnson Foundation

Glossary(42)

Baseline Data	Basic information gathered before a program begins. It is used later to provide a comparison for assessing program impact.
Community Participation	Involving the community in an activity such as the planning of projects or carrying out a HIA.
Evidence-based	A body of information, drawn from routine statistical analyses, published studies and “grey” literature, which tells us something about what is already known about factors affecting health.
Health Disparities	Gaps in the quality of health and health care across racial, ethnic, sexual orientation and socioeconomic groups.
Health Impact	A health impact can be positive or negative. A positive health impact is an effect which contributes to good health or to improving health. A negative health impact has the opposite effect, causing or contributing to ill health.
Health Impact Assessment	A means of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques.
Health Indicators	A characteristic of an individual, population, or environment which is subject to measurement (directly or indirectly) and can be used to describe one or more aspects of the health of an individual or population.
HIA Team	Six members of the MeHi Team who were actively engaged in performing the HIA, engaging stakeholders and increasing HIA awareness in the community.
Impact Assessment	Judging the effect that a policy or activity will have on people or places.

Key Stakeholders
Those with expert knowledge of the project, those involved and those potentially affected.

MeHi Team

Outcomes

Rapid HIA

Scoping

Screening

Secondary Data

Appendix B: HIA Timeline

Start Date	Activity	Due Date	Specifics
2-May	Agree on Aim of HIA	5/11 prelim final after workshop	Includes 1) identifying which element/ aspects of project will be focus of HIA, 2) Identifying physical and social boundaries of HIA. For whom will the HIA be

			performed? What plans or policies will it affect? On what core issues/values will it focus? Will the HIA focus on a specific geographical area? Will the HIA focus on a particular group of people (e.g. children, residents within a ¼ mile of Maine Street?)
7-May	Inventory of Existing Plans and Policies	by 5/18	A brief summary of what polices and plans are in place for the area.
Create Profile of Area (Provide at workshop)	by 5/18	Includes 1) identifying stakeholders (Listing important groups and summarizing their positions), 2) identifying key information necessary to undertake the HIA (Characteristics of residents, Geography and history, Existing and proposed land uses, Environmental quality).	
14-May	Finalize Timeline and Tasks		
4th Week of May	Workshop	Includes: Identify Focus of Impacts/Indicators (Requires assessment of level of priority, potential health effects, community concern, and what areas can be changed/improved through HIA process). Provide for workshop participants: Brief intro to HIA, Background info on geographic area and proposed project(s), Most up-to-date version of	

		proposal, Policy and plan inventory, Profile of the area.	
Week of June 11th	MeHi Agreement on Final Report Recommendations	We'll want a meeting to review and discuss data analysis and how to frame recommendations - report formatting determinations	
1st Week-6/22	Predicting Impacts: Literature Review/Data Analysis		
22-Jun	Final Data and Recommendations Submitted to Rebecca for Report		
5-July	Preliminary Report to Advisory board and community members	7/5/2012	Meeting with HIA team and advisory board with added community members to present preliminary HIA findings and encourage feedback / response.
12-July	HIA Meeting		
19-July	HIA Meeting		
20-July	Draft Report to HIA Team	7/20/12	This is the first version of the whole report the whole project team will see. Sub-groups may review previous drafts or sections of the report if needed. There may be 2-3 iterations of this report submitted to the team, depending on feedback on previous drafts.
25-July	Feedback from HIA Team due to Rebecca		

26-July	HIA Team Meeting to discuss feedback from HIA Team/ Resolve Major Issues	
26-July	Revisions due to Rebecca	8/1/12
6-August	Draft 2 Report to HIA Team	8/6/12
6-August	Feedback from HIA Team due to Rebecca	8/8/12
13-August	Draft 3 Report to Advisory Committee	8/13/12
13-August	Feedback from Advisory Committee due to Rebecca	8/20/12
24-August	Final Draft Report due to HIA Team from Rebecca	8/24/12
24-August	Feedback from HIA Team due to Rebecca	8/28/12
30-August	Final Report to Community	8/30/12

Appendix C: HIA Workshop: May 30, 2012

Invitation Text
Good afternoon,
You are receiving this email because you have been identified as someone who is engaged in work that affects the health of Mainers and as such may be interested in an opportunity to become trained in Health Impact Assessment (HIA). If you know of others in your agency or service area who may also be interested or are a more appropriate contact for this work please feel free to forward this email to them.
The Maine Health Impact Assessment Initiative (MeHi) has been awarded a grant to grow capacity in Maine for the performance of Health Impact Assessments (HIA). HIA has been called “a combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population” (1999 Gothenburg consensus statement). I have attached a brief summary of HIA for additional information.
We will achieve our grant objective by using the performance of an HIA as a training opportunity. We are working with the Androscoggin Land Trust to perform an HIA on their Greenways Master Plan for the

greater Lewiston-Auburn area. Individuals who complete this HIA as part of our working group will have, by the end of the process, received HIA 101 training and will be well on the way to being able to perform their own HIA's in the future.
If you are a planner interested in the health impacts of proposed plans, a Healthy Maine Partnership or District Coordinating Council working on Active Community Environment Team promotion, or any other party interested in applying a health lens to proposed policies, programs, or projects in your community, then this training is for you.
HIA 101 Training Process & Opportunity
Our process begins Wednesday, May 30th with a full day workshop held in Auburn City Hall, 2nd floor community room. The process will conclude in mid to late July. In the interim participants will be involved in a variety of ways, conference calls, independent work, action groups etc., feeding into the overall work.
If you are interested in taking advantage of this free training opportunity please complete this on line registration form by Thursday, May 24th.
All registrants will receive background materials before the workshop which they should review in full.

Invitation List
The invitation list included:

- Local Community Members: Auburn Land Trust staff & contractors developing the land trust's trail master plan (Wright-Pierce), City of Lewiston Planning, Health & School Departments, City of Auburn Planning, Health & School Departments, Androscoggin Valley County Council of Governments, Healthy Androscoggin Healthy Maine Partnership and other local health agencies including two local hospitals.
- 26 Healthy Maine Partnerships (HMP): HMPs are community coalitions working to improve the environment for improved physical activity and nutrition, and decreased smoking and substance abuse at the local level. In addition to the L-A local HMP, Healthy Androscoggin, the additional 25 statewide HMPs were invited. Among the extended invitations were the three HMPs working on the Active Community Environment Team (ACET) development (Healthy Northern Kennebec in Waterville, Healthy Oxford Hills in Norway, and Partners for Healthier Communities in Sanford). ACET groups are working specifically on improvements to the built environment to increase opportunities for physical activity.
- Public Health Districts: We also sent special invitations to those four public health districts working on the ACET objective within Maine's Community Transformation Grant (CTG).

Maine's Active Community Environment (ACE) Workgroup: The ACE Workgroup is a 13 member statewide coalition of agencies and organizations working to promote ACE concepts.

Workshop Agenda
9:00-9:20 Welcome and Introductions
9:20-9:30 Purpose of Today
9:30-9:50 HIA Overview
9:50-10:20 Overview of Project
10:20-10:35 Break
10:35-10:55 Scoping: Potential Impacts to the Community (Small group work)

10:55-11:55 Scoping: Potential Health Impacts (Small group work)
11:55-12:45 Lunch and Walk
12:45-1:25 Scoping Report-Out
1:25-1:35 Indicator Voting
1:35-1:45 Break
1:45-2:15 Assessment: Finding the Data
2:15-2:45 Discussion
2:45-3:00 Wrap-Up

Appendix D: HIA Participants

LAST NAME	FIRST NAME	COMPANY / ORGANIZATION	HIA TEAM	HIA ADVISORY
Anderson*	Norman	ME CDC	X	
Bartel	Len	Maine Health Access Foundation	X	
Beck*	Douglas	Maine CDC PAN-HW	X	
Carey	Phil	State Planning Office	X	
Comstock*	Jamie	Bangor Health and Community Services	X	
Cousens	Eric	City of Auburn		
Drewette-Card*	Rebecca	Public Health Partners, LLC	X	
Fochesato	Melissa	Mid Coast Hospital		
Fortier	Bethany	York District Public Health Council	X	
Guay	Erin	Healthy Androscoggin		
Hediger	David	City of Lewiston	X	
Huber	Margi	Androscoggin Land Trust		
Isbill	Julie	National Park		

		Service	
Johndro	Steven	Healthy Androscoggin	X
Joy	Joanne	Healthy Communities of the Capital Area	X
Knight	Kathy	NEMRRC	
Labonte	Jonathan	Androscoggin Land Trust	
Lysen	Jim	Community Clinical Services	X
Martin	Sarah	Consultant/ Evaluation Specialist	X
Mayo	Robin	Piscataquis Public Health Council	X
Mitchell*	Michelle	Partnerships For Health	X
Ouellette	Leslie	USM- Muskie School	X
Paul	Jamie	State of Maine/DHHS/CDC	X
Plourde	Janice	Lewiston Public Schools	
Rice	Cindie	CMMC	X
Tetreault*	Ashley	Partnerships For Health	X
Walton	Joan	Androscoggin Valley Council of Governments	X

Appendix E: Health Benefits of Physical Activity—A Review of the Strength of the Scientific Evidence

Adults and Older Adults
Strong Evidence

- Lower risk of:
    - Early death
    - Heart disease
    - Stroke
    - Type 2 diabetes
    - High blood pressure
    - Adverse blood lipid profile
    - Metabolic syndrome
    - Colon and breast cancers
- Prevention of weight gain
- Weight loss when combined with diet
- Improved cardiorespiratory and muscular fitness
- Prevention of falls
- Reduced depression
- Better cognitive function (older adults)

Moderate to Strong Evidence

- Better functional health (older adults)
- Reduced abdominal obesity

Moderate Evidence

- Weight maintenance after weight loss
- Lower risk of hip fracture
- Increased bone density
- Improved sleep quality
- Lower risk of lung and endometrial cancers

Children and Adolescents
Strong Evidence

- Improved cardiorespiratory endurance and muscular fitness
- Favorable body composition
- Improved bone health
- Improved cardiovascular and metabolic health biomarkers

Moderate Evidence

- Reduced symptoms of anxiety and depression

From: http://health.gov/paguidelines/factSheetProf.aspx

Appendix F: Impact Survey

Introduction
This survey is aimed at determining the impact of a HIA (Health Impact Assessment) conducted in June/July 2012 for the Androscoggin Land Trusts Tier One of the Greenway Plan. The Androscoggin Land Trust has identified you as an important stakeholder and would appreciate your opinion. This survey should take approximately 5 - 10 minutes to complete.
Survey responses are anonymous. Results will only be reported in aggregate form to protect individual confidentiality.
Thank you in advance for taking the time to participate in this survey. Your feedback is very important.

About You
1. Which of the following best describes the type of organization you are primarily associated with?
◯City department
◯State agency
◯Community organization
◯Statewide foundation
◯Countywide foundation
◯Hospital / health system
◯Public health organization
◯Private business
◯Other (please specify)

2. Which of the following best describes your role within the organization you described above?
◯Planner
◯Manager
◯Consumer
◯Health care organization support staff
◯Other (please specify)

3. Which of the follow statements best describe your role in the HIA? (Please select all that apply)
◯I was a member of the HIA Workgroup
◯I was a member of the HIA Advisory Committee
◯I attended the HIA meeting in Lewiston
◯I attended the HIA meeting in Auburn
◯I reviewed the HIA report before it was finalized
◯I read the HIA report
◯I attended a presentation on the HIA results

4. Please read through the statements about the HIA conducted for the Androscoggin Land Trust and indicate the degree to which you agree with each one.

The ALT HIA	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	I Don't Know
The HIA was relevant to my work						
The HIA results were what I expected						
The HIA results were useful when making decisions						
The HIA informed a discussion of the trade-offs involved with the projects						
The majority of the recommendations were accepted by the decision-makers						
The majority of the recommendations were implemented by the decision-makers						
The HIA results were used to secure funds						

The HIA helped to build consensus and buy-in among stakeholders

The HIA led to interest from previously uninvolved groups

5. In your opinion, how were the recommendations accepted and implemented by the decision-makers?
6. In your opinion, what factor(s) contributed to the recommendations being accepted (or not accepted)?
7. Please read through the statements about the HIA in general and indicate the degree to which you agree with each one.

Health Impact Assessments	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**I don't know**
HIAs are useful tools						
Where possible, HIAs should be included in de cision-making processes						
A HIA is an objective and scientific approach						
HIAs make health impacts more explicit						

Appendix G: Impact Monitoring Worksheet

INDICATOR	**DATA SOURCE**	**BASELINE LEWISTON-AUB**	**EXPECTED CHANGE**	**FOLLOW UP [DATE]**

		URN
% adults reporting general health as fair or poor	BRFSS 2010. (http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp)	15.5 % (± 3.8)
% of adults reporting doing no leisure time exercise or physical activity in the past 30 days	(http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp)	24.3% (±4.8)
% of adults told by doctor they have diabetes	(http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp)	9.5% (±2.6)
% of adults reporting Body Mass Index greater than or equal to 30.0	(http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp)	26.9% (±4.9)
% of adults who are limited in any activities because of physical, mental, or emotional problems	OneMaine (2011)	20.3%(16.1-24.4)
Number of annual bike and pedestrian crashes	Lewiston and Auburn Police Departments	8bikecrashes,25pedestriancrashesforLewiston(1yr: 2011). 10bike crashes,22pedestrian crashesforAuburn(1.5yr: Jan ’11-June ‘12).
% adults who commute to work	http://transportation-modes-city.findtheda ta.org/	Lewiston: 7% walk; 1% public bus; 2% bike, motorcycle or taxi. Auburn:3% walk, 0% bus, 1% bike, motor or taxi

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Types of HIAs

Rapid HIAs can take anywhere from a couple of hours to a couple of weeks to complete. Because of limited time and resources, rapid HIAs usually use existing HIAs, literature, or data on the topic and may have limited community engagement. Those who do incorporate community engagement usually do so in the form of a one day workshop with multiple days of preparation and follow-up. Rapid HIAs can also be used as a brief assessment to determine if a more lengthy HIA is warranted for a particular policy, plan, project, or program.

Intermediate HIAs usually take months to complete and include studying similar HIAs, collecting and analyzing new data, and incorporating community input. When doing an intermediate HIA, it is very helpful to form a steering committee with diverse expertise to provide current information on the topic and suggest recommendations for actions that can be taken to improve potential health outcomes.

Comprehensive HIAs take months to years to complete and provide a very thorough assessment of multiple potential health impacts that a policy, project, plan, or program may have. They involve an extensive review of the literature, other HIAs, and existing data in addition to the collection of new data and community input. Comprehensive HIAs often require quantitative modeling and qualitative surveys or case studies and usually results in reports with hundreds of pages and a large partnership of academics, government entities, community organizations, residents, etc. Because of the overwhelming size of a comprehensive HIA report, it is recommended that an executive summary be developed and recommendations be prioritized for decision-makers.

Source: Katherine Hebert via phConnect
http://www.phconnect.org/group/healthimpactassessmentscop/forum/topics/did-you-know-levels-of-hia.