

Gary/New Duluth Small Area Plan Health Impact Assessment

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EXECUTIVE SUMMARY

Between June 2013 and June 2014, the City of Duluth collaborated with community members to develop a small area plan for the neighborhood of Gary/New Duluth. A small area plan is a plan that is developed for a clearly defined area and gives more detailed recommendations than would be provided in a comprehensive plan. The comprehensive plan is a common vision or framework on development and protection policies for an entire city. It sets forth the vision, principles, policies, and recommended strategies that have been embraced by the City to shape its future. The Gary/New Duluth small area plan (SAP) builds upon the goals, policies, and implementation strategies in the City's comprehensive plan in five specific areas: Commercial Development, Residential Development, Natural Environment, Transportation, and Park Planning.

Concurrently, the Minnesota Department of Health conducted a health impact assessment (HIA) on the SAP in collaboration with City staff and a Technical Advisory Committee made up of community members and representatives from St. Louis County Public Health, Arrowhead Area Agency on Aging, Parks and Recreation, Metropolitan Interstate Council, and St. Luke's Hospital. The purpose of the HIA was to explore how the SAP might impact the community's health, positively and negatively, and make recommendations to the SAP to promote positive impacts and reduce negative impacts.

Based on community input and local data, the HIA Technical Advisory Committee selected three areas of focus for the HIA: Social Cohesion, Physical Activity and Access to Healthy Food. These three topics are important determinants of health. Social cohesion, or the strength of the relationships of a community, has been correlated with lower blood pressure rates, better immune responses, lower levels of stress hormones, and longer lives. Physical activity has many positive health effects, including: lower mortality rates; lower risk of cardiovascular and heart disease mortality; lower risk of diabetes; lower rates of obesity; and improvements in depression, anxiety, and overall mood. Studies have found that residents with greater access to healthy foods consume more fresh produce and other healthful items, while lack of access to grocery stores is linked to serious health concerns, such as higher rates of obesity and increased risk of diabetes and cardiovascular disease.

FINDINGS

The HIA used literature review, geographic information systems (GIS) analysis of local data, summaries of data and analysis from existing local studies, and input from community members and topic area experts from local agencies and organizations to inform the findings. A summary of the findings are provided in Figure 1.

FIGURE 1: SUMMARY OF HIA FINDINGS

Health Concern	Direction	Magnitude	Strength of Evidence	Likelihood	Distribution
Commercial Development					
Social Cohesion	+	high	**	likely	Some recommendations will affect business owners more; but many will have equal impact
Physical Activity	=/+	medium	****	uncertain	Residents within ½ mile of new businesses
Access to Healthy Food	=/+	medium	***	uncertain	Residents within ½ mile of new businesses
Residential Development					
Social Cohesion	+ or -	medium	***	likely	New residents; residents proximate to new residential development
Physical Activity	+	low	****	possible	New residents within ½ mile of recreation and businesses
Access to Healthy Food	+	low	***	possible	New residents within ½ mile of new and existing businesses
Natural Environment					
Social Cohesion	+	high	**	possible	equal impact
Physical Activity	+	medium	**	possible	equal impact
Access to Healthy Food	=/+	low	*	unlikely	equal impact
Transportation					
Social Cohesion	+	high	**	possible	equal impact
Physical Activity	+	high	****	likely	equal impact
Access to Healthy Food	+	high	**	possible	equal impact
Park Planning					
Social Cohesion	+	high	***	likely	Effects may be stronger for those who live closer to the park/use the park more
Physical Activity	+	high	****	likely	Effects may be stronger for those who live closer to the park/use the park more
Access to Healthy Food	+	high	**	likely	Effects may be stronger for those who live closer to the park/use the community garden plots
<p>Key: + (positive) change that may improve health - (negative) change that may harm health = (no change) Magnitude: the number of people affected (high = many or most of the community) Strength of evidence: combination of the number of articles that support finding (**** = many peer reviewed journals; * = generally consistent with public health concepts) and the GIS analysis, community input, and other local data summary/analysis from this HIA</p>					

Health Concern	Direction	Magnitude	Strength of Evidence	Likelihood	Distribution
<p>Likelihood: health determinants were characterized as likely, possible, unlikely, or uncertain based on the clarity and details of the SAP recommendations and the support for the connection in the literature</p> <p>Distribution: will the change affect certain populations or subpopulations more than others</p>					

Social Cohesion Findings

In the *Commercial Development* section, the SAP may promote social cohesion by strengthening relationships among business owners; offering new businesses and recreation amenities that act as informal gathering spaces for residents; increasing employment opportunities; increasing the sense of identity and belonging with signage and wayfinding; and decreasing crime and improving safety through the removal and redevelopment of blighted properties and appropriate lighting and streetscape improvements.

In the *Residential Development* section, the SAP may promote social cohesion by introducing new residents into the community that may increase opportunities for new social ties. Additionally, social cohesion can be promoted by ensuring housing stock remains affordable to current residents, thereby reducing residential turnover and maintaining social networks. However, the Residential recommendations could decrease social cohesion if new residential infill housing units cost more and as a result of increases in property values and taxes, displacing existing residents and breaking their social ties; and if income inequality between new and current residents increases.

In the *Natural Environments* section, the SAP may promote social cohesion by preserving natural and well-vegetated areas and incorporating natural features into future development; increasing access to parks, trails and natural areas; and promoting development and programming that would preserve the environment and/or bring the community together to promote social bonding.

In the *Transportation* section, the SAP may promote social cohesion by decreasing traffic speeds, increasing use of traffic calming treatments, encouraging streetscape features, and improving sidewalk conditions which will all improve the pedestrian environment to encourage more walking and neighborly interaction, especially for older adults and youth who rely on active forms of transportation to get to social activities.

In the *Park Planning* section, the SAP may promote social cohesion by developing the Gary/New Duluth Community Center and Recreation Area which may enhance residents' sense of belonging or identity with the neighborhood and provide activities where residents interact with each other and build social networks.

Physical Activity Findings

In the *Commercial Development* section, the SAP may promote physical activity by attracting new businesses for residents to walk to; improving the pedestrian environment; increasing the number of jobs within walking or bicycling distance; and reducing crime by developing and removing vacant and blighted properties and increasing the number of people out and about in the community.

In the *Residential Development* section, the SAP may promote physical activity by increasing the number of households within walking distance of recreation opportunities.

In the *Natural Environment* section, the SAP may promote physical activity by increasing recreation opportunities, such as trail extensions and access to natural areas and the St. Louis River through sidewalks and trails; and also by providing active and engaging opportunities for the community and visitors to practice stewardship and enjoy Gary-New Duluth's natural features.

In the *Transportation* section, the SAP may promote physical activity by decreasing traffic speeds, increasing use of traffic calming treatments, encouraging streetscape features, and improving sidewalk conditions, which will all improve the pedestrian environment to encourage more walking and active transportation; improving the sidewalk network and overall sidewalk conditions; and designating a bicycle lane.

In the *Park Planning* section, the SAP may promote physical activity by developing the proposed Gary/New Duluth Community Center and Recreation Area concept.

Access to Healthy Food Findings

In the *Commercial Development* section, the SAP may increase access to healthy food by recruiting new businesses if they include a grocery store or new restaurant, and increasing the number of jobs and households in the community to support a grocery store.

In the *Residential Development* section, the SAP may increase access to healthy food by increasing the number of households within walking distance to existing markets and transit stops with service to grocery stores.

In the *Natural Environment* section, the SAP may increase access to healthy food by enhancing and preserving the environment to support pollinators, improve soil health, and reduce contamination in fish.

In the *Transportation* section, the SAP may increase access to healthy food by improving the pedestrian and bicycling environment to existing markets, through traffic safety measures, streetscape enhancements, and sidewalk and bicycle infrastructure.

In the *Park Planning* section, the SAP may increase access to healthy food by developing the proposed Gary/New Duluth Community Center and Recreation Area concept, which includes a community garden and could be used for a farmers' market or food hub.

RECOMMENDATIONS

In order to promote the positive impacts of the SAP and reduce the negative effects, the HIA proposes a number of recommendations. The recommendations were developed by the HIA Technical Advisory Committee and HIA project team, with input from community members. A complete list of recommendations is available in the body of the report and Appendix D. A summary is provided here.

Social Cohesion Recommendations

Recommendations to promote social cohesion in the *Commercial Development* section include increasing partnerships, specifically between Gary/New Duluth businesses and area business groups; increasing use of social media outlets (website, Facebook, Twitter, blogs); and connecting residents with training opportunities and jobs. Recommendations also touch on recruiting jobs-dense businesses to redevelopment sites, and developing a comprehensive wayfinding and signage system for the neighborhood.

Recommendations to promote social cohesion in the *Residential Development* section include organizing a “welcome wagon” for new residents, promoting a more diverse housing stock, and encouraging supportive or transitional housing.

Recommendations to promote social cohesion in the *Natural Environment* section include developing an urban tree canopy goal and strategy, conducting an ecosystem services assessment, and encouraging energy-efficient building design.

Recommendations to promote social cohesion in the *Transportation* section include addressing the comfort and safety of the pedestrian environment, adopting a Complete Streets policy, and addressing lighting and safety of trails.

The primary recommendation to promote social cohesion in the *Park Planning* section is to implement the Gary/New Duluth Community Center and Recreation Area concept plan.

Physical Activity Recommendations

Recommendations to promote physical activity in the *Commercial Development* section include developing commercial corridor design guidelines for Commonwealth Ave and promoting pedestrian access in new commercial development sites.

Recommendations to promote physical activity in the *Residential Development* section include incorporating green space into new residential developments and/or locating residential development near recreation opportunities.

The recommendation to promote physical activity in the *Natural Environment* section is to provide passive and active amenities within identified natural scenic areas in Gary/New Duluth.

Recommendations to promote physical activity in the *Transportation* section include providing location-specific guidance on implementation of sidewalks and traffic calming in the Small Area Plan, conducting pedestrian counts, promoting snow removal on sidewalks, increasing connections of trails to schools, studying the Commonwealth Ave bicycle lane for parking impacts, and promoting bicycle parking infrastructure near transit stops and destinations.

Recommendations to promote physical activity in the *Park Planning* section include supporting implementation of the Gary/New Duluth Community Center and Recreation Area concept plan, directing

users of area trails to the Gary/New Duluth Community Center and Recreation Area, and possibly providing sporting equipment rentals at the Gary/New Duluth Community Center and Recreation Area.

Access to Healthy Food Recommendations

Recommendations to promote access to healthy food in the *Commercial Development* section include studying the potential for mobile markets, food hubs, or farmers' markets in Gary/New Duluth, and developing an urban agriculture plan for the City.

The recommendation to promote access to healthy food in the *Residential Development* section is to conduct a study to determine how many residents have residential gardens and rely on gardens as important food source, and determine demand for more gardens (community gardens).

Recommendations to promote access to healthy food in the *Natural Environment* section include implementing community education programs on beekeeping and gardening, exploring the feasibility of composting or mulching, and increasing native plantings that support pollinators.

Recommendations to promote access to healthy food in the *Transportation* section include improving pedestrian conditions from residential areas to bus stops in Gary/New Duluth and from bus stops to grocery stores in West Duluth, and developing an educational campaign through the Duluth Transit Authority to increase transit ridership to destinations, such as grocery stores.

Recommendations to promote access to healthy food in the *Park Planning* section include using the Gary/New Duluth Community Center for a farmers' market or mobile food hub, and partnering with local organizations already working on access to healthy foods for the proposed community garden in the Gary/New Duluth Community Center and Recreation Area concept plan.

EVALUATION AND MONITORING

The final steps of HIA include impact and process evaluation and monitoring. The HIA Advisory Committee evaluated the impact the HIA had on the outcome of the SAP, evaluated the process of conducting the HIA, and developed a formal monitoring plan for on-going monitoring of long-term health outcomes. The process evaluation found that the HIA met its goals and faced few challenges or barriers that it could not overcome. Overall, the HIA TAC was very positive about the process, but noted that more training on HIA and more involvement from affected community members would have strengthened the HIA.

The impact evaluation was favorable regarding the impact the HIA had on the Gary/New Duluth SAP. The final Gary/New Duluth SAP and HIA were both approved by the Duluth City Council on June 23, 2014. The HIA directly affected some of the SAP recommendations, and contributed to the involvement of stakeholders in the process. The HIA increased the understanding of connections between health outcomes and policy for City staff and other stakeholders, which will influence their work in the future.

Since the SAP and HIA have been approved; implementation of the recommendations may now begin. In fact, some implementation of the recommendations began during the process of developing the SAP and HIA. For example, the GND Development Alliance received City approval and support from partners

for the Gary/New Duluth Community Center and Recreation Area, moving forward at record pace. Additionally, the City has begun to identify and remove blighted properties in the commercial corridor. Finally, in 2016 the SAP and HIA will be incorporated into the update to the City's Comprehensive Plan which will continue their status as living documents. The Monitoring plan identified a few measures for tracking the impact of implementation on health and methods for revising recommendations if they are either not implemented or have a detrimental impact on the community.

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INTRODUCTION

This section will provide an overview of the health impact assessment (HIA) process, address the connection between health and our physical environment, and introduce the Gary/New Duluth community and Small Area Plan process.

HEALTH IMPACT ASSESSMENT, OVERVIEW OF PROCESS

HIA is a tool to address health in decision making where there may be externalities that affect human health but these potential impacts are not being considered. According to the International Association of Impact Assessment, HIA is “a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program or project on the health of a population and the distribution of the effects within the population. HIA provides recommendations on monitoring and managing those effects” (Quigley et al 2006).

HIA follows six prescribed steps: Screening, Scoping, Assessment, Recommendations, Reporting, and Evaluation and Monitoring. Screening determines whether a project will go forward with an HIA based on the value the HIA would add to the decision-making process, whether resources are available to conduct the HIA, and whether there is enough time and information to conduct the HIA prior to the decision being made. Scoping defines the geographic boundaries of the study area, determines the populations who will be affected, and selects the health determinants with which the project, plan or policy will be assessed. Assessment draws from a combination of qualitative and quantitative data to determine how the proposed project, plan or policy will affect health, specifically related to the health determinants identified in Scoping. The Recommendations step develops methods for mitigating the negative health impacts of the proposed project, plan or policy and promoting the potential positive impacts. Reporting is where the findings and recommendations are disseminated to the public, stakeholders, and decision-makers through various media. Evaluation and Monitoring attempts to evaluate the process of conducting the HIA, evaluate the impact the HIA had on the decision, and monitor the effects the HIA and project/plan/policy had on health outcomes.

HIA is a valuable tool for identifying the potential harms and benefits of a proposal before the decision is made. Taking a proactive approach allows for modification of a proposal prior to implementation, rather than dealing with the potential consequences of a decision down the road, which can often be more costly and difficult. Additionally, HIA has a strong stakeholder engagement component which can support inclusive and democratic decision-making, as well as increase transparency in the political process. Bringing stakeholders into the decision-making process often has positive outcomes beyond the specific project at hand, such as empowering community members to unite and organize to make their communities better.

CONNECTION BETWEEN BUILT ENVIRONMENT AND HEALTH

Society has understood the connection between health and the built environment for many years. In the United States, efforts to plan and organize the built environment came out of concerns for public health and welfare as a result of poor urban living conditions. The 1960s saw an awakening in the

understanding that if we do not protect our environment it can have detrimental impacts on our health. Despite long understanding these issues, our society still has a tendency to believe that the medical profession generally, and doctors and health care specifically, are responsible for making sure we are healthy. However, studies from the late 1960s and 1970s concluded that health care is not as large of an influence on our health outcome as we thought (McGinnis et al, 2002). Health care only accounts for about 10% of the contributing factors to premature death, while behavioral patterns, environmental conditions and social circumstances contribute 60% of the contributing factors to premature death (Braunstein and Lavizzo-Mourey, 2011).

Today the planning field is as active as ever in deciding how the built environment will look, and how communities will develop. To ensure that plans are developed that have a positive impact on our health, planners must be intentional about addressing the potential health impacts of planning and policy recommendations. Regular concerns include everything from siting residential uses too close to industrial or agricultural uses, to the provision of sidewalks and green space for recreation. Every decision can be connected to a health outcome, and the first step is to recognize the connections and decide that health will be one of the many parameters that are addressed when planning the built environment.

HISTORICAL CONTEXT – BACKGROUND OF GARY/NEW DULUTH

Gary/New Duluth is a neighborhood located in the southwest end of the City of Duluth, approximately 10 miles from downtown; only the neighborhood of Fond du Lac is farther west. See Figure 2. The neighborhood is a relatively flat area in a City renowned for its hilly terrain. The neighborhood is bordered to the south by the St. Louis River, to the east by the U.S. Steel site (the largest brownfield in the state and a nationally registered Superfund site), to the north by the Canadian Northern railroad bridge, and to the west by Fond du Lac and the limits of Duluth and St. Louis County.

Gary/New Duluth started to develop toward the end of the 19th century. Industrial development was a major factor in the development of the area.

Successful industries between the end of the 19th century and mid-20th century included: the Hurd Refrigerator Factory, Heimbach Sawmill, Atlas Brass and Iron Works, and the Furniture Factory, the cement plant, and, most significantly, US Steel’s Duluth Works (GND Plan, 1978). Up until its closing in 1972, over 2,500 persons had been employed at Duluth Works on a continuous basis

FIGURE 2: GARY/NEW DULUTH



over the years (GND Plan, 1978). The cement plant, which closed in 1975, employed an additional 150 persons.

During those days Gary and New Duluth were very much separate communities. Gary, the northern half, was an area where the unskilled Southern European laborers located. New Duluth, the southern half, was, for the most part, an area where people that were of “foreign extraction” located (GND Plan, 1978). With industry booming, Gary and New Duluth attracted new residents from Southern European areas of Slovenia, Croatia, Serbia and Italy. The majority of the people came from the mining areas of Michigan and Minnesota’s Iron Range.

At its height the community contained four hotels, three banks, a clothing store, shoe store, hardware store, lumber yard, numerous grocery stores, taverns, a post office, and many other businesses scattered along Commonwealth Avenue (GND Plan, 1978). Stowe School was built around 1913, replacing a smaller school on McCuen Street. At that time Stowe was both an elementary and junior high school, with Morgan Park (neighborhood to the northeast, and US Steel company town) providing the senior high school facility (GND Plan, 1978).

The 1978 Gary/New Duluth Small Area Plan states that, “The combined closing of the steel plant and the cement plant had a significant impact on the community. The vast majority of the work force in the community worked at the plant, and its closing seriously affected the lives of many people who lived in the area. Many persons retired, others tried to seek employment in Duluth, while even a larger percentage of the workers sought employment on the Iron Range.”

Today, the legacy of industry remains and the community is facing many of the very same unresolved issues that it did over 35 years ago when the last small area plan was developed. However, much of the positive values of the community are still there as well, most of which are the people themselves.

Gary/New Duluth is still home to Stowe Elementary School (no longer a middle school), a recognized asset to the community, which is located right in the heart of the community. ME Global is a foundry that provides jobs in the area. And Ikonics, a company that specializes in the creation and transfer of physical and visual images, is now located on the former Atlas cement plant site.

GARY/NEW DULUTH SMALL AREA PLAN

Starting in June 2013, the City of Duluth Long-Range Planning staff began the process of developing a small area plan for the Gary/New Duluth neighborhood. A small area plan is a plan that is developed for a clearly defined area and gives more detailed recommendations than would be provided in a comprehensive plan. The comprehensive plan is a common vision or framework on development and protection policies for an entire city. It sets forth the vision, principles, policies, and recommended strategies that have been embraced by the City to shape its future. A small area plan does not replace the comprehensive plan but rather serves to augment it. The small area plan builds on the goals, policies, and implementation strategies in the comprehensive plan to provide a finer level of detail.

The Gary/New Duluth Small Area Plan (SAP) includes two main components: the assessment and recommendations. The assessment section defines the project area; reviews past planning efforts and

current land use, zoning, transportation, and environmental characteristics; and analyzes current demographic trends. The recommendations section includes a vision statement, goals, and objectives for five main topics: commercial development, residential development, natural resources, transportation, and park planning. Small area plans are ultimately incorporated into the City's Comprehensive Plan and used to guide resources and development in the community.

The process of developing the small area plan is the primary way that community input is integrated with the planning process. Small area plans generally have a Steering Committee made up of community members and other stakeholders, conduct two public meetings or open houses, and hold a public hearing before the Planning Commission when the plan is ready to be approved. It is critical for community members to have a say in the formation of the plan because implementation of the plan can result in substantial impacts to a community with lasting or even permanent effects.

SCREENING SUMMARY

Screening is the first step of HIA. The purpose of Screening is to determine whether the proposed plan, policy, or project will benefit from an HIA and whether it is possible to conduct the HIA. HIAs add value to decision making by providing new information on and insight into the proposed plan, policy or project. The first series of questions to ask during the screening step is: does the decision have the potential to result in significant impacts (positive or negative) to population health; will the impacts unequally affect certain people more than others; and are the impacts potentially severe or irreversible? The next question to ask is: does the plan, project or policy already address health, or is health already being considered during the decision making process? If the answer is yes, then the HIA may not add value to the decision. The questions to consider regarding whether the HIA is feasible include: is there sufficient time to conduct the HIA prior to the decision being made; does the person or team leading the HIA have the resources and expertise to conduct the HIA; and, is the decision-maker open to considering the outcomes and recommendations of the HIA? Ultimately, when these questions have been answered, a recommendation is made whether to move forward with HIA or not.

The Gary/New Duluth SAP was selected by City staff and Minnesota Department of Health (MDH) for screening for a number of reasons. First, City staff were interested in pursuing HIA as an innovative field for advancing health in planning and economic development. Second, the SAP for Gary/New Duluth was a good choice for screening because it has the opportunity promote health in a community with a number of concerns related to socioeconomic conditions, environmental concerns, and limited access to goods and services. Some of the issues with potential health ramifications for the community include but are not limited to the following:

- Depressed property values correlated with proximity to US Steel Superfund site and other blighted properties. Abandoned industrial and potentially contaminated Brownfield sites can lead to depressed property values and neighborhood disinvestment. These conditions can affect quality of life, which in turn affects health and well-being.
- Lower income and education levels. Many chronic diseases, such as asthma, are higher in communities with less wealth and education. Income and education may also contribute to lower access to quality, affordable housing, goods and services, and health care.
- Food deserts (areas with little or no access to food retail outlets, such as grocery stores, that sell fresh fruits and vegetables). Residents with limited ability to access fresh fruits and vegetables outside of their neighborhoods may have to rely on corner stores or fast food restaurants in their area that sell high fat and calorie foods. This can result in a number of chronic health conditions such as overweight, obesity and diabetes.

The SAP could impact health by improving blighted properties, developing vacant land, cleaning contaminated land, connecting sidewalks and adding bike lanes, promoting businesses and job growth, increasing green space and connecting the community to new recreational opportunities, and more. Specific categories that the SAP contains include: commercial development, residential development, natural resources, transportation, and parks and recreation.

Without the HIA the SAP would not otherwise address the health impacts of proposed land use guidance and policy decisions. The HIA functions as a vehicle to support those concepts that improve health and

make recommendations to modify the concepts that do not support health. The HIA allows community members to identify their concerns and provide recommendations to the plan and policy decisions that will improve their health.

It has been established that the HIA will add value to the Gary/New Duluth SAP, and the SAP would not otherwise address health. In regards to the feasibility, both from a resources and political perspective, the SAP was a promising candidate. City staff, including the lead Planner for the SAP and two individuals from the Business and Economic Development Department, were engaged from the pre-screening stage and helped MDH staff apply for and secure funding for the project through a Program Grant from the Health Impact Project. MDH received the funding, and as a result was able to provide substantial staff time for coordinating the HIA and technical assistance, as well as a mini-grant to provide resources directly to the Duluth Planning Division. Also, the Business and Economic Development Department and the Long-Range Planning Division agreed to provide in-kind resources for the project. Political support was obtained early on, as the City Council had to approve the contract between MDH and the Long-Range Planning Division to partner on the HIA of the Gary/New Duluth SAP. Additionally, the local City Councilor and two Planning Commission members were recruited to be on the SAP Steering Committee and received regular updates on the progress of the HIA.

In light of the value added by the HIA, the resources available, and the support of political leaders and staff, the screening recommendation was to proceed with an HIA of the Gary/New Duluth SAP.

STAKEHOLDER ENGAGEMENT

Stakeholder participation is a critical part of the HIA process and supports the core values of HIA, including: democracy, equity, sustainable development, and ethical use of evidence (Stakeholder Participation Working Group of the 2010 HIA in the Americas Workshop, 2011). The Gary/New Duluth SAP HIA utilized a number of techniques to engage stakeholders, including an HIA Technical Advisory Committee (TAC), a community survey, outreach at community meetings, and presentations at the two SAP public meetings.

The first step in the stakeholder engagement process was conducting a stakeholder analysis to identify the stakeholders. The HIA project team, including the MDH HIA coordinator, the MDH HIA program director, two Long-Range Planners from the City of Duluth, and two Businesses and Economic Development staff from the City of Duluth, conducted the stakeholder analysis and identified key stakeholders for roles on the SAP steering committee, the HIA TAC, or other methods of engagement. See Figure 3 for the stakeholder analysis. Stakeholders of the Gary/New Duluth SAP HIA include all residents and local business owners, persons who are employed in the neighborhoods, visitors, students and their families, elected officials, community leaders, and broader community organizations that represent underserved communities.

FIGURE 3: GARY/NEW DULUTH SAP HIA STAKEHOLDER ANALYSIS

Stakeholder Group (Description/Key Contact)	Interest in HIA or related decision?	Power to influence the decision (high/medium/low)	How and when (what stage) to engage?	Potential role in/contribution to HIA (SAP v. HIA)	Barriers/challenges to engagement
City Councilor	High (responds to constituent needs and interests)	High (will ultimately approve SAP & HIA)	Engage at Scoping through remaining HIA steps	SAP Steering Committee	Schedule (very busy)
City of Duluth Trails Coordinator	High (interest is professional and personal; well versed in study area and very plugged in to the community)	High (has ear of decision makers; well respected; has influence)	Engage at Scoping through remaining HIA steps	HIA Technical Advisory Committee	Schedule (very busy)
Transportation Planners from the Metropolitan Interstate Council (MIC)/Arrowhead Regional Development Commission (ARDC)	High (organization mission is to help local communities in the region identify needs and work towards solutions; strong	Medium (ARDC work is well respected; have good rapport with Duluth Planning Commission)	Engage at Scoping through remaining HIA steps	SAP Steering Committee and HIA Technical Advisory Committee	Schedule (competition with paid contracts)

Stakeholder Group (Description/Key Contact)	Interest in HIA or related decision?	Power to influence the decision (high/medium/low)	How and when (what stage) to engage?	Potential role in/contribution to HIA (SAP v. HIA)	Barriers/challenges to engagement
	focus on quality of life including active living and community planning)				
ME International (local foundry; global business)	High (business is located in study area; has a professional stake and personal interest in the project)	High (is a member of the Planning Commission and represents a high profile business)	Engage at Scoping through remaining HIA steps	SAP Steering Committee	Schedule
Veit/Vonco (owns local landfill; regional business – MN, WI & ND)	Moderate to High (Veit owner promotes giving back to the community; project could be good PR)	Medium (not a locally owned business; but it is an important corporate citizen)	Engage at Scoping through remaining HIA steps	SAP Steering Committee and HIA Technical Advisory Committee	Schedule and travel time
Stowe School Principal	High (has strong interest in the neighborhood conditions for students and their families)	High (as Principal his opinion carries a lot of weight)	Engage at Scoping through remaining HIA steps	SAP Steering Committee; offered the school for meeting space	Time commitment and school schedule
Residents	High (Residents are all active members of the Gary/New Duluth Community Club and have been engaged in community interests for years)	High (have the ear of City Councilor Fosle)	Engage at Scoping through remaining HIA steps	SAP Steering Committee (one or two may overlap with HIA TAC)	Time commitment and schedules
St. Louis County Public Health	High (Has professional interest in advancing health; works on Statewide Health Improvement Program grant and has had HIA training)	Low/Medium	Engage at Scoping through remaining HIA steps	HIA Technical Advisory Committee	Time commitment and schedule
Planning	High (Very	High (She is a	Engage at	SAP Steering	Time

Stakeholder Group (Description/Key Contact)	Interest in HIA or related decision?	Power to influence the decision (high/medium/low)	How and when (what stage) to engage?	Potential role in/contribution to HIA (SAP v. HIA)	Barriers/challenges to engagement
Commission	interested)	member of the Planning Commission)	Scoping through remaining HIA steps	Committee	commitment and schedule
Contractor to Canadian National (DC) railroad	Low-Medium	Low-Medium	Engage at Scoping through remaining HIA steps	SAP Steering Committee	Travel time and schedule
Area Agency on Aging (division of Arrowhead Regional Development Commission)	Medium-High (represents older adults of which there are many in the community)	Low-Medium	Engage at Scoping through remaining HIA steps	HIA Technical Advisory Committee	Time commitment and schedule
Health professionals (St. Luke's Hospital)	High (have strong professional interest in health)	Low/Medium (they are building better relationships with city; carry weight as a large institution)	Engage at Scoping through remaining HIA steps	HIA Technical Advisory Committee	Time commitment and schedule
Healthy Duluth (local coalition)	High (professional interest in health; has HIA training)	Medium (has credibility with community; may be engaged with Council)	Engage at Scoping through remaining HIA steps	HIA Technical Advisory Committee	Time commitment and schedule

Not only did the stakeholder analysis include a discussion of who the stakeholders were, but also identified their interests in the decision, their power to influence the decision, when and how the stakeholders will be engaged in the HIA, the roles of stakeholders, and potential barriers or challenges to engaging stakeholders. A number of stakeholders were identified to participate on the HIA TAC or the SAP Steering Committee. All stakeholders were invited to participate in public meetings hosted by the City planners and provide comments throughout the development of the Gary/New Duluth SAP. The SAP planning process included two public meetings to present the SAP progress to residents and stakeholders and receive feedback on recommendations.

HIA Technical Advisory Committee (TAC)

The HIA TAC was comprised of stakeholders from a variety of organizations to represent different interest groups, particularly the most vulnerable stakeholders, such as the un/under-employed, low-income families, and older adults. The HIA TAC intentionally included overlap with participants also on the SAP Steering Committee to ensure that there was regular communication and shared perspective between the two groups.

The HIA TAC was responsible for 1) guiding the HIA by providing feedback to the HIA Coordinator and HIA project team on all deliverables, and 2) defining the Scope and Recommendations of the HIA using data and community input. Additionally, the HIA TAC helped develop a plan for stakeholder engagement and participated in the implementation of the plan (i.e., reaching out to community members).

The HIA TAC and SAP Steering Committee were brought together for a SAP/HIA kick-off meeting on June 18, 2013. The HIA TAC met approximately monthly following the kick-off from July through February 2014. Agendas and meeting minutes for each meeting are available on the MDH [Gary/New Duluth SAP HIA website](#). At the first HIA TAC meeting, participants discussed a plan for stakeholder engagement. The strategies that were prioritized included developing and disseminating a community survey, attending SAP public meetings, and either conducting focus groups or utilizing community meetings to receive input from community members on draft Recommendations. Each of these strategies is discussed in further detail below.

The HIA TAC was responsible for determining the Scope of the HIA, specifically by selecting the top health issues that would be used to assess the Gary/New Duluth SAP. The HIA TAC used a combination of baseline data and stakeholder input to determine the three most important health determinants. The full Scoping process is described in the Scoping Summary.

For the Assessment, the HIA TAC contributed invaluable resources, data, and insight to inform the work done by the HIA Coordinator. This was done primarily through email and personal phone calls.

The HIA TAC was responsible for developing the draft HIA Recommendations, which they did at the February 2014 HIA TAC meeting. The HIA TAC was broken into groups to address each section of the Gary/New Duluth SAP. Each group was provided with the draft Assessment and asked to develop recommendations that would promote the positive impacts of the SAP and reduce the negative effects. The ideas from the HIA TAC were then compiled, vetted for feasibility, and assigned a priority level (low to high) that was identified by the HIA Technical Advisory Committee based on a combination of the recommendation's significance for health impacts and feasibility the recommendation based on the City's activities and priorities.

The final task of the HIA TAC was to assist the HIA Coordinator and HIA project team in developing a plan to monitor the short-term and long-term effects of the Gary/New Duluth SAP and HIA. The HIA TAC also provided feedback on the process of the HIA to inform the HIA Process Evaluation. These tasks were completed in June 2014, following the City Council vote on the Gary/New Duluth SAP and HIA.

Community Survey

The HIA project team and HIA TAC developed a community survey (Appendix A) that was distributed to residents and other stakeholders to collect feedback on their health concerns for the community to inform HIA scoping. The community survey was distributed in the following ways:

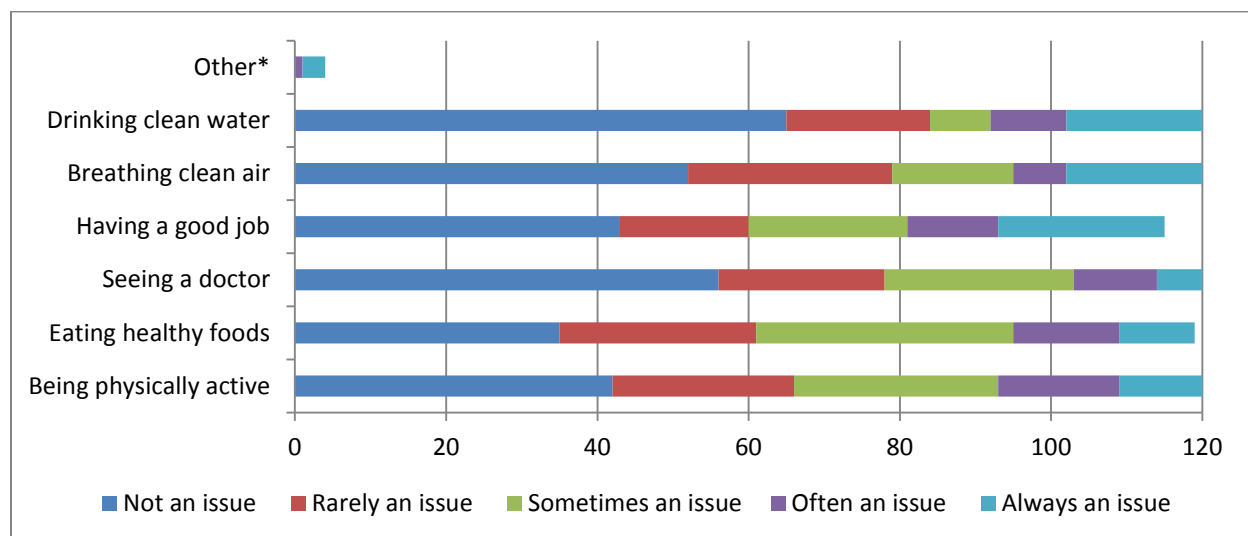
- The HIA Coordinator and two HIA TAC members attended the Stowe School open house on September 12, 2013 to hand out community surveys and speak with parents of Stowe School students

- The Principal of Stowe School sent the community survey home in students’ folders that parents know to expect every Wednesday, and collected returned surveys
- The survey was hosted online using Survey Monkey and posted on the Gary/New Duluth SAP webpage on the City’s website and the HIA webpage on MDH’s website
- Surveys were made available at the Milkhouse and Bridgemans, two local businesses in Gary/New Duluth that are well known community gathering places
- Surveys were distributed to residents at Vintage Acres, a mobile home park adjacent to Stowe School
- Surveys were distributed at a flu shot clinic in the neighborhood hosted by St. Louis County Public Health
- Surveys were available to fill out at the first SAP public meeting
- Surveys were distributed to students at Lake Superior College’s Emergency Response Training Center
- The HIA TAC attempted to distribute surveys to local church congregations and the HRA-owned senior living apartments, Heritage Apartments, but was not successful

Between September 12 and November 18, 120 community surveys were collected. Half of the surveys were completed by residents of Gary/New Duluth and the rest were completed by residents of Morgan Park, Fond du Lac, Smithville, Norton Park, Riverside and other communities nearby. Respondents were asked to rank health concerns, accessibility to services, priorities for the community, and describe their favorite thing about the community and what they would like to see changed.

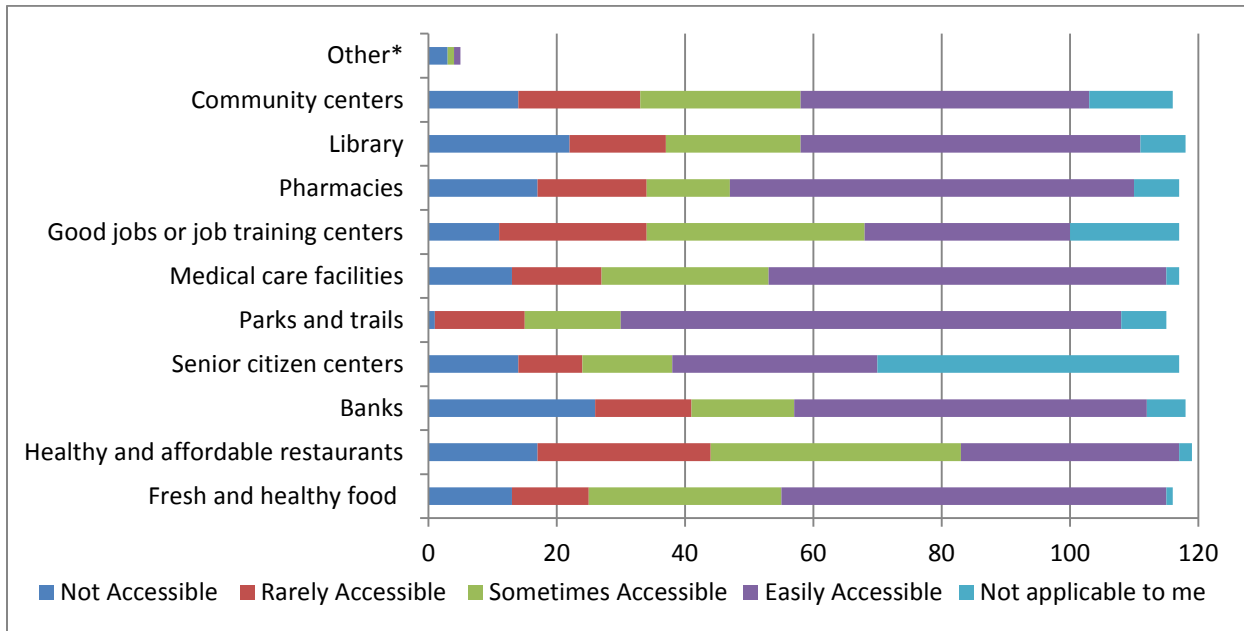
The first question asked respondents to rank their opinion of a series of health concerns from *Not an Issue* to *Always an Issue*. Having a good job ranked highest for *Always an Issue*, followed by drinking clean water and breathing clean air (Figure 4). Eating healthy foods, being physically active, and having a good job were the top three issues for *Sometimes an Issue*, *Often an Issue*, and *Always an Issue* combined.

FIGURE 4: HEALTH CONCERNS RANKED FROM “NOT AN ISSUE” TO “ALWAYS AN ISSUE”



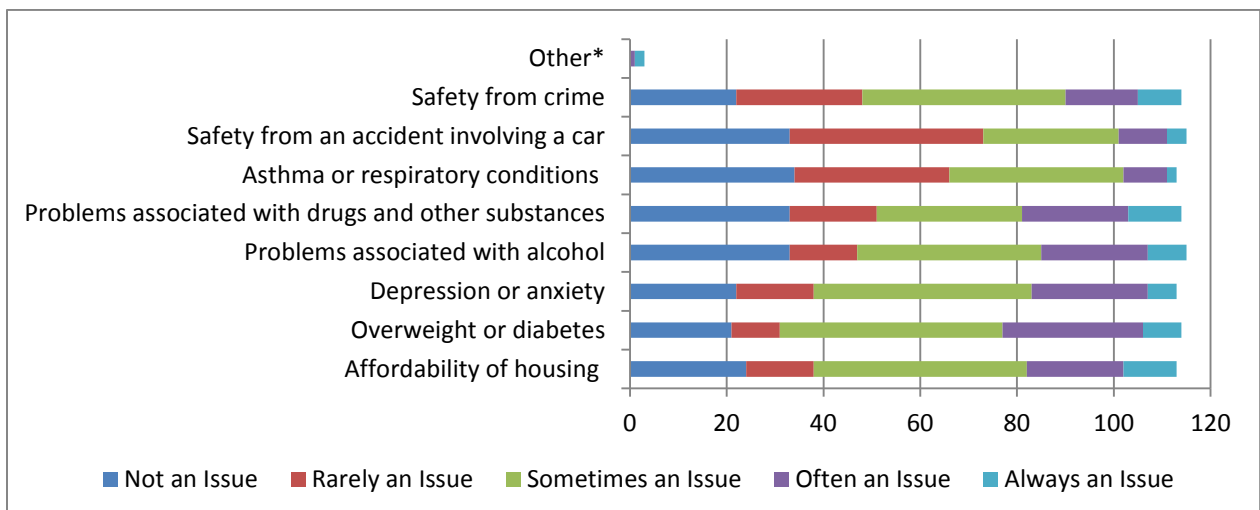
The second question asked respondents to rank their access to certain stores and services from *Not Accessible* to *Easily Accessible*. Banks had the most responses for *Not Accessible*, followed by pharmacies and healthy and affordable restaurants (Figure 5). When votes for *Not Accessible* and *Rarely Accessible* were combined, healthy and affordable restaurants, banks, and libraries were the top three issues.

FIGURE 5: ACCESSIBILITY OF STORES AND PUBLIC SERVICES - “NOT ACCESSIBLE” TO “EASILY ACCESSIBLE”



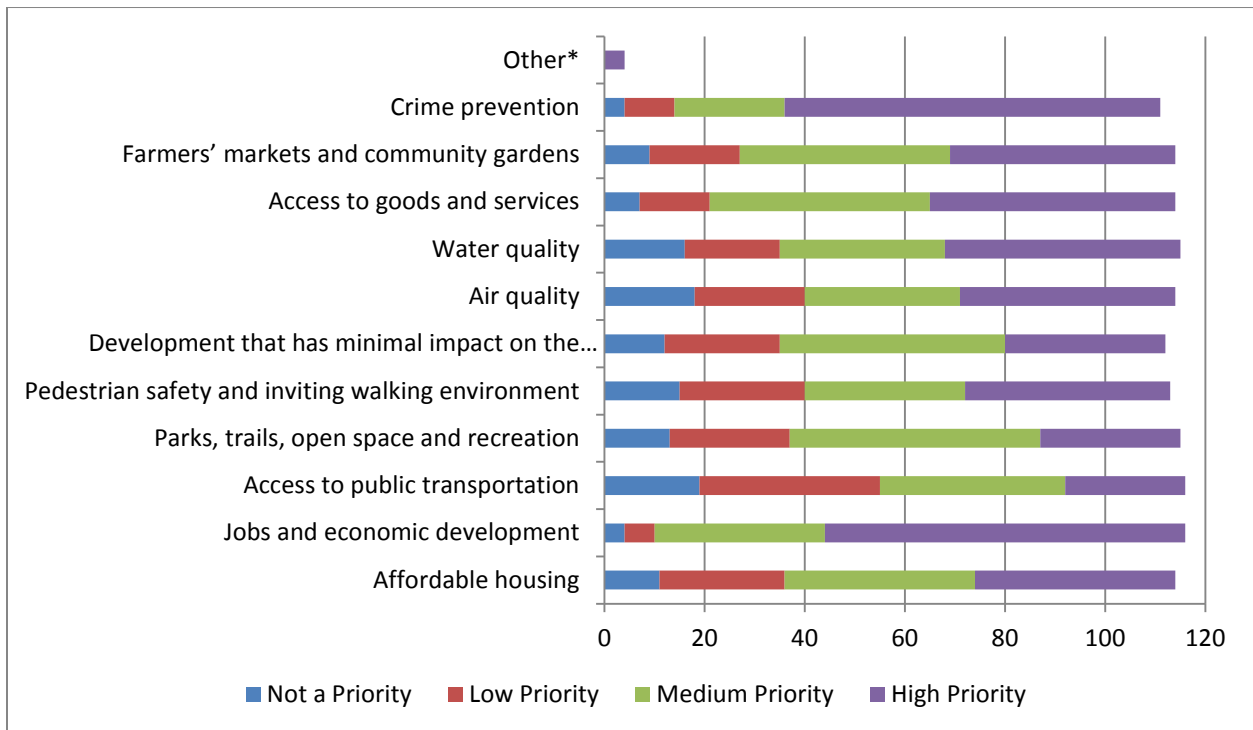
The third question asked respondents to rank how they perceived a series of health concerns from *Not an Issue* to *Always an Issue*. Affordability of housing and problems associated with drugs and other substances received the most responses for *Always an Issue* (Figure 6). When *Often an Issue* and *Always an Issue* were combined, overweight or diabetes received the most responses, followed by problems associated with drugs and other substances and affordability of housing.

FIGURE 6: PERCEPTION OF HEALTH CONCERNS AS ISSUES FOR RESIDENTS



The next question asked respondents to rank priorities that should be addressed in the community from *Not a Priority* to *High Priority*. Jobs and economic development and crime prevention received the most *High Priority* responses (Figure 7). When *Medium Priority* and *High Priority* responses were combined, jobs and economic development, crime prevention, and access to goods and services received the most responses.

FIGURE 7: KEY/PRIORITY ISSUES THAT SHOULD BE ADDRESSED IN GARY/NEW DULUTH



In response to an open-ended question asking what was the responder’s favorite thing about Gary/New Duluth, 24 respondents wrote “community” in combination with adjectives including “small,” “quiet,” “safe,” “close,” “nice,” and “good.” Eighteen responses included access to parks, trails, nature or greenery. Seventeen used the word “quiet;” thirteen said “friendly;” and eight said “safe.” Fifteen responses included Stowe elementary school as a favorite. Eight responses included Hugo’s pizza and seven responses included the Milkhouse as favorites in the neighborhood.

In response to an open-ended question asking what the responder most wanted to see changed in the community, the most frequent response was more food options or a grocery store. Other suggestions, in order of frequency, included: more parks/trails/playgrounds/recreation; more activities (besides recreation), especially for kids; more businesses; lower/less crime; more housing, especially affordable; more restaurants and dining; and more police/cops in the neighborhood.

A complete summary of the community survey is provided in Appendix B.

First Small Area Plan Public Meeting

The Gary/New Duluth SAP planning process included two public meetings to present the SAP progress to residents and stakeholders and receive feedback on recommendations. The first public meeting was held on November 6, 2013. The meeting was opened with a welcome and introduction by the City of Duluth Planning Division Land Use Supervisor and a communications officer from the Mayor's office. The planner for the Gary/New Duluth SAP provided an overview of the small area plan and the HIA Coordinator presented on the HIA. The local Fox news station was present, as well as approximately 20 community members, including a City Councilor and a couple members of the Planning Commission.

Most of the event was planned time for community members to ask questions of the presenters and provide input on their preferences for the SAP by writing on Post-It notes and sticking them to large maps of the study area. Attendees could also fill out comment forms and drop them in a box on their way out.

Comments from attendees of the public meeting included the following concerns and recommendations:

- Noise from dump
- Bike and Kayak rental
- River front trail
- Hotel with windows , restaurant, deck, and bar on the river
- Farmers market
- Take out bump-out on Commonwealth Avenue in front of Vet[eran']s memorial!
- Community center for parents with young children to meet and have play dates. (the winter is too cold)
- Access to fresh fruit is key to healthy living
- Need for local super market
- Boys and Girls or subsidized after school program and activities for school age children
- Cater to thirsty mountain bikers in Fond Du Lac.
- Concerning healthy living
- Question: How much land does VANCO actually have? Also, I see them expanding- So what land are they expanding on and is this zoned for expansion?
- Horse trails and access to trails, possible parking area and access horse trails from Gary to Fond du Lac.
- More trails, possibly leaving Stowe School.
- Parking areas patrolled more, having video cameras at parking areas
- Safety is an issue, drugs are an issue. Shopping is an issue. Better access to river. Promote Oliver Bridge.
- Restore historical values, having some sort of way to help public understand the history of the area.
- Would like to see horses allowed on some trails, they played a large part in developing the city.

Second Small Area Plan Public Meeting

The second of two public meetings for the Gary/New Duluth SAP was held on January 29, 2014. The local Fox news station was present again, as well as approximately 25 community members, including a City Councilor and a member of the Planning Commission.

As with the first public meeting, this meeting was opened with a welcome and introduction by the City of Duluth Planning Division Land Use Supervisor and a communications officer from the Mayor's office. The planner for the Gary/New Duluth SAP gave a presentation on the draft SAP Recommendations on commercial development, residential development, natural environment, and transportation. Following the Planner, there was a presentation on a proposed concept plan for the redevelopment of the Gary/New Duluth Park from the newly organized Gary/New Duluth (GND) Development Alliance. The GND Development Alliance is being led by a Board of community members that are actively planning and funding a new Gary/New Duluth Community Center and Recreation Area on a dilapidated park in the center of the community. This concept plan forms the basis of the park planning section of the Gary/New Duluth SAP. Next, the HIA Coordinator presented on the progress of the HIA, including stakeholder input collected to-date, how the HIA Scope was determined using baseline data and stakeholder input, and a few example findings from the Assessment. Finally, the meeting was opened up to questions from community members.

A lot of discussion from community members revolved around the Gary/New Duluth SAP Commercial Development recommendation to sell tax-forfeit land at fair market value. Current and potential property owners were concerned that this would make land too expensive to obtain for certain commercial uses (e.g., storage units). Additionally, community members were concerned about the zoning on specific lots in the neighborhood. For example, some lots near the railroad tracks and landfill were zoned for residential, but would make more sense for low-impact industrial or commercial uses. Another issue was raised with the Gary/New Duluth SAP Transportation recommendation to put a bike lane on Commonwealth Avenue. Residents were concerned with how this would impact or be impacted by street parking and the recently installed bump-outs for pedestrian crossing near Stowe Elementary School. Two transportation planners from the Metropolitan Interstate Council (MIC) were there to answer questions, but most of the specifics were undetermined as yet. No other concerns were raised about the Gary/New Duluth SAP recommendations or the HIA.

Stakeholder Input on Recommendations

The timeline for obtaining feedback on draft HIA Recommendations, as well as the final SAP Recommendations, was short: approximately three weeks. In late February 2014, the HIA Coordinator and SAP Planner developed summary documents, a flyer, and a comment form that were distributed to two community meetings, sent home in the Stowe Elementary School student folders, delivered to local businesses, and posted on the MDH [Gary/New Duluth HIA website](#) and the City's [Gary/New Duluth SAP website](#).

Public comments were accepted through March 14, 2014. Very few community members submitted public comments. The comments that were received supported the recommendations for parks and recreational amenities; healthy food access; more shopping and retail options; and pedestrian/bicycling

trails and safety. Some comments provided additional suggestions, such as developing a dog park and a riverwalk; methods to increase homeownership in the neighborhood; and a recommendation to utilize existing residents' knowledge on natural resources. There was minimal disagreement with the SAP and HIA recommendations, and the only comments that disagreed with the recommendations related to traffic calming, the Commonwealth Ave bike lane, and connecting to trails. All of the comments received were taken into consideration by the Planner and HIA Coordinator.

Distribution of Public Documents

In addition to the strategic dissemination outlined above, materials were posted on a combination of both Duluth and MDH websites throughout the HIA process. SAP materials were posted on Duluth Planning Department website, which referred to the HIA and linked to MDH HIA website. All HIA TAC materials were posted on the [MDH Gary/New Duluth HIA website](#), which linked back to [Duluth SAP website](#).

SCOPING SUMMARY

The second step of health impact assessment is Scoping, which establishes the geographic and temporal boundaries of the HIA; the populations that are likely to be affected by the decision and HIA; the health issues that might be affected by the decision; and the research questions, data sources and research plan for the HIA. Scoping is also a place for significant stakeholder engagement, particularly when it comes to selecting the health issues that might be affected by the decision. Scoping is an involved process that can take a lot of resources in the form of time, people, and energy; but a thorough scoping process can lead to a more effective and efficient HIA process in the long term.

AFFECTED POPULATIONS

The residents and business owners within the Gary/New Duluth neighborhood are the populations most likely to be affected by the SAP and the HIA. Within this larger population are subpopulations that may feel the effects of the SAP and HIA more than others. These subpopulations include vulnerable populations, such as children, older adults, low-income people, people with lower educational attainment, disabled people, and people with pre-existing health conditions.

Recommendations in the SAP or HIA may affect the students who attend the school which include children from Gary/New Duluth and the neighboring communities of Fond du Lac, Morgan Park, Riverside, Smithville, and Norton Park. Additionally, Lake Superior College runs an Emergency Response Training Center for Fire Training in Gary/New Duluth. This training program brings in students from all over the region and country that require temporary housing and bring additional consumer buying power to the community. The students and visitors to this training center may be affected by the SAP and HIA.

POTENTIAL HEALTH ISSUES

The SAP includes five main sections: Commercial Development, Residential Development, Natural Environment, Transportation (including subsections on motorized and non-motorized transportation), and Park Planning. The goals and recommendations from the January 31, 2014 draft of the Gary/New Duluth SAP were used as the basis of the assessment and included the following:

New Development Opportunities - Goal 1: Guide new development opportunities that complement existing development while minimizing potential negative impacts.

Commercial Development Recommendations

- A. Local Businesses should establish an Association and evolve into a business improvement district.
- B. Establish a working relationship with economic development groups such as Duluth Economic Development Authority (DEDA) to recruit business and industry to the area.
- C. Compile available land inventory for commercially zoned property.
- D. Revitalize blighted properties including renovation of existing structures and/or removal of blighted buildings, and the site prepared for new development.
- E. Establish entry monument features at entry points into the neighborhood:

- a. North end features should be located at Becks Road and Commonwealth Avenue and designed to face Becks Road and Grand Avenue.
 - b. South end features should be located at Commonwealth Avenue and State Highway 23 and East McCuen Street and Commonwealth Avenue.
- F. Encourage building designs and storefronts to be consistent with the existing building character of the commercial corridor along Commonwealth Avenue.

Residential Development Recommendations

- A. Encourage residential infill on vacant lots within the developed portions of the neighborhood and available lands for housing within the study area.
- B. Identify housing needs for current population and for future workforce.
- C. Encourage a mix of Market Rate housing stock including single-family and multi-family.
- D. Tax forfeited properties to be sold at fair market value.

Zoning – Goal 2: Change zoning map designation to better reflect existing land use while minimizing potential negative impacts to surrounding area.

Recommendations

- A. Rezone that portion of Vintage Acres manufactured housing community zoned MU-B and I-G to a zoning designation that is consistent with the Comprehensive Land Use Plan. The future land use for this area is traditional Residential which could support a rezoning to R-1 or R-2 zone districts.

This recommendation is specific to one site and will not be included in the HIA Assessment due to time, resources, prioritization, and magnitude of impact. The zoning change will result in an illegal non-conforming use to become a conditional use, thereby allowing the manufactured housing community to make improvements to maintain, enhance, or potentially expand the community. The primary purpose is to remove regulatory hurdles and will have little direct impact on the broader community.

Natural Environment – Goal 3: To improve and enhance the natural environment.

Recommendations

- A. Minimize adverse impacts on the natural environment through leadership and policy, and address impacts of past practices where feasible.
- B. Motivate individuals, businesses, and community organizations to protect the environment; and provide opportunities for the community and visitors to practice stewardship, and enjoy Gary-New Duluth’s natural features.
- C. Require conservation design for any residential developments occurring in areas covered by the Sensitive Lands Overlay designation in the Comprehensive Land Use Plan.
- D. Encourage individuals, businesses and community organizations to work with the St. Louis River Alliance to protect, restore and enhance the health of the St Louis River through public awareness and community action.
- E. Encourage redevelopment of Brownfields identified in the study area.

Transportation – Goal 4: Provide safe and convenient motorized and non-motorized transportation options throughout the study area.

Motorized Transportation Recommendations

- A. Promote safe and comfortable travel in the neighborhood.
 - Establish a neighborhood traffic safety group to monitor traffic speeds and driving behavior.
 - Consider lowering posted speed limits on Local Streets throughout the neighborhood area.
- B. Work with the Minnesota Department of Transportation to install warning signage for the narrowing of Grand Avenue onto Commonwealth Avenue at the CN railroad bridge.
 - Signs alerting drivers to the changing road ahead.
 - Warn drivers to Slow Down and look around for other cars.
- C. Encourage the use of traffic calming treatments along Commonwealth Avenue and neighborhood streets including changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and street safety.
 - Evaluate bump-out configuration at the intersection of West Stowe Street and Commonwealth Avenue.
 - Improve street design and install barriers to reduce traffic speed and turning movement's at the intersection of 101st Avenue West and West Carterett Street.
 - Consider the installation of a landscaped center median/boulevard along Commonwealth Avenue from Reis Street to McCuen Street.
- D. Encourage streetscape features, such as trees, landscaping, and street furniture that will contribute to the livability and unique character of Commonwealth Avenue and the entire neighborhood.
 - As discussed in Goal 1, the recommended Business Association should work with business owners and the City to install interpretive display boards along Commonwealth Avenue promoting the natural and cultural history of the area.
 - Install flower planters, in conjunction with City planting program, in front of businesses along Commonwealth Avenue.
 - Improve appearance of street frontage along Commonwealth Avenue with benches and street art.
- E. City Council adopted Resolution 13-0602R requesting City staff to review the feasibility of opening City trails for All-Terrain Vehicle Use.
- F. Where potential trail corridors are planned and not located on City property, work with adjacent property owners to secure appropriate easements.

Non-motorized Transportation Recommendations

- A. Encourage the City to establish a sidewalk repair program.
 - Work with residents on cost share for sidewalk repair.
- B. Improve existing sidewalk conditions to create a comprehensive safe and convenient network.

- Work with City Engineering to allow for alternative walking surfaces/design in problematic areas to preserve the integrity of a natural or cultural feature.
 - Focus sidewalk repair and reconstruction in priority areas: Stowe Elementary School, Neighborhood Streets, Commercial corridor along Commonwealth Avenue
- C. Establish a network of recreational trails within the neighborhood to facilitate pedestrian and bicycle travel.
 - D. Encourage Minnesota Department of Transportation to consider installing a designated bike lane along Commonwealth Avenue.
 - E. Create opportunities for pedestrian and bicycle linkages to the St. Louis riverfront to provide greater access to this community amenity.
 - F. Link trails to adjacent neighborhoods, community facilities such as community centers, parks, schools, and the commercial and retail activity along Commonwealth Avenue.
 - G. Where potential trail corridors are planned and not located on City property, work with adjacent property owners to secure appropriate easements.
 - H. Improve pedestrian and bicycle wayfinding throughout the study area.
 - Install directional signage for bike and pedestrian wayfinding throughout the study area as trail and bike routes are established. The directional signage will be part of a larger sign program that will be used throughout the City. Directional signage will be aligned with information provided city wide bicycle and pedestrian trail map.

Park Planning – Goal 5: Facilitate a park planning process for park improvements.

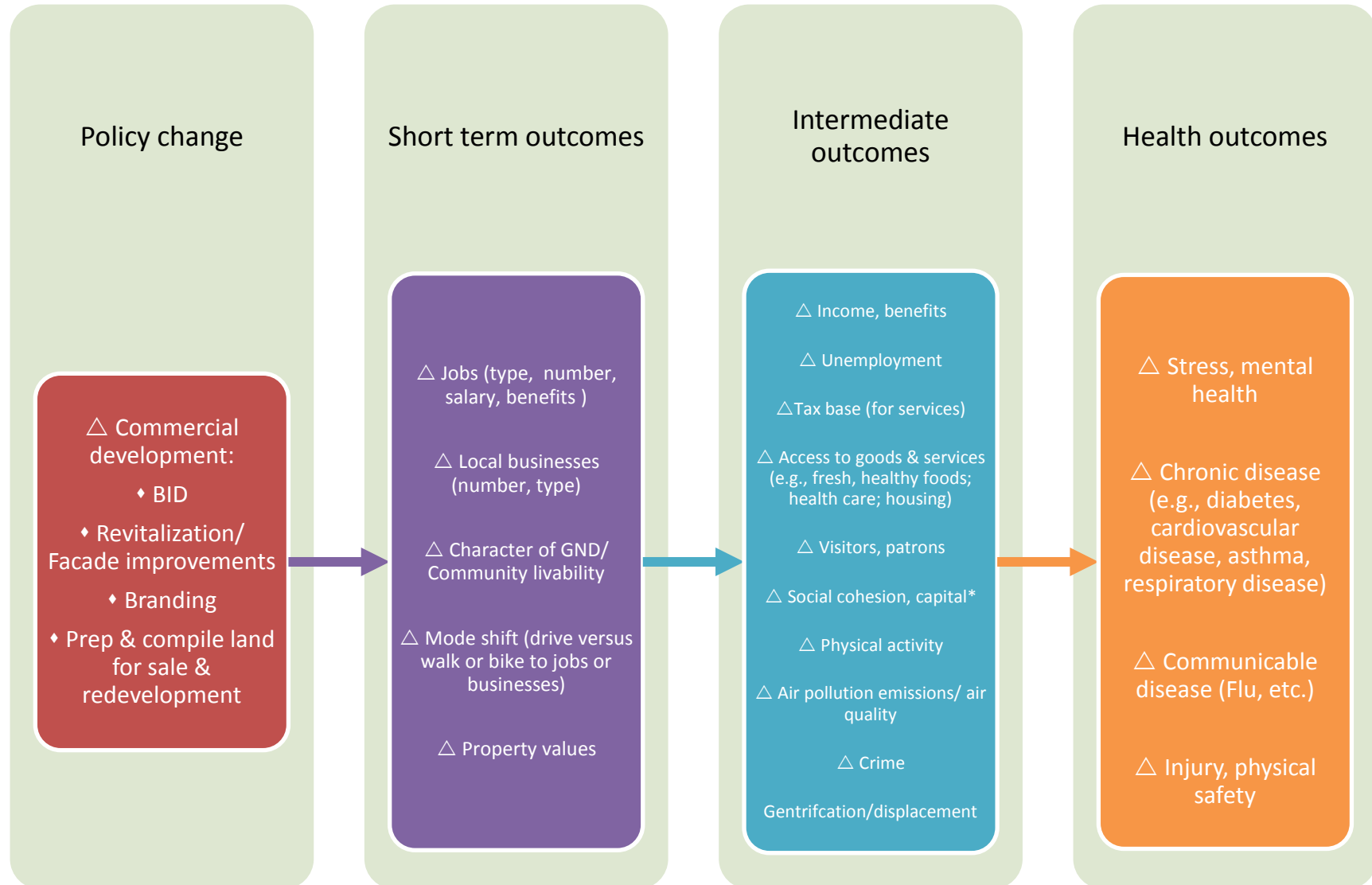
- A. City to develop an agreement with GND Development Alliance for park operations.
- B. GND Development Alliance to follow City sanctioned process for review of the proposed plan.
- C. City to support the GND Development Alliance on grant opportunities.
- D. City to provide guidance and expertise to the GND Development Alliance project team
- E. Promote the project on the City’s website and by other appropriate means.

These recommendations will affect a number of health determinants and will result in potential positive or negative health outcomes. To assist the discussion of health determinants, pathway diagrams were developed for each of the sections of the small area plan. They are included here.

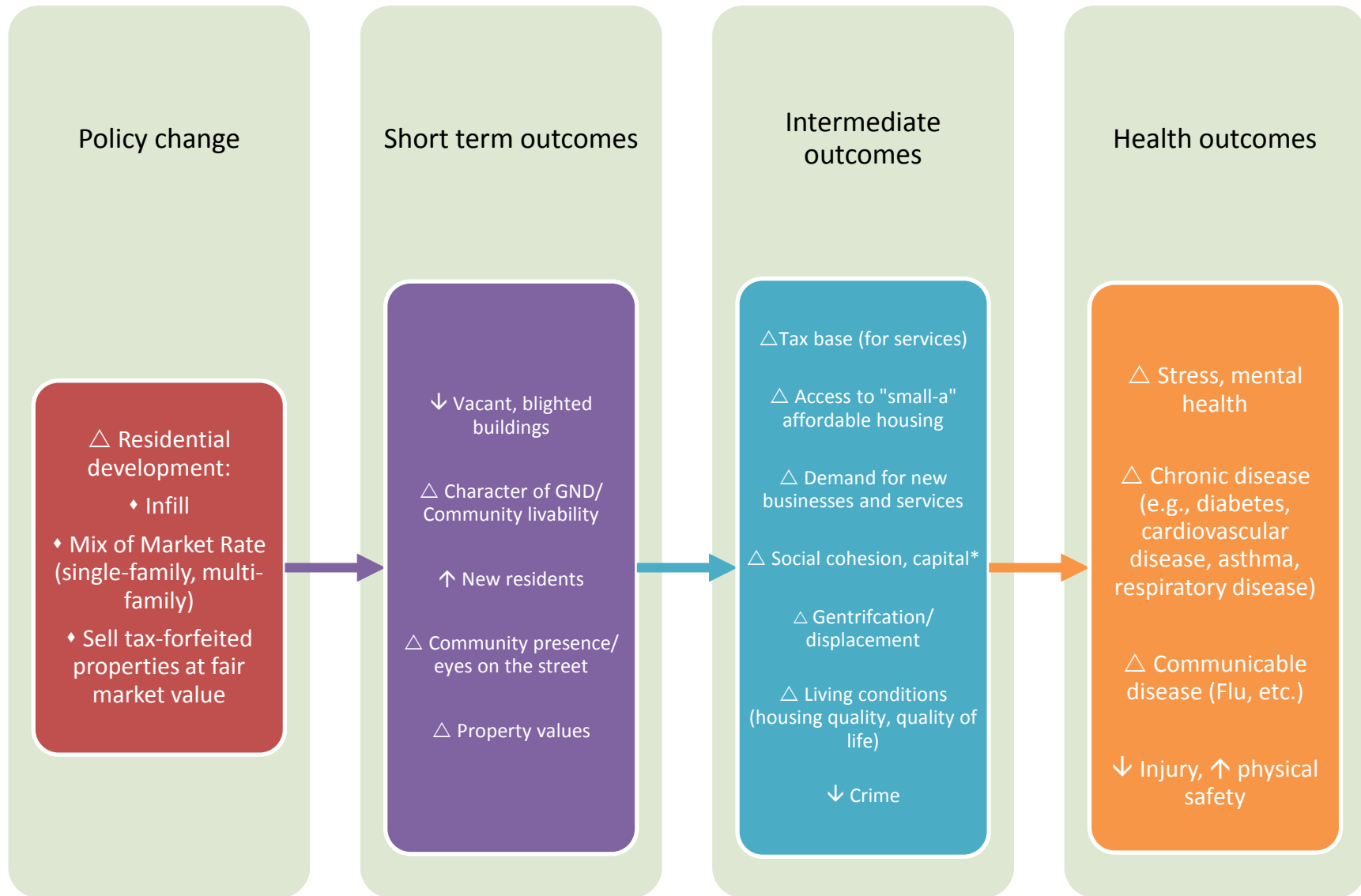
PATHWAY DIAGRAMS

Pathway diagrams outline the ways in which health might be affected and guide the formulation of appropriate research questions.

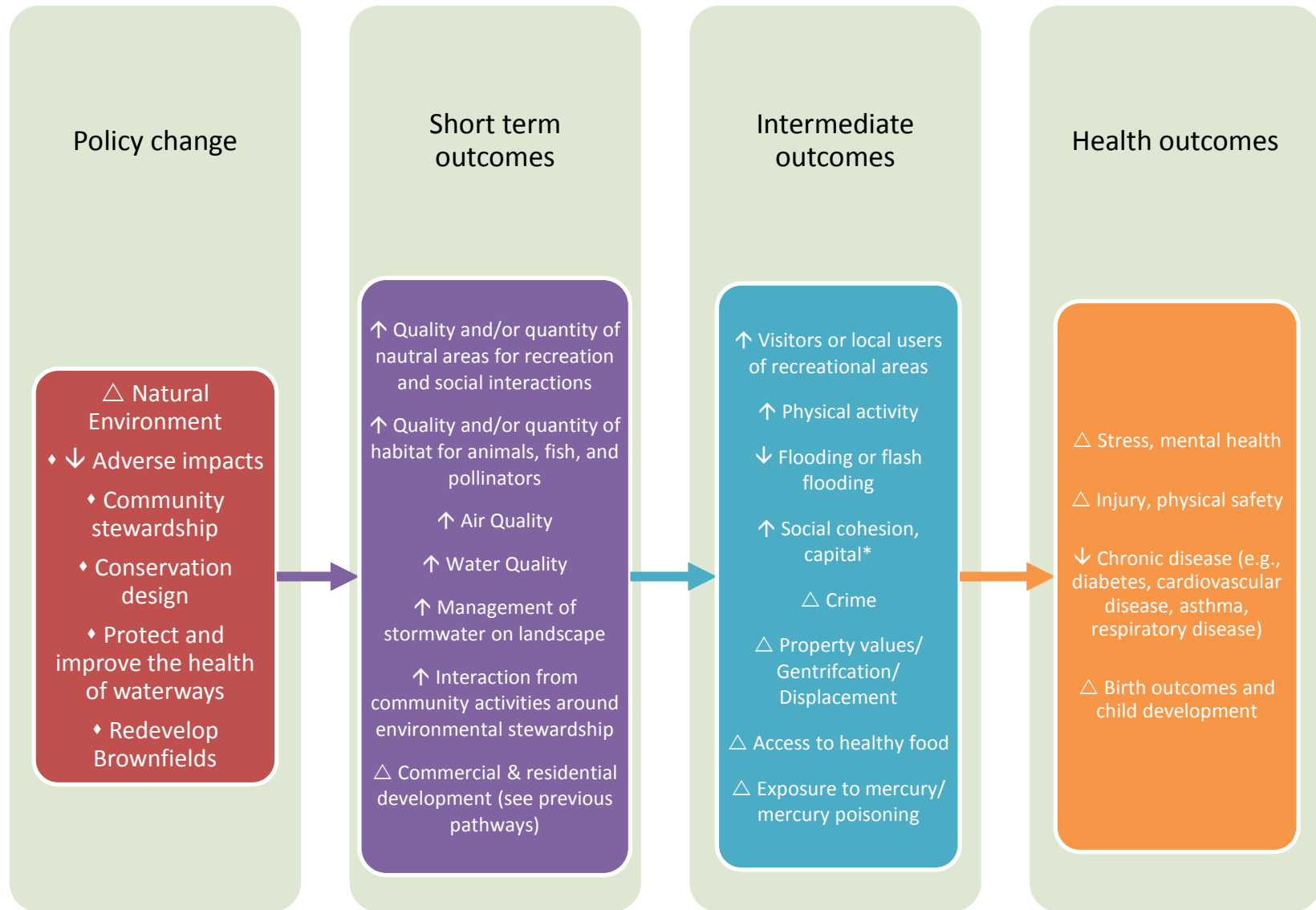
New Development Opportunities: Commercial Development



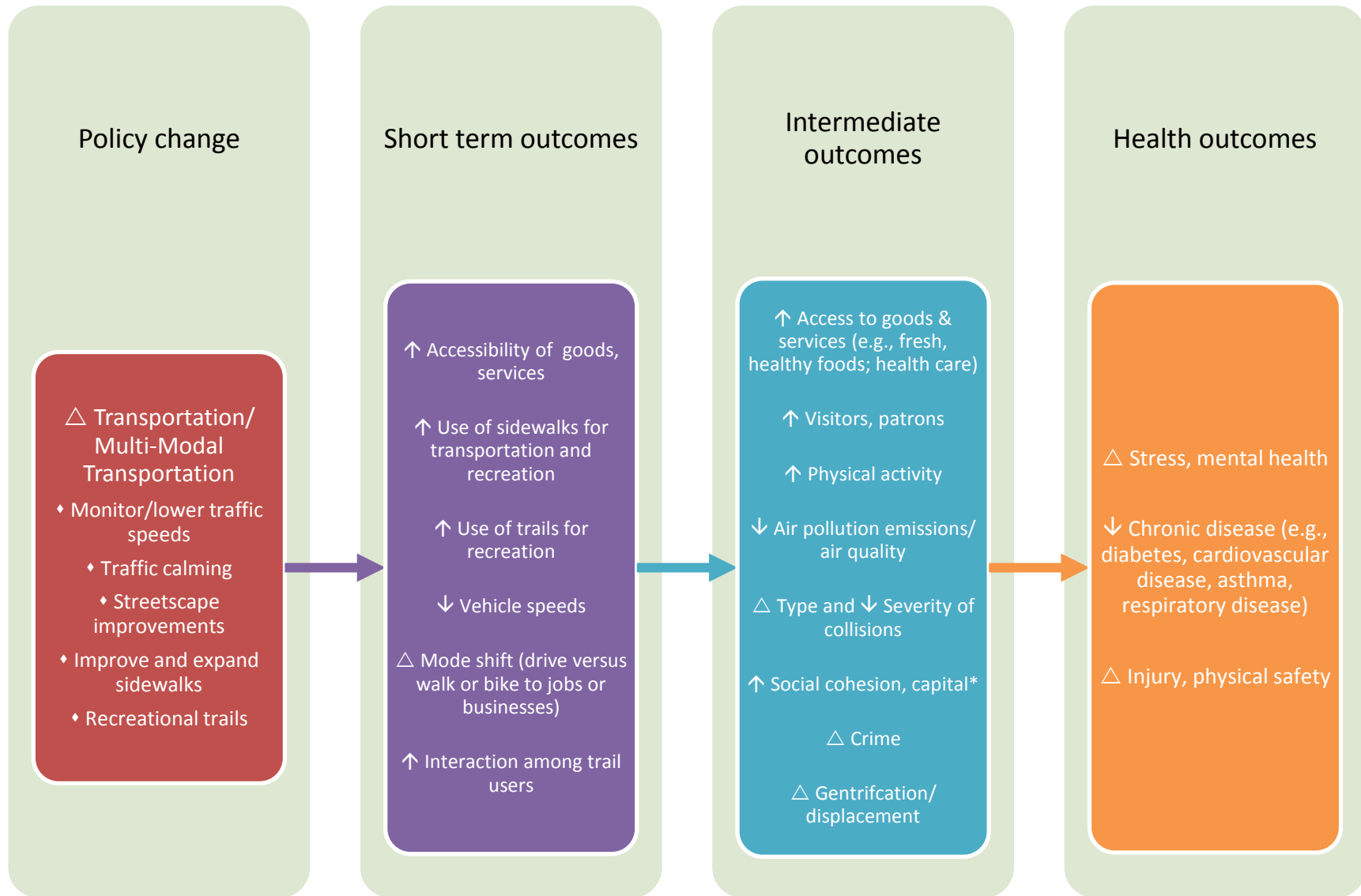
New Development Opportunities: Residential Development



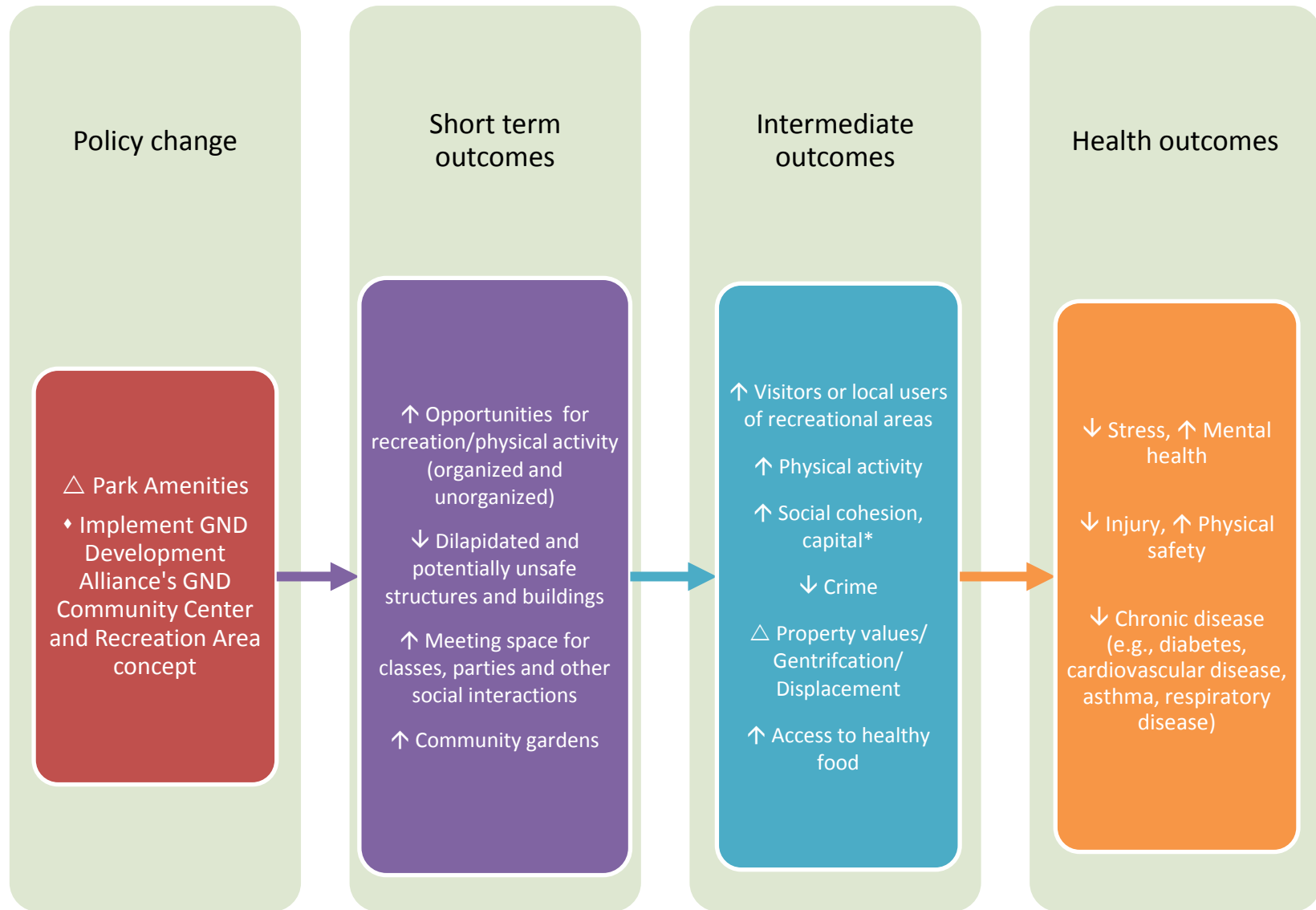
Natural Environment



Transportation/Non-Motorized Transportation



Park Planning



The asterisk (“*”) next to Social Cohesion in the pathway diagrams refers to the health determinants for Social Cohesion, which include change in stress (including positive “buffering factors” or negative excessive demands on support provider); change in influence of peers on behaviors (positive or negative), such as smoking or diet; increased opportunities to learn new skills; increased sense of belonging to one’s community; increase in access to material resources and services (e.g., job opportunities and health services) (Eriksson, 2010).

SCOPING EXERCISE

The pathway diagrams provide a summary of health outcomes that could result from recommendations made in the Gary/New Duluth SAP. Not all of these health issues could be assessed in depth in the HIA. The primary reason for this is lack of time and resources. Additionally, not all of these health determinants were of concern to the community. A scoping exercise was conducted with the HIA TAC to narrow down the health issues for the Gary/New Duluth SAP HIA.

On November 18, 2013 the HIA TAC met to select the health determinants that were used to assess the Gary/New Duluth SAP. Following a review of baseline data and summaries from the community survey and public meeting, the HIA TAC was asked to take several minutes and write down the top three or four health issues that they would select as the scope. Then the HIA TAC was asked to report back to the group their individual responses. All the ideas were collected on large easel paper for everyone to see.

Following the brainstorming, the HIA TAC was asked to vote on the top three health determinants that should be used to evaluate recommendations from the SAP. Then the results were tallied. The results of the scoping exercise are summarized in Figure 8. By selecting the health determinants with the most votes, the scope of the HIA was determined to be: social capital, physical activity, and access to healthy food.

FIGURE 8: SCOPING EXERCISE RESULTS

Health Determinant	Votes
social capital	5
physical activity	3
access to healthy food	3
stress or mental health	2
crime	2
jobs	2
community livability/living conditions	2
gentrification/displacement	1
quality of life	1

Next, research questions and a research plan were developed for the HIA. Research questions guide the Assessment and include both existing conditions research questions and impact research questions. The existing conditions research questions are used to determine what the state of the community is currently related to the health determinants identified in the Scope. For example, how accessible is healthy food to residents in Gary/New Duluth now? Impact research questions are used to assess the potential impact the proposed plan would have on the community. For example, how would the Gary/New Duluth SAP Recommendations change residents’ access to healthy foods?

The research plan outlines each research question, the indicators that will be used to measure or evaluate the question, data sources for the indicators, methods for analysis, what the priority level of the research question is, and any additional notes. See Appendix C for the research plan. The priority level of the research question is important in case there is not time to answer all of the research questions in the HIA. An HIA could choose to only analyze the “high” priority questions if their resources were limited, or devote more attention to the higher priority questions.

BASELINE ASSESSMENT

The baseline assessment provides a description of the existing conditions of the community that will likely be affected by the proposed plan, project, or policy. The baseline assessment provides the base for the development of projections of potential health impacts on the population, and provides a comparison before and after the implementation of the proposed plan, project, or policy. The baseline assessment includes information on the demographics and socioeconomic status of the affected populations, the existing health conditions, and any other relevant data that might be available to describe the existing conditions of the community.

For analysis purposes, the residents of Gary/New Duluth are the demographic focus of this HIA. Depending on data availability, this included the boundaries of the small area plan study area, Duluth Census Tract 38, Duluth zip code 55808, the City of Duluth, or St. Louis County. See Figure 9 which identifies the location of the neighborhood and shows the overlapping geographic characteristics of Census Tract 38 (orange) and Zip Code 55808 (purple) in which the community is located.

DEMOGRAPHICS AND SOCIOECONOMICS

Data for demographics and socioeconomic comes from the US Census American Community Survey 5-year estimates. Data was collected over the course of a year and due to US Census data releases includes both 2007-2011 5-year estimates and 2008-2012 5-year estimates. All ACS data was downloaded at the Census Tract level. Gary/New Duluth is located in Census Tract 38, St. Louis County, MN, which also includes the adjacent neighborhood of Fond du Lac. See Figure 10. Summaries of demographic and socioeconomic data are provided in Figures 11 and 12.

The Gary/New Duluth neighborhood is less racially and ethnically diverse than Duluth and Minnesota. The population has similar percentages of children and older adults as the City and the state. Educational attainment is lower, with more adults 25 and older that do not have a high school diploma or equivalent, and fewer adults

FIGURE 10: CENSUS TRACT 38, ST. LOUIS COUNTY, MN

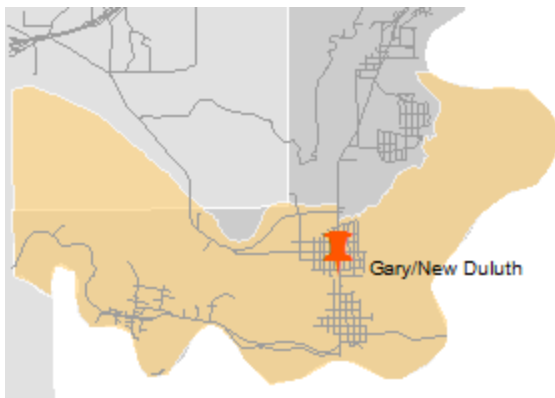
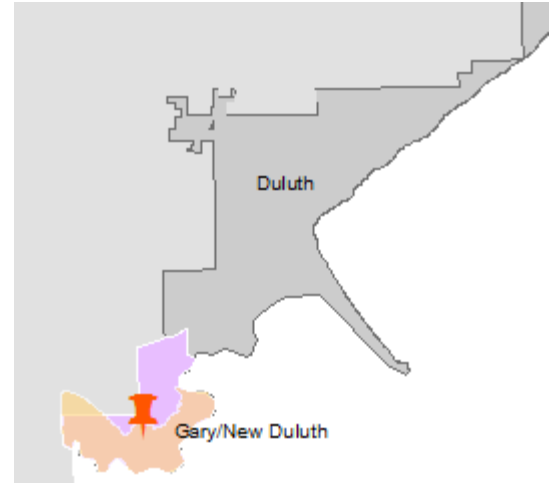


FIGURE 9: MULTIPLE GEOGRAPHIES OF DATA FOR GARY/NEW DULUTH



25 and older with a Bachelor's degree or higher. Median household income is lower than the City and state; but the poverty level is lower than the City and childhood poverty is half that of the state and less than one-third that of the City. Older adults have a higher poverty rate than the City and the state. Also, a higher percentage of households receiving SNAP (Supplemental Nutritional Assistance Program, a.k.a., food stamps) benefits are households with at least one person 60 years or older. The unemployment rate is higher in Gary/New Duluth than the City and the state, and this is particularly exaggerated in young adults (ages 16 to 24).

FIGURE 11: DEMOGRAPHIC CHARACTERISTICS OF CENSUS TRACT 38, ST. LOUIS COUNTY, MN (ACS 5-YEAR ESTIMATES, 2007-2011)

Characteristic	Census Tract 38	Duluth	Minnesota
Population			
Total Population	3,193	86,177	5,278,190
Percent Less than 18	21%	19%	24%
Percent 65 and over	12%	14%	13%
Median Age (years)	35.8	32.8	37.3
Race			
Percent White/ Caucasian	99%	91%	86%
Percent Black/African American	0%	2%	5%
Percent American Indian	0%	2%	1%
Percent Asian	0%	2%	4%
Percent Hawaiian/ Pacific Islander	0%	0%	0%
Percent Other race or two or more races	1%	3%	4%
Ethnicity			
Percent Hispanic or Latino	0%	2%	5%
Language			
Percent of population 5 years and over: Speak English "very well"	99%	98%	96%
Percent of population 5 years and over: Speak language other than English	5%	5%	11%

FIGURE 12: SOCIOECONOMIC CHARACTERISTICS OF CENSUS TRACT 38, ST. LOUIS COUNTY, MN (ACS 5-YEAR ESTIMATES, 2007-2011)

Characteristic	Census Tract 38	Duluth	Minnesota
Median Income			
Median Household Income (2011 Inflation Adjusted dollars)	\$40,833	\$41,116	\$58,476
Poverty			
Population below poverty level	12%	7%	14%
Population under 18 below poverty level ¹	21%	25%	9%

¹ Poverty level for a family of four with two children under 18 years was \$22,811.

Characteristic	Census Tract 38	Duluth	Minnesota
Population 65 years and over below poverty level ²	11%	14%	8%
SNAP/Food Stamps			
Households receiving food stamps	8%	11%	7%
Households With one or more people 60 years and over receiving food stamps	47%	18%	20%
Households With children under 18 years receiving food stamps	31%	52%	55%
Educational Attainment			
Percent Age 18 to 24, Less than High School diploma	9%	7%	13%
Percent Age 25 and older, Less than High School diploma	14%	7%	8%
Percent Age 25 and older, Bachelor's degree or higher	15%	31%	32%
Employment			
Unemployment Rate	12%	8%	7%
Unemployment Rate 16 to 19 years	37%	27 %	20%
Unemployment Rate 20 to 24 years	20%	20%	11%

HEALTH CONDITIONS

The majority of available health data is not provided below a sub-county or sub-city level. Exceptions include life expectancy and age-adjusted mortality data provided by St. Louis County Public Health Department and asthma emergency department visits that were provided by the MDH Asthma Program through a special request.

Gary/New Duluth is located in zip code 55808 (see Figure 13). Life expectancy was 80 years in zip code 55808. This ranks 5th out of 9 zip code areas in the City.³ The highest life expectancy in Duluth was 85 (55812) and the lowest was 73 (55802 & 55806 combined).

² Poverty level for one person 65 years and over was \$10,788 and \$13,609 for two person household 65 years and over. (2011 poverty threshold by Census Bureau: <http://www.census.gov/hhes/www/poverty/data/threshld/index.html>)

³ Statistical summaries from St. Louis County Public Health, based on MDH Center for Health Statistics mortality data 1999 - 2008

The age-adjusted mortality rate in zip code 55808 was 12 deaths per 1,000 people; the fourth highest of nine zip code areas in the City.⁴ The lowest age-adjusted mortality rate was 9 per 1,000 (55812) and the highest was 19 (55802 & 55806 combined). The lower the rate means there are fewer deaths per 1,000 people. The inference is fewer deaths mean a longer, healthier life.

Bridge to Health Survey

A significant amount of data about medical conditions and health behaviors are collected through the Bridge to Health Survey which is conducted by a partnership of eight northeastern Minnesota counties, including Aitkin, Cook, Carlton, Itasca, Koochiching, Lake, Pine, and St. Louis, as well as Douglas County, Wisconsin. All results are based on self-reported survey. Data is broken down by gender, age, educational attainment, and whether the respondent is above or below 200% of the poverty level. For full limitations of survey results, see the [Bridge to Health Survey website](#).

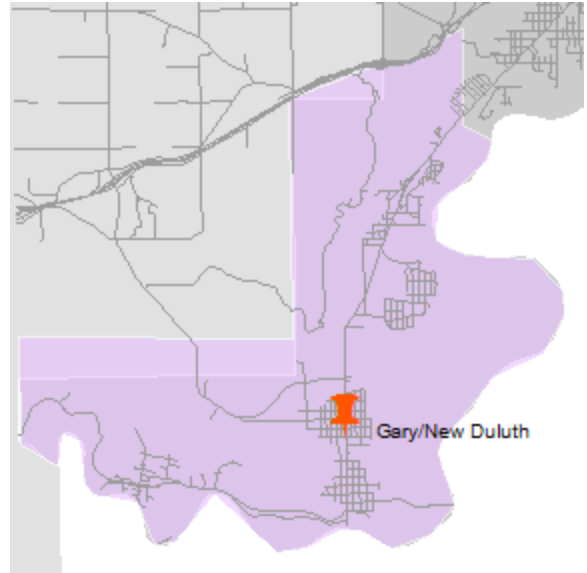


FIGURE 13: ZIP CODE 55808

The City of Duluth is the only city included in the survey summaries, and the smallest geographic unit. As a result, it is not possible to know what health conditions are in Gary/New Duluth specifically and how it might compare to Duluth or the broader region. The only comparison that can be made is between Duluth and the region as a whole. Therefore the HIA is limited to the assumption that Gary/New Duluth is similar in health characteristics to Duluth. Data characterized by gender, age, educational attainment and poverty status may help provide more context for drawing connections for Gary/New Duluth's population and subpopulations.

In general, Duluth had self-reported health outcomes that were better than or not significantly different than the region. Reported medical conditions included allergies, asthma, cancer, diabetes, heart trouble or angina, high blood pressure, high cholesterol, stroke-related problems, anxiety, panic attacks, and sexually transmitted diseases. See Figure 14.

Allergies were twice as high in females (24%) than males (11%). Asthma was also higher in females (11%) than males (2%) and was even higher for respondents with educational attainment below High School diploma (14%). Reported cancer was higher in females (13%) than males (6%); and higher in the population 65 and older (22% for ages 65 to 74, and 44% for ages 75 and older); but was not significantly correlated with educational attainment or poverty status. Diabetes was significantly higher in the population 65 to 74 (25%) and 75 and older (31%), but not significantly correlated with gender, educational attainment or poverty status.

The Bridge to Health survey indicated that heart trouble or angina, high blood pressure, high cholesterol, and stroke all became significantly higher as age increased. None of these conditions were significantly related to educational attainment or poverty status.

⁴ Statistical summaries from St. Louis County Public Health, based on MDH Center for Health Statistics mortality data 1999 - 2008

Depression and anxiety responses were similar for subpopulations. Specifically, depression and anxiety may be higher in the population 45 to 64 years old, and higher in the population below 200% of poverty. Also, depression may be lower in the population with some college or college degrees, compared with the population with less than high school degree, high school degree, or vocational/associates degree.

FIGURE 14: MEDICAL CONDITIONS (BRIDGE TO HEALTH SURVEY, 2010)

Indicator	Duluth		Region	
Allergies	18%	(12 - 23)	20%	(18 - 22)
Asthma	7%	(3 - 11)	7%	(5 - 8)
Cancer	10%	(7 - 13)	10%	(8 - 11)
Diabetes	7%	(4 - 9)	8%	(7 - 9)
Heart Trouble or Angina	7%	(4 - 9)	9%	(8 - 11)
High Blood Pressure	21%	(16 - 27)	27%	(24 - 29)
High Cholesterol	18%	(13 - 22)	23%	(20 - 25)
Stroke Related Problems	3%	(2 - 5)	3%	(2 - 3)
Anxiety or panic attacks	9%	(6 - 12)	8%	(7 - 10)
Depression	11%	(7 - 14)	13%	(11 - 15)
Sexually Transmitted Diseases	1%	(0 - 2)	2%	(0 - 3)

The Bridge to Health Survey also asked for the self-reported behaviors of adult respondents in the areas of weight status and physical activity and nutrition. Specific indicators included: overweight, obesity, food insecurity, consumption of fruits and vegetables, and moderate and vigorous activity. See Figure 15.

FIGURE 15: PREVENTATIVE HEALTH PRACTICES (BRIDGE TO HEALTH SURVEY, 2010)

Indicator	Duluth		Region	
Overweight but not obese ⁵	32%	(24 - 40)	34%	(31 - 36)
Obese ⁶	11%	(8 - 14)	18%	(15 - 20)
Food Insecure (sometimes or often)	22%	(12 - 31)	14%	(12 - 17)
Five or more servings of fruits & vegetables	21%	(13 - 29)	16%	(14 - 19)
Moderate activity 5 or more days per week	37%	(27 - 47)	34%	(22 - 45)
Vigorous activity three or more days per week	43%	(40 - 46)	30%	(27 - 34)

Obesity was lowest in the population 18 to 34 years (2%), and may increase with age until 65 to 74 when it appears to decrease again. Obesity did not appear to be correlated with educational attainment or poverty in Duluth.

Food insecurity may be higher in the population 18 to 34 (34%) and the population with less than high school degree (64%), and was significantly worse in the population at or below 200% of poverty (54%) than the population above 200% of poverty (11%). Consumption of fruits and vegetables was also significantly higher in population more than 200% of poverty (29%) than the population at or below 200% of poverty (5%).

⁵ Overweight was determined by calculating body mass index (BMI) using self-reported height and weight of survey respondent.

⁶ Obese was determined by calculating body mass index (BMI) using self-reported height and weight of survey respondent.

Moderate activity may be lowest in the population 35 to 44 (25%) and population with less than high school degree (18%), but did not appear to be correlated with age, educational attainment, gender or poverty. Vigorous activity was higher in males (49%) than females (20%), and highest in the population age 18 to 34 (53%). It did not appear to be correlated to educational attainment or poverty status.

ENVIRONMENTAL HEALTH AND VITAL STATISTICS DATA

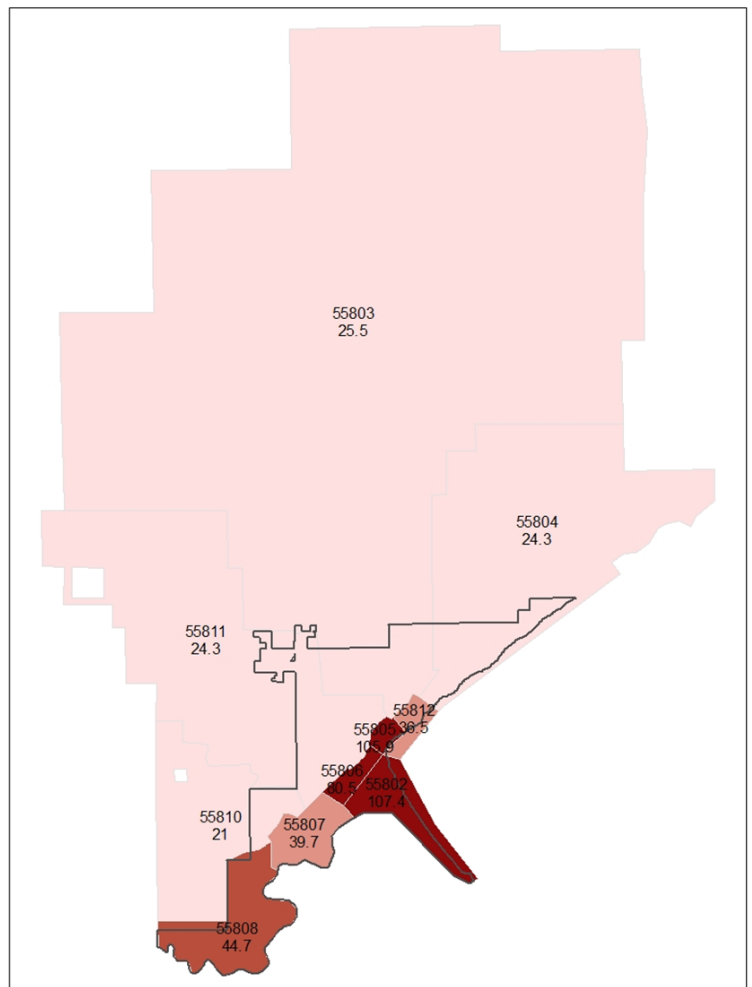
Environmental health data is available through the MDH Environmental Public Health Tracking Program and the Minnesota Public Health Data Access Portal on the MDH website. Vital statistics data is available from the MDH Center for Health Statistics. At the time of this HIA, the data available at a sub-state level (counties) through these programs included: air quality (particle pollution and ozone), asthma hospitalizations and emergency department visits, cancer incidence for a number of cancer types⁷, carbon monoxide poisonings and

deaths, child immunizations, child lead poisoning, chronic obstructive pulmonary disease (COPD) hospitalizations, heart attack hospitalizations, and reproductive and birth outcomes. The only data available at a sub-county level was asthma hospitalizations, which were obtained by special request from the MDH Asthma Program.

Air quality in St. Louis County is very good. Average annual concentrations of pollutants were well below the national ambient air quality standards (NAAQS). From 2001 to 2006 only two days exceeded the NAAQS for ozone.

The MDH Asthma Program provided age-adjusted asthma emergency department visit rates for the Duluth zip codes. The age-adjusted asthma emergency department visit rate for zip code 55808 encompassing Gary/New Duluth was 45 per 10,000 residents for 2007-2011, the fourth highest out of ten zip codes in the Duluth area. See Figure 16 for a map of asthma emergency department visits.

FIGURE 16: AGE-ADJUSTED ASTHMA EMERGENCY DEPARTMENT VISIT RATES PER 10,000 RESIDENTS, ALL AGES, 2007-2011



⁷ There are 18 total cancer types on the portal, including: acute lymphocytic leukemia (childhood only)*, acute myeloid leukemia, bladder cancer, brain and other nervous system cancer, breast cancer (female only), chronic lymphocytic leukemia, esophageal cancer, kidney cancer, laryngeal cancer, leukemia, liver cancer, lung and bronchus cancer, melanoma, mesothelioma, non-Hodgkin lymphoma, oral and pharyngeal cancer, pancreatic cancer, and thyroid cancer. (*Not available at county level.)

The asthma hospitalization rate, cancer incidence (overall), carbon monoxide emergency department visits, COPD hospitalizations, heart attack hospitalizations, percent of pre-term babies (< 37 weeks) were at least slightly higher in St. Louis County than in Minnesota for all of the time periods of data provided.

Childhood immunization rates for St. Louis County were close to Minnesota's, with the exception of Hepatitis A, which was substantially lower in St. Louis County. More children in St. Louis County have been tested for elevated blood lead levels between 2000 and 2008 than Minnesota, and most years the percent of tests that come back with elevated levels (>10 µg/dL) are similar for the county and state.

IMPACT ASSESSMENT

SOCIAL COHESION

What is social cohesion?

There is not a concise, agreed-upon definition of social cohesion. Essentially, social cohesion describes the strength of the relationships of a community, which can be any group of people. Social cohesion often strengthens the overall “sense of belonging” people have in the community (Forest & Kearns, 2001). “A society lacking cohesion would be one which displayed social disorder and conflict, disparate moral values, extreme social inequality, low levels of social interaction between and within communities and low levels of place attachment” (Forest & Kearns, 2001).

While social cohesion is a measure of the depth of relationships in a community, the relationships themselves are often referred to as “social networks.” Having strong social networks can lead to developing “social capital” which speaks more to “the ability of [people] to secure benefits by virtue of membership in social networks and other social structures” (Eriksson, 2010). Living in a high social capital area can be beneficial even for individuals with poor social connections, with ‘spill over’ benefits gained from living in a high social capital community (Putnam, 2000).

Areas with high social cohesion and social capital are characterized by trust, participation and mutual support (Campbell and Jovchelovitch, 2000). Highly cohesive communities can result in community collective action and trust (Woolcock, 2001; Grootaert and van Bastelaer, 2002); higher success in influencing political decisions and fighting cuts to local services, such as health care (Kawachi, Kennedy, Glass, 1999); and ‘health-enabling communities,’ in that these communities are most likely to support health-enhancing behaviors (Campbell and Jovchelovitch, 2000). “Social capital has been found to be linked to more than just good health; empirical linkages have been found among social capital, the proper functioning of democracy, the prevention of crime, and enhanced economic development” (Putnam, 2000).

Why is social cohesion important for health?

Social cohesion can have impacts on both personal and community health. Affects to personal health include lower blood pressure rates, better immune responses, and lower levels of stress hormones, for people with higher levels of perceived social connectedness (Uchino et al., 1996). Additionally, socially connected people who have higher levels of trust between residents, live longer, have mortality rates one-half or one-third that of socially isolated people, and are generally healthier physically and mentally (Lochner et al., 2003; Leyden, 2003, Brunner, 1997). “Social isolation is considered a risk factor for multiple chronic diseases, including obesity, high blood pressure, cancer, and diabetes (Cacioppo & Hawkey, 2003). And the greater the social isolation of individuals, the greater their symptoms of depression and the more likely they are to report being in fair or poor health, when compared to individuals with larger social networks” (Ferris, 2012).

At a community level, socially cohesive communities are stronger politically and are better at taking action to improve their neighborhood, whether through their own initiatives or by engaging with local government or organizations. The relationships that form the bonds of social cohesion “can create healthy social norms, help people connect with local services, provide emotional support, and increase knowledge about health – or “health literacy” – within social networks (Kim et al., 2008). “Communities with high levels of bridging and

linking social capital are also better positioned to influence policies that support health, particularly when there is socioeconomic and demographic diversity within social networks” (Ferris, 2012).

However, social support may also have a negative effect on health by increasing stress due to excessive demands on the support provider (Eriksson, 2010). Additionally, highly cohesive communities can exacerbate social divisions based on race, class, and other social features (Ferris, 2012). Social cohesion can also reinforce negative norms and unhealthy behaviors (e.g., smoking). Gangs are one example of highly bonded groups that exert strong negative influences (Ferris, 2012).

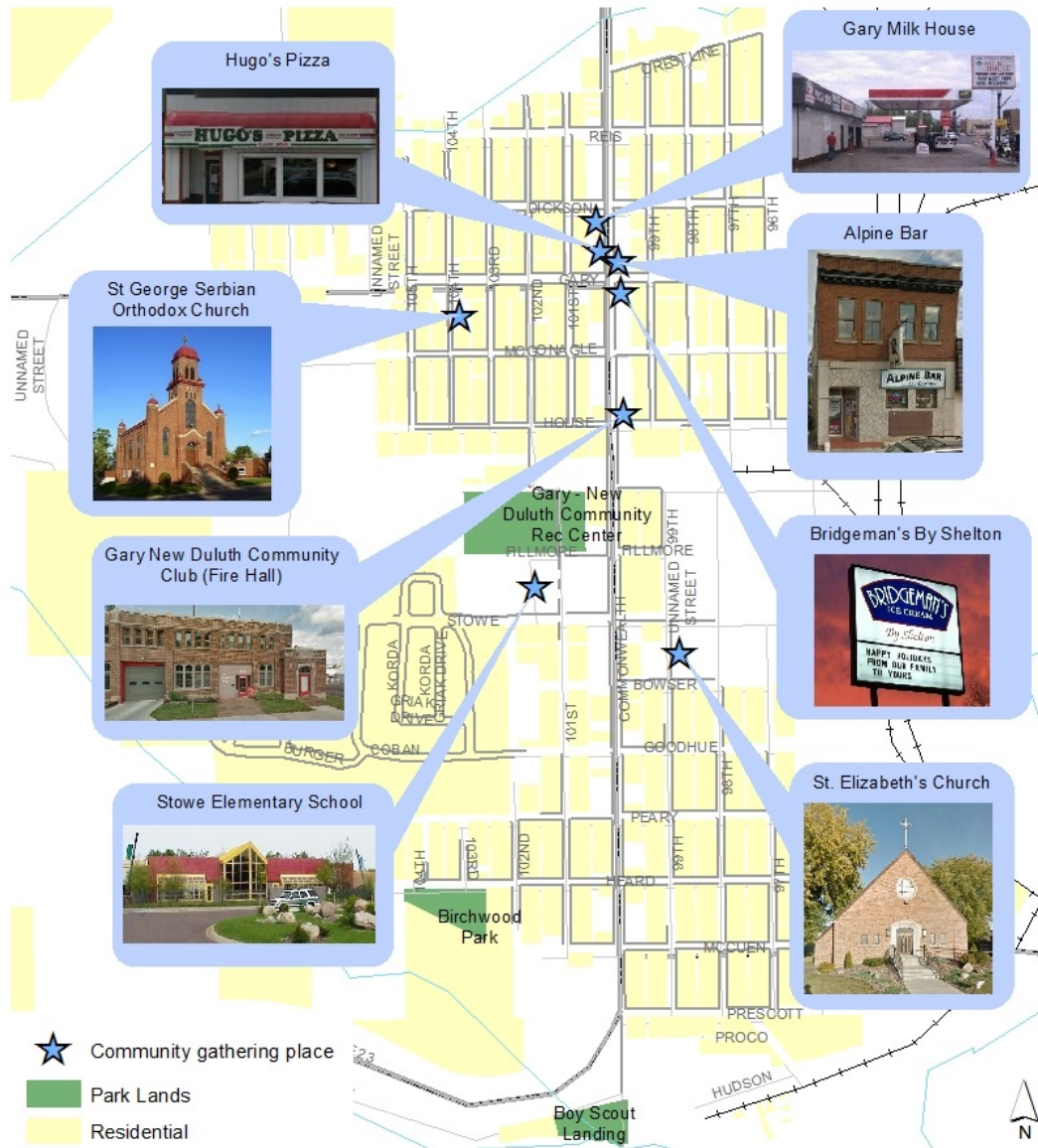
New Development Opportunities - Commercial Development

Existing Conditions Question: What community gathering places (e.g., coffee shops, community centers, etc.) are available to residents? Are they equally accessible, welcoming, and appealing to all residents?

There is a strong relationship between walkable, mixed-use environments and levels of social cohesion and social capital. One study found that “the more places people reported being able to walk to in their neighborhood, the more likely they were to be engaged with others socially” (Leyden, 2003). The study showed that beyond being more social, residents of walkable communities with many places to walk to knew their neighbors, had higher political participation, and trusted their neighbors more than residents of less walkable, mostly residential, suburban communities (Leyden, 2003).

For a low-density, residential community 10 miles from downtown Duluth, Gary/New Duluth is a relatively walkable community. The HIA TAC identified nine community gathering places in the neighborhood: the Milk House, Hugo’s Pizza, Alpine Bar, Bridgeman’s by Shelton, Gary/New Duluth Community Club, Boy Scout’s Landing, St. Elizabeth’s Catholic Church, St. George Serbian Orthodox Church, and Stowe Elementary School. See Figure 17 for the locations of these community gathering places.

FIGURE 17: COMMUNITY GATHERING PLACES



Not all of the community gathering places are as accessible or welcoming to all residents. Most of the gathering places are clustered towards the northern half of the neighborhood in Gary than in New Duluth. This limits access to the formal and informal social interactions for New Duluth residents. Additionally, community gathering places vary substantially in their provision of amenities and appropriateness by for different age groups (e.g., churches versus a bar).

Bridgeman's by Shelton, an ice cream shop that hosts frequent community events, is the most age universal gathering place. Bridgeman's is open on the weekends during the winter, providing breakfast and dinner meals, and all week during the summer season. Stowe Elementary School is an obvious gathering place for children and their families. Also, the school opens its doors to community events and public meetings on matters that are

important to the neighborhood. Similarly, the Gary/New Duluth Community Club hosts monthly Community Club meetings, Boy Scout meetings, and other meetings on issues that impact the neighborhood.

Churches are major areas of civic engagement that contribute to more cohesive communities and opportunities for the development of social networks and social capital (Forrest and Kearns, 2001; Putnam, 1995). Churches are places for all ages and often provide programs for different age groups, including children, older adults and parents. Gary/New Duluth has two churches, St. George's Serbian Orthodox Church and St. Elizabeth's Catholic Church. In addition to traditional religious services, St. George's offers a number of activities that engage residents of all ages including a youth choir, adult classes, meals, recitals, and more. St. Elizabeth's offers programming and activities for the community as well. Activities include a pasties sale that brings residents together for a dinner and the pasties pick-up, a potluck dinner every one to three months, religious education classes for youth where parents are also encouraged to attend, and development of a men's club is in the works.

The adjacent neighborhood of Fond du Lac contains the Fond du Lac Community Church, and Morgan Park has three churches: Redeemer Lutheran, St. Margaret Mary's Catholic Church and the Apostolic Pentecostal Church of Morgan Park. The Fond du Lac Community Church, in addition to religious services and ministry groups, hosts a program called Share and Care. Share and Care does a number of activities including the following: helps those who are ill or have health needs by providing meals, gift cards, visits, notes of encouragement, or homemade baked goods; organizes baby showers or gifts, and gives bridal showers for those in the church who are engaged; hosts an annual Christmas Senior Luncheon; and sometimes helps with financial needs within the church family. These activities bring the community together for shared experiences and often promote activities to improve the community around the church.

According to residents, the Milk House is one place where older adults in the community tend to gather. Additionally, the Alpine Bar is where residents go to air their grievances and create plans for their community over a drink. Hugo's is the only restaurant in the neighborhood, and a place for all ages to gather over a pizza or sub. Having places in a community where residents interact, even superficially (e.g., a nod from an acquaintance), are important for the development of ties that lead to feelings of belonging, security and social support (Henning and Lieberg, 1996).

The community also has two parks, the Gary/New Duluth Park and Birchwood Park. However, due to lack of maintenance, infrastructure and programming, neither of these parks are considered gathering places. However, the Gary/New Duluth Park has a future design concept as the Gary/New Duluth Community Center and Recreation Area, which could change that. See the *Park Planning – Social Cohesion* section for a full discussion.

Impact Question: How will the Gary/New Duluth SAP Commercial Development recommendations change opportunities for social networking and the development of social cohesion?

The Commercial Development Recommendation A "Local Businesses should establish an Association and evolve into a business improvement district" may increase social cohesion among business owners in Gary/New Duluth by building on social networks. These new and strengthened relationships may encourage business owners to help each other through tough times or entice new businesses to come to the community as a result of increased resources and a support network for entrepreneurs (Mittiga, 2004). Business improvement districts

also focus on community service, bringing business members together for the purpose of developing a collective good for their communities (Mittiga, 2004).

Social cohesion could also be bolstered if the Commercial Development Recommendation B “Establish a working relationship with economic development groups such as Duluth Economic Development Authority (DEDA) to recruit business and industry to the area” results in the recruitment of new businesses, such as restaurants, coffee shops, etc., that act as informal gathering spaces for residents to meet, greet and interact with one another, either intentionally or accidentally (Henning and Lieberg, 1996).

Existing Conditions Question: Are current unemployment rates – especially long term and among young people – a limiting factor in the development of social cohesion?

Job loss, lack of access to jobs and unemployment negatively impact social cohesion (World Bank, 2013). Persons experiencing unemployment may disconnect from the community, feel depressed, lose trust in others, and have limited hope for the future (World Bank, 2013). Being in a situation with no jobs or jobs with limited opportunities for growth can lead to alienation, frustration, and possibly criminal activity (World Bank, 2013). Long-term unemployment and underemployment particularly among young people are disruptive factors for a community (Forrest and Kearns, 2001; Fukuyama, 1999). Conversely, having many good jobs in a community supports social cohesion. Not only do jobs alleviate stress and alienation associated with unemployment, but they can also create economic and social ties (World Bank, 2013).

Unemployment in Gary/New Duluth is higher than both the City and Minnesota. The difference is especially pronounced in teens (workers age 16 to 19) and young adults (workers age 20 to 24). See Figure 18 for unemployment rates.

FIGURE 18: EMPLOYMENT FIGURES
Source – 2011 American Community Survey 5-Year Estimates

	Unemployment Rate	Unemployment Rate 16 to 19 years	Unemployment Rate 20 to 24 years
Census Tract 38	12%	37%	27%
Duluth	8%	27%	10%
Minnesota	7%	20%	11%

Approximately half of the unemployed persons in Census Tract 38 (Gary/New Duluth and Fond du Lac) are 20 – 24 years old (110 persons out of 228 persons), but that age group accounts for only 21% of those in the labor force (402 out of 1,898 persons). In Duluth, approximately 25% of the unemployed persons are 20 – 24 years old (964 out of 3,881 persons), and account for approximately 21% of the labor force (9,735 out of 46,765 persons). In Minnesota, approximately 14% of the unemployed persons are 20 – 24 years old (38,643 out of 286,189), and account for approximately 10% of the labor force (293,760 out of 2,940,694 persons). While unemployment is higher for youth than would be expected for their relative level of participation in the workforce in all geographies, the discrepancy in Gary/New Duluth is exceptionally high. In fact, the percentage of 20 to 24 year olds in the labor force in Census Tract 38 (90%) is just slightly higher than that of the City (81%) and the State (82%), but the unemployment rate is nearly 3 times as high. See Figure 19.

The percentage of teens in the labor force (ages 16 to 19) is much lower in Census Tract 38 (23%) than for the City (47%) and the State (53%). The unemployment rate for those teens in the labor force is also much higher in Census Tract 38 (37%) than for the City (27%) and the State (20%).

FIGURE 19: UNEMPLOYMENT FIGURES IN DETAIL
 Source: 2011 American Community Survey 5-Year Estimates

	Unemployment Rate: all ages 16+	Unemployment Rate: 16 to 19 years	Unemployment Rate: 20 to 24 years
Census Tract 38	12%	37%	27%
Population:	2,570	83	447
% in labor force (#):	69% (~1,898)	23% (~19)	90% (~402)
# Unemployed (based on unemp. rate):	~228	~7	~110
Duluth	8%	27%	10%
Population:	71,835	7,501	12,093
% in labor force (#):	65% (~46,765)	47% (~3,495)	81% (~9,735)
# Unemployed (based on unemp. rate):	~3,881	~951	~964
Minnesota	7%	20%	11%
Population:	4,147,665	299,382	357,808
% in labor force (#):	71% (~2,940,694)	53% (~157,475)	82% (~293,760)
# Unemployed (based on unemp. rate):	~286,189	~58,679	~38,643

The data ask more questions than provide answers. Future questions to investigate through qualitative or quantitative research include:

- Are teens not entering the labor force because there are no jobs for them?
- If more young adults entered the labor force would their unemployment rate increase?

Either way, based on the literature, it would be reasonable to assume that unemployment rates in Gary/New Duluth, especially among teens and young adults may be a limiting factor for social cohesion. On the positive side, the strong cohesion that Gary/New Duluth does have may be a buffering factor to some of the negative consequences of unemployment. Residents may be able to tap their social networks to find job opportunities and secure employment.

Impact Question: Will the Gary/New Duluth Small Area Plan Commercial Development recommendations change opportunities for employment and as a result the potential for development of social cohesion?

The GND SAP Commercial Development recommendations to establish a business association and encourage the recruitment of new businesses and industry to the area could increase employment opportunities. The types of businesses will determine the number of employment opportunities and the skill sets required. The

educational attainment of workers is important for matching skill sets for employment. Figure 20 provides a snapshot of educational attainment for persons between 18 and 24 and 25 and older in Census Tract 38 (Gary/New Duluth and Fond du Lac), Duluth, and Minnesota. Generally, new jobs will only benefit GND residents if training is provided or they meet current educational attainment levels.

FIGURE 20: EDUCATIONAL ATTAINMENT (2011 ACS 5-YEAR ESTIMATES)

	Percent Age 18 to 24, Less than High School diploma	Percent Age 25 and older, Less than High School diploma	Percent Age 25 and older, Bachelor’s degree or higher
Census Tract 38	9%	14%	15%
Duluth	7%	7%	31%
Minnesota	13%	8%	32%

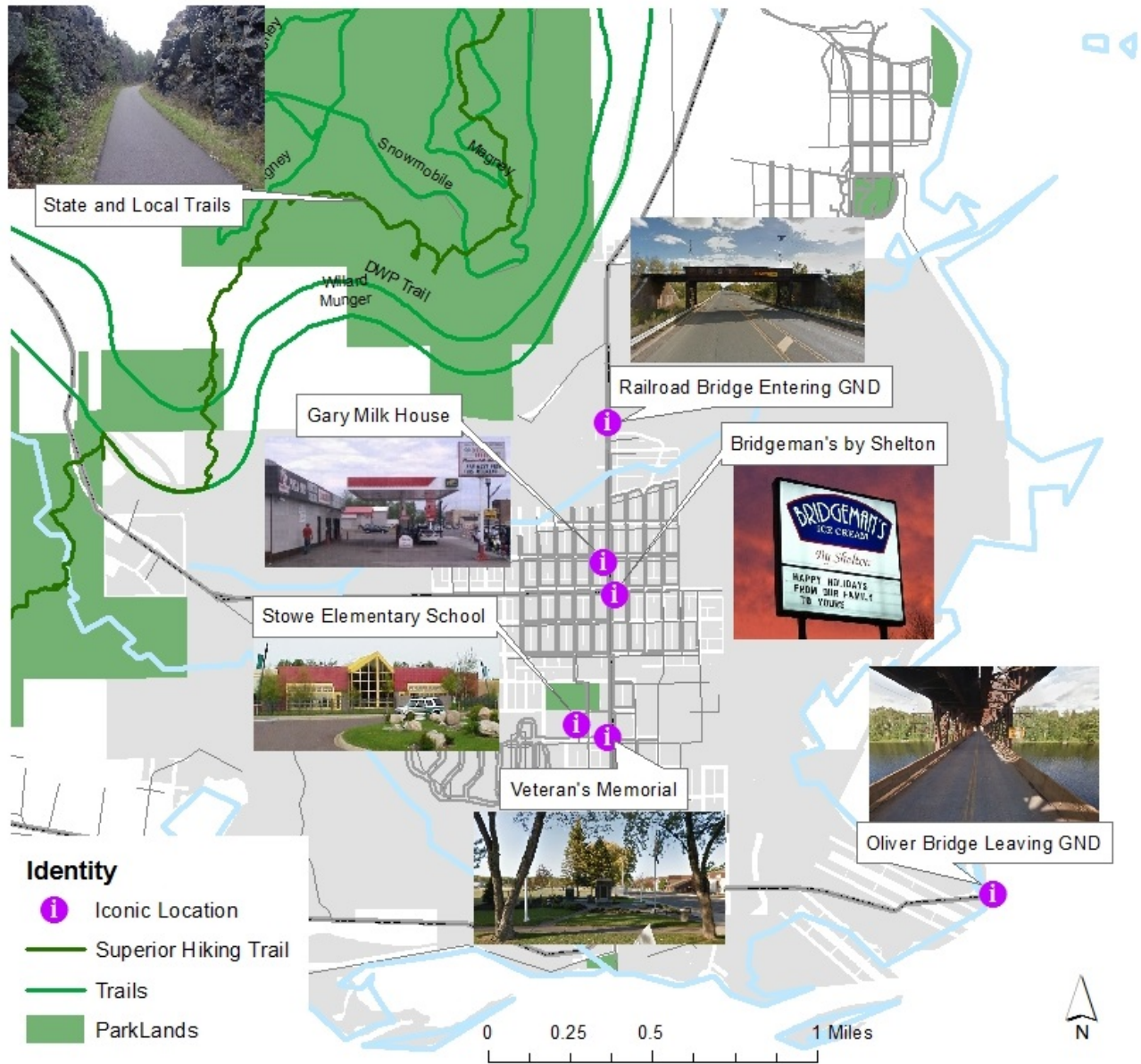
As it is unknown what the required skill set of the workers would be, it is difficult to know if future job opportunities will match the skill set of Gary/New Duluth residents, particularly teens and young adults. However, if employment opportunities were to increase, Gary/New Duluth may benefit from an increase in trust among residents and participation in civil society, two measure of social cohesion (World Bank, 2013).

Existing Conditions Question: What current places in Gary/New Duluth are associated with the neighborhood’s identity?

While MDH was unable to find any peer reviewed publications on the effects of neighborhood identity or branding, there are a number of articles and economic development strategies built on the concept of branding a community to 1) develop a sense of pride and belonging to a community for existing residents, and 2) to attract new residents and drive economic development (Huang, 2013; Winfield-Pfefferkorn, 2005; Stabert, 2012). One resource purported that “People define themselves by where they live. . . Their neighborhood, and what it says about who they are and how they want to live, is important” (Stabert, 2012).

First and foremost, one must identify the tangible things that are associated with a neighborhood’s identity. Gary/New Duluth contains a number of sites that contribute to the neighborhood’s identity. See Figure 21 for places associated with neighborhood identity. A couple of the sites, such as the railroad bridge entering Gary and the Oliver Bridge leaving New Duluth, are iconic because they mark the boundaries of the community. Some of them, such as the Milk House and Bridgeman’s, are iconic because that is where the community meets one another for an informal conversation or a community event. Stowe Elementary School is another icon for the community and the neighborhood is very proud of its reputation in the City. Similarly, the Veteran’s Memorial has become an icon because of its beauty and the significance of remembering the community’s service to its country. Finally, the state and local trails that surround Gary/New Duluth are also identifying features of the community.

FIGURE 21: PLACES ASSOCIATED WITH NEIGHBORHOOD IDENTITY



Second to identification of iconic places in the community, is to tell the stories of a community in a positive way, and not over emphasize the problems. For example, the Gary/New Duluth Community Survey identified that many of the residents and visitors find the community very friendly and welcoming. Additionally, Gary/New Duluth has many assets and amenities, including Stowe School, an active Community Club, strong neighborhood relations with local businesses, regionally-connected recreational opportunities, and neighborhood festivals and events. Marcia Nedland, principal of Fall Creek Consultants, an organization specializing in neighborhood stabilization, neighborhood marketing, and market rebuilding, suggests messaging around these positive aspects. Rather than announcing that the community is a food desert, a press release or newspaper article should focus on the actions the community is taking to increase access to healthy foods for its residents (Nedland, 2014).

Impact Question: How will SAP Commercial Development recommendations related to the entry monument features affect neighborhood identity?

One of the Gary/New Duluth SAP Commercial Development recommendations is to establish entry monument features at the north and south entry points into the neighborhood on Commonwealth Avenue. The purpose of the entry monuments is to help establish an identity for the community by welcoming residents and visitors with attractive signage upon entry into the neighborhood. The effects of entry monuments and other successful branding to encourage the development of neighborhood identity include:

- Economic changes, including increases in tourism, and investments in the community (Huang, 2013)
- Cultural changes, including changes in the perception of the community by focusing on positive aspects, developing sense of pride and ownership and community solidarity, which can translate into political will to take action (Huang, 2013)

Additionally, at the January 9, 2014 community meeting on the Gary/New Duluth Community Center and Recreation Area design plan, residents raised the idea of a community event board. The GND Development Alliance is investigating the potential of having a LED sign on Commonwealth Ave and Stowe St to announce community events. Having this community buy-in for the recommendation for entry monuments and community event signage will not only increase the likelihood of it coming to fruition and ensure a sense of ownership over the project from community members, but the project itself will help the community come together to create their shared identity.

Existing Conditions Question: Do blighted properties and current crime levels inhibit relationship and trust building among neighbors?

Community safety is strongly related to promoting social cohesion (SFDPH, 2010). High rates of community violence can create real or perceived unsafe environments which may hinder social cohesion among neighbors (Sampson et al, 1997). Community violence undermines social functioning and can result in residents increasing their isolation from the community (Fullilove et al., 1998).

Conversely, strong community cohesion can be a deterrent to crime and increase real and perceived community safety (Sampson et al, 1997; Adams et al, 2000). Organizing the community into collective action around crime and safety, such as a neighborhood watch group, is one way to improve perceived safety in a neighborhood (Sampson et al, 1997). Additionally, residents that experience greater integration among their neighbors perceive their neighborhood to be safer (Adams et al, 2000).

In total, the City of Duluth has higher rates of both violent and property crimes than Minnesota. See Figures 22.1 and 22.2. Similarly, Gary/New Duluth has higher rates of crime for larceny and theft, burglary, and motor vehicle theft than Minnesota. See Figure 23. However, Gary New Duluth does not report any robberies, sex crimes or rape, murder or homicide, or arson. Assault statistics for Gary/New Duluth cannot be compared with the state of Minnesota because Gary/New Duluth includes more than just aggravated assault, whereas Minnesota's statistics only include aggravated assault.

FIGURE 22.1: VIOLENT CRIME RATES

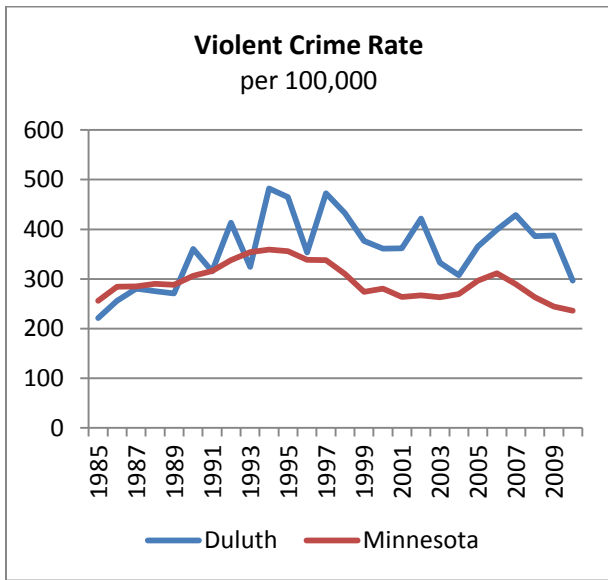


FIGURE 22.2: PROPERTY CRIME RATES

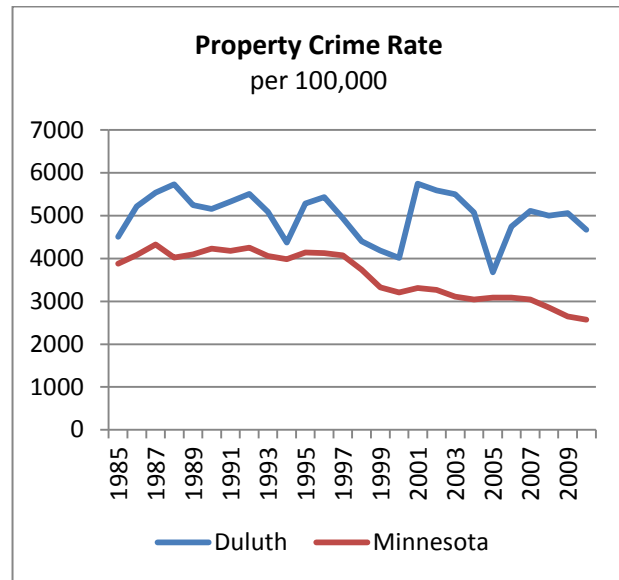


FIGURE 23: CRIMES IN GARY NEW DULUTH

Crime	Gary/New Duluth	Duluth	Minnesota
Theft/Larceny	88 (10/12 – 10/13) 3,253 per 100,000	3,294 (average 2004 – 2012) 3,819 per 100,000	109,707 (average 2004 – 2012) 2,096 per 100,000
Assault*	31 1,146 per 100,000	1,203 1,394 per 100,000	No Data
Aggravated Assault	No Data	201 233 per 100,000	7,673 147 per 100,000
Burglary	37 1,368 per 100,000	664 770 per 100,000	27,267 521 per 100,000
Motor Vehicle Theft	7 259 per 100,000	205 238 per 100,000	10,851 207 per 100,000

Blighted and underutilized properties are associated with higher crime levels and fear among residents (Hollander, 2009), and may therefore affect social cohesion. There is a clear link between public signs of disorder (such as vacant housing, burned out buildings, vandalism, and litter) and more serious crime (Skogan, 1990).

Duluth recognizes both the risk and opportunity of blighted and underutilized properties. As part of the Small Area Plan process, DEDA contracted with Bay West consultants to conduct an “Area-Wide Limited Inventory Environmental Site Assessment” of non-residential properties in Gary-New Duluth. The assessment found 61 sites with current or historical non-residential uses and of those 61 sites, 17 could be classified as Brownfields and 4 were considered potentially blighted (Bay West, 2013). The sites included previous commercial and industrial uses along Commonwealth Avenue that are currently boarded and closed or are vacant parcels that are paved or covered in tall grass. See Figure 24 for examples of some of the properties included in the assessment.

Based on the data provided, Gary/New Duluth crimes and blighted properties may have a negative impact on social cohesion in the community. The Community Survey conducted as part of the HIA found that the number one “high priority” item that residents wanted was crime prevention. While respondents still described the community as safe and friendly, there appears to be rising concern about crime.

Impact Question: Will the Gary/New Duluth SAP help discourage and reduce crime?

Studies suggest that community design may be a useful tool for decreasing crime and improving community health (Carter, Carter and Dannenberg, 2003). The logic of the argument is intuitive: if blight and abandoned buildings are places that attract crime (described above), then replacing blighted and abandoned properties with active uses would deter crime, or at least displace it (Schumacher and Leitner, 1999).

The SAP Commercial Development Recommendation C “Compile available land inventory for commercially zoned property,” has already been completed through a contract with Bay West. The SAP Commercial Development Recommendations D “Revitalize blighted properties including renovation of existing structures and/or removal of blighted buildings, and the site prepared for new development” and B “. . . recruit new business and industry to the area,” are the next steps to removing blight that may attract crime. The City is already taking action on some blighted properties in the neighborhood and demolishing them as a result of the SAP.

If implemented with appropriate lighting and streetscape improvements (e.g., SAP Transportation Recommendation D) to encourage more pedestrian activity, the Commercial Development Recommendations to redevelopment and reinvest in the community to remove blight are likely to reduce or displace crime (Schumacher and Leitner, 1999).

New Development Opportunities - Residential Development

Existing Conditions Question: How does residential stability promote or limit social cohesion in Gary/New Duluth?

Residential stability, measured by years at current address and in the neighborhood, owner-occupancy, and single-family dwellings, is associated with higher levels of social cohesion in neighborhoods (Greenberg, Rohe, Williams, 1982). Residential mobility can have positive or negative impacts on individual residents and the community (Beatty et al, 2009). Mobility can have positive impacts if the resident is moving into a community by choice and improving their circumstances (Livingstone, Bailey and Kearns, 2008). However, mobility can have negative impacts if the resident is moving as a result of loss of employment or inability to afford their current living conditions, or if the new housing and community lower quality or unsafe (Cole et al, 2005; Beatty et al, 2009). A high degree of mobility and population turnover can lead to a weakening of social bonds and networks



FIGURE 24: BLIGHTED PROPERTY ON COMMONWEALTH AVE (BAY WEST, 2013)

for the individuals who are mobile, and can negatively impact social cohesion at the community level (Livingstone, Bailey and Kearns, 2008; Beatty et al, 2009).

Figure 25 shows residential mobility for Census Tract 38, Duluth, and Minnesota. Gary/New Duluth had lower mobility within St. Louis County than Duluth overall, but higher mobility from outside St. Louis County. The mobility rates are not substantially higher or lower for the area. Another measure of mobility is the number of years a person has lived in their home. Figure 26 shows the year that the households moved into his or her current home. Since 2010, the Gary/New Duluth area saw lower turnover (5%) than Duluth or Minnesota (13% and 10%, respectively), but the percentage of householders that moved in previous decades were very similar across geographies.

FIGURE 25: RESIDENTIAL MOBILITY (2011 ACS 5-YEAR ESTIMATES)

	Moved: within same county	Moved: from different county, same state	Moved: from different state	Moved: from abroad
Census Tract 38	6%	7%	2%	0%
Duluth	15%	6%	2%	1%
Minnesota	8%	4%	2%	1%

FIGURE 26: YEAR HOUSEHOLDER MOVED INTO UNIT (2012 ACS 5-YEAR ESTIMATES)

	Moved in 2010 or later	Moved in 2000 to 2009	Moved in 1990 to 1999	Moved in 1980 to 1989	Moved in 1970 to 1979	Moved in 1969 or earlier
Census Tract 38	5%	49%	24%	11%	6%	5%
Duluth	13%	50%	16%	9%	6%	6%
Minnesota	10%	49%	20%	10%	6%	5%

Figure 27 shows housing occupancy by tenure for Census Tract 38 (Gary/New Duluth and Fond du Lac), Duluth and Minnesota. The Gary/New Duluth area has a high percentage of owner-occupied housing, and very low percentage of vacant housing units, compared to Duluth and Minnesota.

FIGURE 27: HOUSING OCCUPANCY (2012 ACS 5-YEAR ESTIMATES)

	Total Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units	Vacant Housing Units
Census Tract 38	1,344	994 (74%)	280 (21%)	70 (5%)
Duluth	38,112	21,039 (55%)	14,301 (38%)	2,772 (7%)
Minnesota	2,347,928	1,534,719 (65%)	567,156 (24%)	246,053 (11%)

Figure 28 shows the type of housing structure by number of units. The majority of the housing stock in the Gary/New Duluth area is single family. Gary/New Duluth has a high percentage of mobile homes; 23% of the housing units in Gary/New Duluth area are mobile homes, which is approximately 40% of all of Duluth’s mobile homes. Mobile homes are affordable home ownership options; however the resident does not own the land which tends to appreciate in value and mobile home structures tend to depreciate faster than traditional home

structures. Vintage Acres is the mobile home park in Gary/New Duluth. This is a well-managed park with lots of amenities and its own community atmosphere. One resident of Gary/New Duluth noted that the homes and lots in Vintage Acres are often in better condition than the rest of the neighborhood housing stock (Dan Hinnenkamp, personal communication, October 10, 2013).

FIGURE 28: NUMBER OF HOUSING UNITS IN STRUCTURE (2012 ACS 5-YEAR ESTIMATES)

	1-Unit, detached and attached	2 units	3 or more Units	Mobile home
Census Tract 38	871 (65%)	62 (5%)	99 (7%)	312 (23%)
Duluth	24,724 (65%)	2,680 (7%)	9,925 (26%)	783 (2%)
Minnesota	1,755,316 (75%)	55,602 (2%)	452,045 (19%)	84,317 (4%)

Other measures of social cohesion include participation in organized groups. Gary/New Duluth has an active Community Club, and residents recently formed a neighborhood watch group. These activities promote social cohesion.

Impact Question: How will the Gary/New Duluth SAP Residential Development recommendations (increased residential density and new residents) change opportunities for social networking and the development of social cohesion?

The Residential Development recommendations to encourage residential infill on vacant lots (A) and identify housing needs for current population and for future workforce (B) have the potential to increase residential density and bring in new residents to the neighborhood. Residential infill in urban areas can lead to displacement of existing residents if new housing units cost more and subsidized or rent controlled units are not retained. The displacement of people can create stress, can result in poorer housing quality for tenants, and can destroy cohesive communities (Guzman, Bhatia & Durazo, 2005).

Gary/New Duluth provides housing that is affordable to a community with a lower median income. As identified in the Small Area Plan recommendation, residential infill on vacant lots is preferred. Residential infill on vacant lots should have less of a direct displacement effect on current residents; although if residential infill result in higher property values and residential turnover becomes high it could lead to gentrification and loss of current residents. Residential turnover and displacement may have a negative impact on the social networks of current residents and change the social cohesion of the community (Livingstone, Bailey and Kearns, 2008).

As new residential units are built and new residents move into the community opportunities for social networks could increase, bringing new residents into a cohesive community (Coulton et al, 2012); or social cohesion could be disrupted (Livingstone, Bailey and Kearns, 2008). High turnover threatens attachment; people are not familiar with their neighbors and have not had time to build up trust. High turnover also resulted in people withdrawing from social contact with neighbors, limiting the opportunities to build trust and attachment (Livingstone, Bailey and Kearns, 2008). Stability and attachment will affect some population groups more than others, for example families with young children tend to be affected more than younger persons without family (Livingstone, Bailey and Kearns, 2008).

New residential units and new residents could change the distribution of income, potentially increasing or decreasing income inequality. Income inequality is significantly associated with social trust and violent crime, and has a negative effect on social cohesion (Wilkinson, Kawachi and Kennedy, 1998). Additionally, it can lead to other “spillover effects” to persons and society, including higher rates of mortality, “increased rates of crime and violence, impeded productivity and economic growth, and the impaired functioning of representative democracy” (Kawachi and Kennedy, 1997).

Existing Conditions Question: Is GND housing stock affordable to residents?

Stable, affordable housing is important for health in a number of ways. When residents spend less money on housing (affordability threshold) they have money to spend on life’s necessities, including clothing, healthcare, doctor visits, medication, and healthy food (Guzman, Bhatia & Durazo, 2005). Housing instability – or frequent mobility – as a result of unaffordable housing can cause stress and other mental health conditions like depression (Cohen, 2011). Housing affordability is generally assumed to be 30% or less of a household’s gross income; those who pay more than 30% of household income on housing are considered to be cost-burdened (HUD, 2014). Figure 29 shows the number and percent of households by what percent of their household income they spend on housing for Census Tract 38 (Gary/New Duluth and Fond du Lac). This figure shows that more renters are cost burdened than homeowners, with or without mortgages. Overall, 44% of renters, 21% of homeowners with a mortgage, and 22% of homeowners without a mortgage are cost-burdened in Census Tract 38.

FIGURE 29: HOUSING-COST BURDEN - CENSUS TRACT 38 (2012 ACS 5-YEAR ESTIMATES)

Gross Rent As Percent of Household Income	Renters (270)	Homeowners with Mortgage (526)	Homeowners without Mortgage (468)
Less than 20.0%	134 (50%)	190 (36%)	348 (74%)
20.0 to 24.9%	0 (0%)	113 (22%)	11 (2%)
25.0 to 29.9%	18 (7%)	114 (22%)	7 (2%)
30.0 to 34.9%	27 (10%)	45 (9%)	29 (6%)
35.0% or more	91 (34%)	64 (12%)	73 (16%)

Gary/New Duluth has a median household income slightly below Duluth and well below Minnesota. Therefore, for housing to be affordable in the community, it should cost less. Figure 30 shows the median cost of housing for renters and homeowners (with and without mortgages), and the percentage of households at different thresholds of housing costs. In this community, median housing costs for homeownership with a mortgage were nearly twice that of homeownership without a mortgage or renting. Despite that, the previous table indicated that renters are still more likely to be cost burdened. This may indicate that persons with lower incomes are more likely to rent than own.

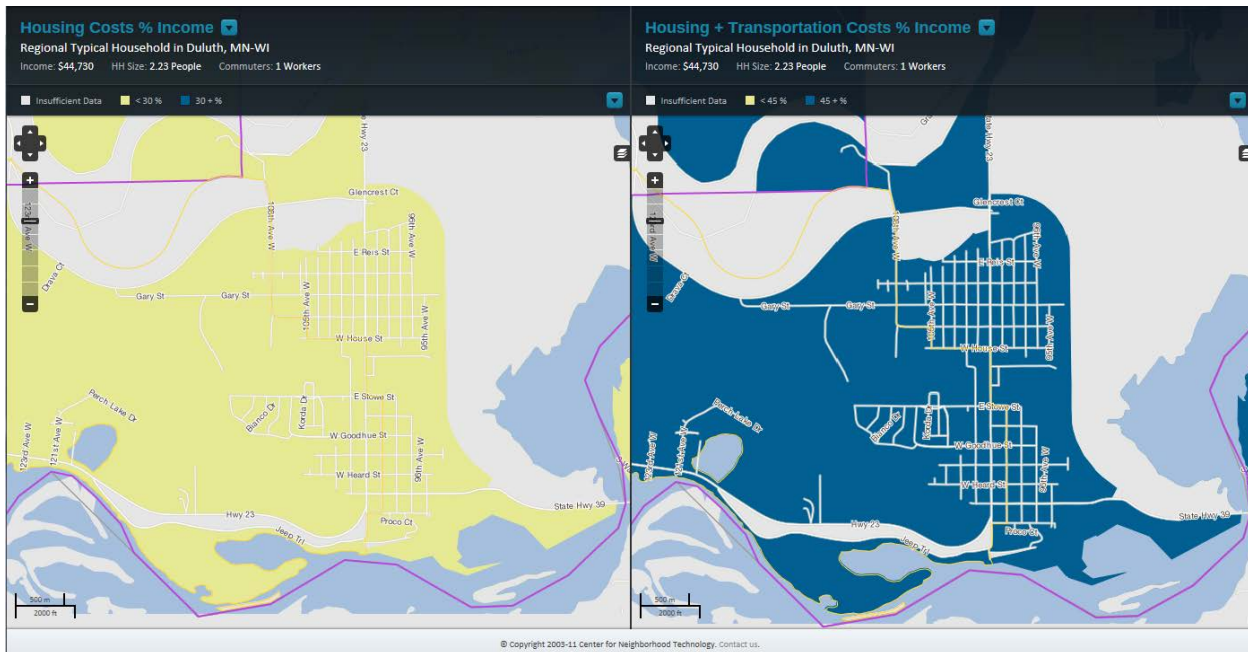
FIGURE 30: HOUSING COSTS - CENSUS TRACT 38 (2012 ACS 5-YEAR ESTIMATES)

Monthly Housing Costs	Renters (Gross Rent)	Homeowners (with Mortgage)	Homeowners (without Mortgage)
Median	\$582	\$1,018	\$456
Less than \$300	41 (15%)	9 (2%)	71 (24%)
\$300 to \$499	54 (20%)	0 (0%)	397 (85%) [\$300 or more]
\$500 to \$999	164 (62%)	247 (47%)	No data
\$1,000 to \$1,499	11 (4%)	169 (32%)	No data
\$1,500 or more	0 (\$0)	101 (19%)	No data

Past planning practices often considered housing and transportation costs separately, resulting in “affordable” housing being located in less accessible areas where transport costs were higher (Lipman 2006). More recently, researchers have been starting to combine costs of housing with transportation to understand true levels of affordability by location. Often housing that is farther away from central cities is less expensive, but transportation costs are higher. Conversely, housing in central cities may cost more, but if residents do not need to own a car to access all their necessary goods and services, their total living costs may be lower. Gary/New Duluth is far enough away from downtown Duluth and has limited services that it would be very difficult to live in the community and not have at least one vehicle per household. Therefore, the lower cost of housing in the community could be offset by an increased cost in transportation.

In fact, this does appear to be the case. The Center for Neighborhood Technology provides an interactive online mapping service that shows the entire United States by housing cost (below or above 30% of median household income) and housing and transportation costs combined (below or above 45% of median household income) (CNT, 2014). Figure 31 shows that for housing costs alone, Gary/New Duluth is affordable (left map – yellow is less than 30% of income); but when transportation costs are factored in, households are paying more than 45% of their income and it is no longer affordable (right map – blue is more than 45% of income).

FIGURE 31: HOUSING AND HOUSING + TRANSPORTATION COSTS (SOURCE: CENTER FOR NEIGHBORHOOD TECHNOLOGY, 2014; HTAINDEX.CNT.ORG/)



Impact Question: Will GND SAP residential development recommendations affect the number of housing units affordable to current residents? And potentially lead to gentrification and displacement?

The purpose of the Gary/New Duluth SAP is to study the area in greater detail to develop and implement a long term plan that will maintain but also enhance the Gary-New Duluth area. The plan should benefit current and future residents and business owners in the community. To maintain but also enhance the community can be a delicate balance to build new housing to attract future residents, without pricing out current residents (Immergluck, 2008). Gary/New Duluth SAP Residential Development Recommendations include the following:

- A. Encourage residential infill on vacant lots within the developed portions of the neighborhood and available lands for housing within the study area.
- B. Identify housing needs for current population and for future workforce.
- C. Encourage a mix of Market Rate housing stock including single-family and multi-family.
- D. Tax forfeited properties to be sold at fair market value.

New housing development, or really any new investment in a community can lead to an increase in property values across the board (Immergluck, 2008). The Recommendations for encouraging infill housing and a mix of market rate housing stock have the goal of increasing housing stock, filling in vacant properties, and ensuring that new housing is not additional subsidized housing. The City’s Planning Department and Business and Economic Development Department should be cognizant of the potential consequences (good and bad) of new housing development. In fact, the Business and Economic Development Department’s 2014 initiative is market rate/workforce housing with values of new housing between \$150,000-\$250,000 and 1,500-1,800 square feet (Heidi Timm-Bijold, personal conversation, January 9, 2014). The question remains whether Gary/New Duluth residents afford that price-point.








The general rule of thumb is that a person can afford a mortgage between two to three times his or her income. To afford a house between \$150,000 and \$250,000 a household would need to make around \$60,000 for the \$150,000 house or \$100,000 for the \$250,000 house. According to the 2011 American Community Survey 5-year estimates, the median income in Gary/New Duluth was \$40,833. Based on the assessed value of land and property provided by the Duluth GIS department in 2014, the median value of single family homes in Gary/New Duluth is \$77,800 and the average is \$48,400. Development of new, market rate infill housing would likely result in higher income residents moving into the community. The impacts on social cohesion could potentially be positive or negative. On the positive side, new social networks could develop that could increase social capital for residents, leading to an improvement in social cohesion and access to resources. On the negative side, new residential development may cause property values to increase, making property taxes unaffordable to current residents and resulting in gentrification and displacement, breaking social ties and decreasing social cohesion.





Existing Conditions Question: Does residential crime in the neighborhood affect social cohesion?

As previously discussed in the *Commercial Development – Social Cohesion* section, community safety is strongly related to promoting social cohesion (SFDPH, 2010). High rates of community violence can create real or perceived unsafe environments which may hinder social cohesion among neighbors and increase isolation of residents (Sampson et al, 1997; Fullilove et al., 1998).

One study found that when looking at types of crime, violent crime was related to social trust, but property crime was not (Wilkinson, Kawachi & Kennedy, 1998). Figure 32 shows the number and rate by type of crimes in Gary/New Duluth from October 2012 – October 2013. Most of the crimes in Gary/New Duluth are property related or non-violent crimes, such as disturbing the peace. While this might be an indication that crimes in Gary/New Duluth have little or no impact on social cohesion, respondents to the Gary/New Duluth Community Survey did indicate that crime prevention was the top issue for the City to work on, and a number of respondents mentioned concerns about crime in the open ended question about what they would like to see changed in the neighborhood.

FIGURE 32: CRIMES BY TYPE FOR GARY/NEW DULUTH (SOURCE: [DULUTH CRIME MAPPING, 2013](#))

Crimes	Year (October 11, 2012 – October 9, 2013)	Crimes per 100,000
 Theft	88	3,253
 DUI	12	444
 Disturbing the Peace	115	4,251
 Assault*	31	1,146
 Burglary	37	1,368
 Vandalism	39	1,442
 Vehicle Prowls	6	222

Crimes	Year (October 11, 2012 – October 9, 2013)	Crimes per 100,000
 Vehicle Theft	7	259
 Drugs/Alcohol	19	702
 Fraud	37	1,368
 Weapons	2	74

High levels of incarceration as a result of crime can also affect community social structures by displacing members of the community, breaking up families and disrupting social networks (Rose and Clear, 2001). Three of the top six offenses for incarceration were drugs (17%), assault (12%), and burglary (8%) (MDC, 2013); offenses that occur in Gary/New Duluth. Data for local incarcerated population is not available, so it is unknown how incarceration may affect social cohesion in Gary/New Duluth.

Despite some concerns about crime, overall Gary/New Duluth residents describe their community as safe and friendly (Community Survey, 2013). As mentioned previously, strong community cohesion can be a deterrent to crime and increase real and perceived community safety (Sampson et al, 1997; Adams et al, 2000). Gary/New Duluth formed a neighborhood watch group, which is one way to improve real and perceived safety in a neighborhood (Sampson et al, 1997).

Impact Question: How will GND SAP residential development recommendations affect crime levels?

The Residential Development Recommendation A “Encourage residential infill on vacant lots within the developed portions of the neighborhood and available lands for housing within the study area” could increase development on existing vacant and problem properties that currently may provide dark, limited-surveillance places that crimes take place (Haughey, 2005). Additionally, more residents will provide more eyes for watching criminals and deter criminal acts (Haughey, 2005). A survey conducted by the Urban Land Institute of Iowa asked residents in neighborhoods where residential infill occurred if they felt as safe from crime after the development was built. Responses ranged from 1 (strongly disagree) to 5 (strongly agree). Overall responses indicated that residents were either neutral about crime or agreed that they were as safe from crime after the development (ULI, 2008). It seems unlikely that new residential development should have a negative impact on social cohesion related to crime levels.

Natural Environment

This section will use research and analyses to describe how the Gary/New Duluth SAP recommendations made for the Natural Environment will affect social cohesion, physical activity, and access to healthy foods. The natural environment, while having significant effects on human health and well-being, does not have clear, direct effects on the specific focus areas identified for this project (social cohesion, physical activity, and access to healthy foods). The natural environment provides ongoing ecosystem services, which are the benefits people obtain from ecosystems and on which human life is ultimately dependent, like clean air and water. For example, trees and vegetation can help filter harmful air pollutants, such as ozone, particulate matter (PM), and nitrogen oxides (NOx), from the environment. Reducing these air pollutants can decrease respiratory symptoms and their

negative effects on sensitive populations (Maller, 2008). The human health benefits are dependent on the health of ecosystems to function properly. If ecosystems are overwhelmed or damaged, then our atmosphere, soil and water systems no longer produce benefits sufficient to support human beings (Millennium, 2005).

Other lesser known services that have impacts on general human well-being include mental health and stress relief. For instance, viewing nature from a window can be both a relaxing and pleasurable experience. Humans have a natural affinity for nature, and thus are generally happier in the presence of aesthetically pleasing and interesting green spaces. In addition, people who live in urban areas near green space rate themselves as healthier and as less stressed than those who do not live near green spaces (Maas, 2006). Residents in this situation experienced positive health outcomes from this access to the natural environment in the form of increased physical fitness, reduced depression and anxiety, and improved cognitive function, among other benefits (Godbey, 2009).

Existing Conditions Question: What opportunities to interact in natural settings exist? (i.e. scenic paths and viewing areas with seating or picnic shelters, young naturalist programs at school or outdoor adopt-a-space programs?)

The natural environment provides much needed opportunities for city residents to relieve stress, escape noise and heat, and improve mental well-being. Residents of neighborhoods with higher levels of natural and well-vegetated areas consistently score higher on measures of connectedness, social cohesion, community involvement, and lower in stress and anger (Croucher, 2008). Some studies also show some connections between natural features like the presence of street trees and lower rates of crime (Kuo, 2001; Garvin, 2013). People who frequent parks and other green spaces close to their homes can have increased social ties and are more likely to participate in neighborly activities (Alaimo, 2010).

Gary/New Duluth is surrounded by natural vegetation. In the Community Survey, many respondents spoke to the abundance of greenery, greenspace, nature, water and woods. Natural settings in Gary/New Duluth that could provide opportunities for interaction include Boy Scout Landing which provides access to the St. Louis River, and the state and local trails surrounding the community that wind their way through the wilderness of state parks. Unfortunately, the trail access points are located at the periphery or even outside of the neighborhood boundary. See Figure 47 from *Residential Development – Physical Activity* section. Within the neighborhood, there are lots of trees and greenery, but limited opportunity to interact in natural settings, besides walking down the street and viewing the trees, or having a barbeque in a neighbor's well-vegetated backyard.

Impact Question: How will SAP connect existing amenities to residents or create new opportunities for interaction in natural settings?

Access to parks, trails and natural areas will greatly increase the rate of use by residents (Godbey, 2009; Mowen et al., 2007). If residents perceive parks and open space to be easily accessible, they will use those amenities at significantly higher rates. The Gary/New Duluth Community Center and Recreation Area proposes a few uses that would increase residents' interaction in natural settings. The first is a possible ropes course; however, this would not be constructed if the Superior Zoo develops a ropes course, and would require organization and supervision. The second is a possible disc-golf course or walking trails in the tax-forfeit land in the northeast corner of the GND Community Center and Recreation Area concept. Additionally, the GND Recreation Area will

have numerous benches and picnic tables which will encourage people to come to the area and sit enjoying being outside and social interaction. See Figure 67 from the *Park Planning – Physical Activity* section.

Incorporating natural features in other projects is an effective way to encourage interaction with nature. For example, the landscaping around the Veteran’s Memorial was completely redone during the revitalization project. Not only were new trees, shrubs, and flowers planted, but benches were installed to encourage people to stop. People are often seen sitting on the benches. The Gary/New Duluth SAP Natural Environment recommendations to preserve the natural environment by minimizing adverse impacts (A), requiring conservation design for residential developments (C), and restoring and enhancing the St. Louis River (D), are ways to incorporate natural features into future development and activities.

The Gary/New Duluth Community Survey asked residents to rank key or priority issues that they think should be addressed. One option was “development that has minimal impact on the environment,” which conveys the same values of the Gary/New Duluth Natural Environments Recommendation (A) “Minimize adverse impacts on the natural environment through leadership and policy, and address impacts of past practices where feasible.” Nearly 30% of respondents said that “development that has minimal impact on the environment” was a high priority, and an additional 40% said that it was a medium priority; only 10% said that it was not a priority.

If these preservation actions are paired with educational or recreational programming, the beginnings of long-term environmental stewardship are more likely to occur. The Gary/New Duluth SAP Natural Environment recommendations (B) “Motivate individuals, businesses, and community organizations to protect the environment; and provide opportunities for the community and visitors to practice environmental stewardship, and enjoy Gary-New Duluth’s natural features,” and (D) “Encourage individuals, businesses and community organizations to work with the St. Louis Rive Alliance to protect, restore and enhance the health of the St. Louis Rive through public awareness and community action,” promote programming that would both preserve the environment and bring the community together to promote social bonding.

Neighborhoods with more natural features, especially those with green, public common areas, can encourage social bonding between neighbors and improve the social cohesion of the community (Coley et al, 1997). Therefore, encouraging natural settings in the community, through the development of the GND Community Center and Recreation Area and the SAP Natural Environment Recommendations, could increase the connection of residents through natural spaces and promote social cohesion.

Existing Conditions Question: What is the current urban forest canopy in commercial corridors and around public amenities?

Trees provide myriad social, environmental, and economic benefits, many of which are difficult to quantify through standard measures. In urban areas, the urban tree canopy (i.e., the layer of leaves, branches, and stems of trees that cover the ground when viewed from above) provides stormwater management, reduces the urban heat island effect, reduces heating/cooling costs, lowers air temperatures, reduces air pollution, increases property values, provides wildlife habitat, and provides aesthetic and community benefits such as improved quality of life (Center, 2008).

Gary/New Duluth residential areas contain and are surrounded by a lot of greenery, but there are very few public boulevard trees, especially on the Commonwealth Commercial corridor. A number of models, both

quantitative and qualitative, have shown that commercial corridors experience increased levels of economic activity when the level of tree canopy increases, as well as increases in property values and neighborhood aesthetics (Dwyer 1992, Sander 2010). In commercial and industrial areas, trees screen unattractive views and soften the harsh outline of masonry, metal, asphalt, steel and glass. People walk and jog more on shady streets, which encourage interaction with neighbors and improve the sense of community (Godbey, 2009).

Impact Question: Will SAP Natural Environment Recommendations promote increased tree canopy and street greening policies and programs?

The Gary/New Duluth SAP Natural Environment Recommendations do not specifically address tree canopy or greening policies. Duluth has been involved in the Tree City USA program for 24 years, according to the National Arbor Day Foundation website (Arbor Day Foundation, 2014). The City celebrates Arbor Day every spring. In 2012, the City held a press event, released new “Tree City USA” signs for the community, and planted over 300 trees in one neighborhood alone (City of Duluth, 2013). One of the programs Duluth has to promote the urban tree canopy was started in 2010 called “Re-Leaf Duluth” (Badhwa, 2013). In 2012, 1,631 trees were planted through Re-Leaf Duluth program, many going to replace trees that had been lost in the devastating June flood of 2012 (City of Duluth, 2013). Additionally, the City has a Tree Commission and a Tree Inventory program run by a Minnesota Green Corps staff.

The City regulates private tree planting using the Duluth Unified Development Chapter of the City of Duluth Legislative Code (UDC) and attempts to plant and maintain trees in City boulevards to the extent it is able, but there is no current policy for city boulevard tree planting (Judy Gibbs, personal communication, February 24, 2014). As trees age and die and are removed from the landscape, the City attempts to replace as time and money and staffing allows. The City generally follows its own rules on city property; for example, in the 7 bridges road flood replacement, they City is going to be removing some large trees and will plant new trees in accordance with the rules for private property owners in the UDC (Judy Gibbs, personal communication, February 24, 2014).

Overall, the City has a strong commitment to tree planting and increasing the urban tree canopy to promote economic, environmental and social benefits. See the box below for evaluation criteria for cities’ commitment to urban forests.

Evaluation Criteria for Cities' Commitment to Urban Forests

Cities that score highest on evaluations of urban forestry usually include the following components in their management of their urban forests.

- 1) Knowledge of their current forest. Includes both current and potential urban tree canopy levels.
- 2) A city's urban forest management activities reflect the commitment it has to its urban forest. Is there an urban forest management plan in place and does it include a stated goals for urban tree canopy?
- 3) Strong civic engagement is paramount for sustainable urban forests. Does the city collaborate with local groups and NGOs to provide trees for private property owners, education on tree care or actively engage the public in forestry projects?
- 4) Policies to improve city greening across multiple areas often promote and reinforce a city's commitment to its urban forest. Does the city actively work to include green infrastructure in public projects, restore natural areas, provide green jobs training, etc.?
- 5) Access to greenspace and parks are an important part of a community's connection with its urban forest. How many acres of greenspace per capita, % of city that is park or natural land, tree cover per capita?
- 6) The physical condition of the urban forest is important to consider when looking at a city's urban forest. How healthy is the urban forest? Are trees living more than 5 years, safe from pests and disease, etc.?

(Source: American Forests, 2013)

Transportation

This section will use research and analysis to describe how the Small Area Plan recommendations made for Transportation will affect social cohesion, physical activity, and access to healthy foods.

Existing Conditions Question: How does current pedestrian traffic (as mode of transportation or recreation) positively or negatively impact community cohesion?

The amount of pedestrian traffic or walking in a community offers opportunities for neighborly interaction. Rogers, et al. (2010) found that "levels of social capital are higher in more walkable neighborhoods." (VTPI) By extension, the rate of neighborhood social tie formation, community engagement, and overall satisfaction in life was "significantly inversely related to the degree to which residents of a neighborhood relied on their automobiles" (Freeman, 2001; Williamson, 2002). Residents of walkable, mixed-use neighborhoods have higher levels of social capital compared with those living in car-oriented suburbs (Leyden, 2003). Walkable neighborhood residents were more likely to know their neighbors, participate politically, trust others and be socially engaged, suggesting that policies and projects that support walking and public transit use, and increase land use mix, tend to increase community cohesion (Litman, 2012). Traffic speed, traffic volume, and road design also affected whether residents were likely to know or interact with their neighbors (Litman, 2012).

Pedestrian traffic in Gary/New Duluth is generated by residents walking to businesses on Commonwealth or recreational opportunities such as the Gary/New Duluth Community Center and Recreation Area; residents walking to work or to the bus to get to work or run errands; and students walking to school. Data is not available to describe whether and how much residents walk to businesses on Commonwealth Ave or to recreational

opportunities. However, one resident noted that there is a large number of people who walk to Bridgeman's in the summer to get ice cream and/or attend the outdoor movies and events, which has huge impact on social cohesion (Dan Hinnenkamp, personal communication, November 18, 2014). It was also observed that the neighborhood needs more places for people to stop/gather/congregate, such as sitting places outside coffee shop, or benches for resting – (similar to those provided and used at the Veteran's Memorial).

According to the 2012 American Community Survey 5-year Estimates, 1% of residents in Census Tract 38 (Gary/New Duluth and Fond du Lac) commute to work by walking, and 5% take public transit, which presumably involves walking to a local bus stop. See Figure 43 – *Commercial Development – Physical Activity*. Rates of walking in Gary/New Duluth are much lower than the City (5%), but public transit usage is about the same. This is likely a result of limited job opportunities in the neighborhood.

According to the 2006 Duluth Safe Routes to School (SRTS) Plan, conducted by the Metropolitan Interstate Council (MIC), 27% of students get to Stowe Elementary by walking, 36.5% by carpool, and 36.5% by bus. At that time, the percentage of 3rd – 5th graders within one-mile walking distance was 46.11% and 54% lived within a two-mile radius of school. Parents responding to a SRTS survey indicated that 57% of students use sidewalks in the winter and 69% of these respondents mentioned that sidewalks are not shoveled, are icy, and that kids are forced into the street. The SRTS study surveyors observed a number of safety issues, including: students walking in the street due to lack of sidewalks, poor lighting around the school and at school crossings, vehicle congestion in front loop, poor school crossing visibility, lack of tree trimming, and kids walking to school before crossing guards were out to assist them (MIC, 2006). The SRTS Plan identified a number of recommendations to improve walking conditions for Stowe Elementary, including the following:

- Concrete curb extensions into both parking lanes (narrowing the road from a six lane to a four lane)
- Implementing poly pre-form/Duratherm crossings at Stowe and Fillmore
- New LED Streetlights which are a bright white light rather than the yellow haze of regular street lights
- Flashing LED school crossing signs mounted to the base of the street lights (there would be a signal box on the corner or within the school so that the flashing crossing lights would be timed or activated for the am and pm peak crossing timeframes and special school events).
- Midblock crossing signs for Stowe and Fillmore Streets.

Since the 2006 study, curb bump-outs were installed at Commonwealth Ave and Stowe St, with school crossing signs. Figure 33 shows the bump-outs, which were installed on all four corners, bumping out onto Commonwealth Ave. Bump-outs and a mid-block crossing were also added at Fillmore St and Commonwealth Ave, shown in Figure 34.

FIGURE 33: SCHOOL CROSSING ENHANCEMENTS AT STOWE ST AND COMMONWEALTH AVE



FIGURE 34: SCHOOL CROSSING ENHANCEMENTS AT FILLMORE ST AND COMMONWEALTH AVE



It is unknown what impact the crossing improvements have had on the number of students who walk to school. MDH observed that sidewalks are still not cleared of snow during the winter and the existing sidewalk network in the surrounding residential areas still require students to walk in the street.

Impact Question: How will the GND SAP transportation recommendations affect pedestrian traffic?

Of particular importance for community cohesion is the security and attractiveness of walking conditions, including the quality of sidewalks and crosswalks, minimal motor vehicle traffic volumes and speeds, and amenities such as shade and shelter from rain, landscaping and the presence of other pedestrians. These factors can be improved through streetscaping (improving the function and aesthetics of streets), traffic calming (designing streets to reduce excessive traffic speeds and volumes), and security improvements (VTPI 2008; Litman, 2012).

SAP Motorized Transportation Recommendations to decrease traffic speeds (A), increase use of traffic calming treatments (B), and encourage streetscape features (C), and the Non-Motorized Transportation Recommendations to improve sidewalk conditions (A & B) will all improve the pedestrian environment to encourage more walking and development of community cohesion.

Existing Conditions Question: Does current bus service limit mobility of older adults (who rely on public transit to participate in community and civic life)?

High quality public transportation can support community cohesion directly by providing opportunities for people to interact, and indirectly by supporting more compact and pedestrian-oriented local development patterns (Litman, 2012). Conversely, automobile reliance is found to negatively impact socializing, reducing the probability of visiting friends and participating in sports and cultural activities, and increasing the probability of staying at home and watching TV (Litman, 2012).

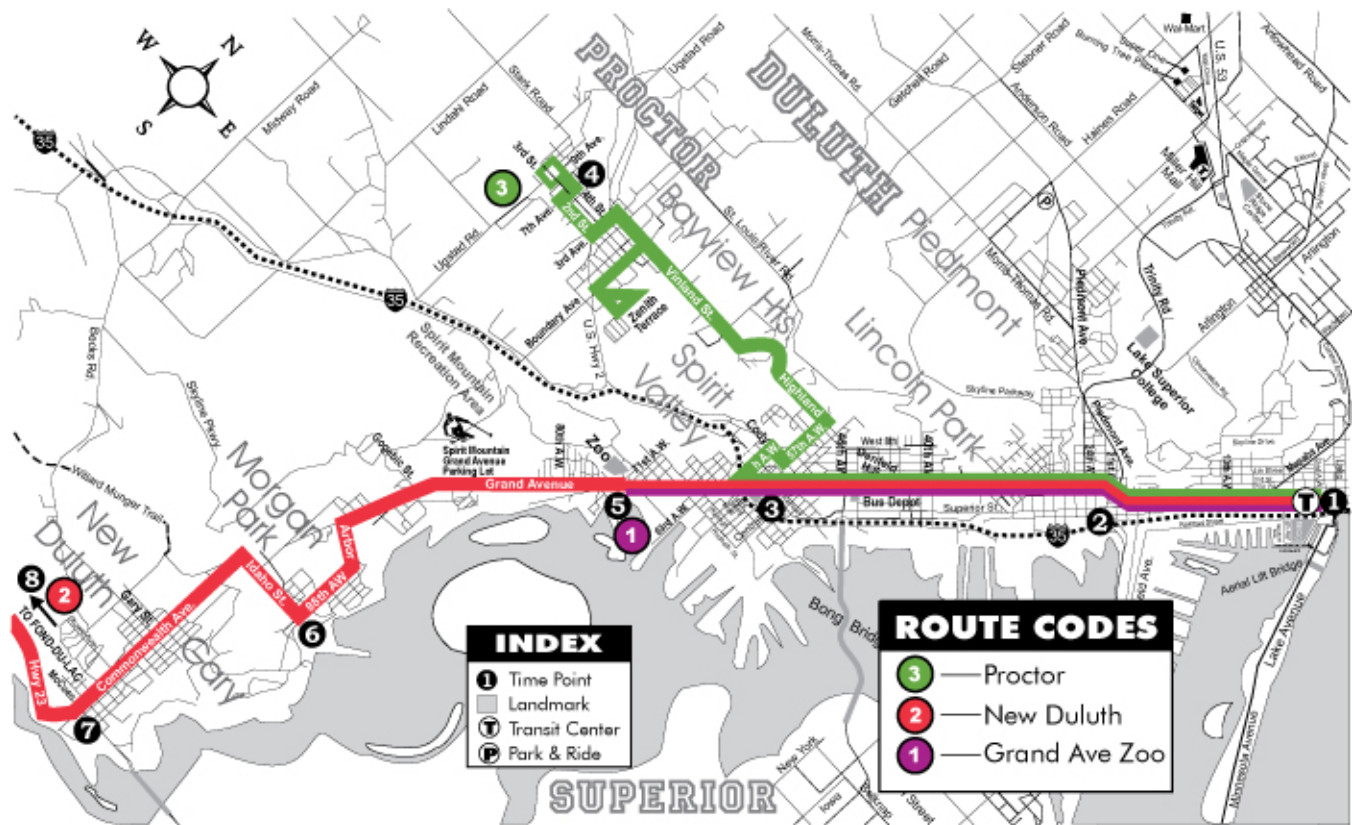
Adequate access to public transit enables elderly and disabled populations to participate in community and civic life. For the elderly and the disabled, limited access to public transit creates barriers to participation in community and civic life, potentially, leading to feelings of depression and alienation (STPP, 2004).

Heritage Apartments includes 60 units of one- and two-bedroom apartments for low-income seniors (source: section-8-housing.findthebest.com). Heritage Apartments is located at the intersection of Commonwealth Ave and Stowe St, the second highest usage stop, next to Commonwealth Ave and Gary St. See Figure 35 for Route 2 bus stops overlaying the number of residents in the census block that are 65 years and over.

In 2008, there was an average of 61 boardings and alightings per day. DTA Route 2 travels from Fond du Lac to downtown Duluth. See Figure 36 for a map of Route 2. As described in *Residential Development – Physical Activity*, bus service from Gary/New Duluth to Downtown starts at 4:30am and runs until after 10pm. Travel time to downtown is about 40 minutes. During peak travel times, service is as frequent as every 20 to 30 minutes. During off-peak times, service is every hour. A total of 27 buses run from Gary/New Duluth to Downtown on weekdays. A total of 16 buses run every hour from Gary/New Duluth to Downtown on Saturdays between the hours of 6:45am and 9:30pm. On Sundays, 13 buses run every hour starting at 7:55am from Gary/New Duluth to Downtown.

One location older adults may need to reach for social connections or access to healthy food is the Morgan Park Senior Program, located at 1242 88th Ave W in Morgan Park. In order to not drive, seniors would need to take the Route 2 bus up Commonwealth where it turns into Grand Ave, get off at Grand Ave and 88th Ave, and walk 1,270 meters to the site. After it is developed, the GND Community Center and Recreation Area will likely be a

FIGURE 36: BUS SERVICE TO GARY/NEW DULUTH, DULUTH TRANSIT AUTHORITY



Seniors are not the only population cannot or do not drive; youth under 16, disabled persons, people who cannot afford a vehicle or people who choose not to own a vehicle, may also be dependent on public transit and walking to get around and be social.

Impact Question: How will the GND SAP transportation recommendations affect older adult mobility and social participation?

Similar to the previous impact question, the SAP Motorized Transportation Recommendations to decrease traffic speeds (A), increase use of traffic calming treatments (B), and encourage streetscape features (C), and the Non-Motorized Transportation Recommendations to improve sidewalk conditions (A & B) will all improve the pedestrian environment to provide the opportunity for older adults to walk more and foster community cohesion.

The recommendations do not mention the concept of Complete Streets, but do have a similar intent. Complete Streets are streets that are designed to be safe and accessible for pedestrians, transit riders, bicyclists, and drivers—all users, regardless of age or ability (MN Complete Streets Coalition, 2014). Duluth City Council passed a Complete Streets resolution in March 2010 declaring its support for the concept and resulting benefits, but never officially adopted a Complete Streets policy or implementation plan. According to the Duluth Complete Streets Resolution, Complete Streets encourage physical activity, improve safety, promote positive interaction among users, and can attract businesses and enhance quality of life.

The Minnesota Department of Transportation (MnDOT) has an adopted Complete Streets policy and associated Technical Memorandum that provides further detail on implementation (MnDOT, 2014). This policy would affect any state road that goes through the community, including Commonwealth Ave (State Highway 23).

The Gary/New Duluth SAP does not have any recommendations to alter public transit provision in the community. As discussed in the *Residential Development – Physical Activity*, Gary/New Duluth does not have the density required to support additional transit services. Gary/New Duluth is well served by bus considering its residential density.

Park Planning

Existing Conditions Research Question: What current parks and recreation facilities or programs exist that enhance or deter social cohesion?

Urban parks promote “informal and cursory interactions [between a diversity of people that] can stimulate” social cohesion (Peters et al, 2010). Gary/New Duluth contains two urban parks (Gary/New Duluth Park and Birchwood Park), as well as the Boy Scout Landing boat launch. However, these parks are not functioning due to limited resources from the City. There have been no facilities at Birchwood Park since the playground was removed. The Gary/New Duluth Park has very minimal recreational facilities, including a skate park that is in disrepair, a baseball diamond that is not programmed, and the “shack” which is blighted and vacant. While the Gary/New Duluth Park is currently defunct, it has potential to be a great asset with City, community and private sector support.

Parks and organized recreation opportunities for youth can provide youth with positive, structured activities with adult supervision that encourage social skill development and relationship building (Jarrett et al, 2005). Having strong, positive relationships is critical for youth and may mitigate negative or “at risk” behavior, such as reducing adolescent pregnancy, delinquency, academic failure, dropping out of school and child maltreatment (Ferguson, 2006; Putnam, 2000).

The Gary/New Duluth Community Survey asked residents to rank their current ability to access public services from “Not Accessible” to “Easily Accessible.” Figure 37 contains the responses for senior centers, parks and trails, community centers, and ‘other’.

FIGURE 37: ACCESSIBILITY OF PUBLIC SERVICES (GND COMMUNITY SURVEY)

	Not Accessible	Rarely Accessible	Sometimes Accessible	Easily Accessible	Not applicable to me
Senior citizen centers	14	10	14	32	47
Parks and trails	1	14	15	78	7
Community centers	14	19	25	45	13
Other*	3	0	1	1	0

*Other responses for Not Accessible included: 1) Parks, no skating rink, no rec center; 2) Transportation costs; and 3) Trails like the snowmobile trail are very hard to get to from Gary.

Thirty-four percent of respondents said that senior centers were not accessible or rarely accessible, excluding those who said that they were not applicable. Only 14% of respondents said that parks and trails were not accessible or rarely accessible, excluding those who said that they were not applicable. However, 32% of respondents said that community centers were not accessible or rarely accessible, excluding those who said that they were not applicable.

Additionally, the GND Community Survey asked residents to rank the key priority issues that they thought should be addressed in Gary/New Duluth. Nearly one-quarter said that parks, trails, open space and recreation were high priorities, and 68% said that they were medium or high priority. See Figure 38. Nearly 40% of respondents indicated that a farmers’ market or community garden was a high priority, and an overwhelming 76% responded that they were medium or high priority. The largest response for high priority of all issues (including those not listed here) was for crime prevention; 68% of respondents indicated that crime prevention was a high priority for Gary/New Duluth. As discussed in this section, there are ways to use community activities and relationship building to mitigate crime through social cohesion.

FIGURE 38: PRIORITY ISSUES IN GARY/NEW DULUTH FROM COMMUNITY SURVEY

	Not a Priority	Low Priority	Medium Priority	High Priority
Parks, trails, open space and recreation	13	24	50	28
Farmers’ markets and community gardens	9	18	42	45
Crime prevention	4	10	22	75
Other*	0	0	0	4

*Three of the four “other” high priority responses included: More neighborhood involvement; More trails for snowmobile and ATV use would be nice in the Duluth area; and Recreation for children/young adults.

Impact Research Question: How will the proposed GND Community Center and Recreation area affect social cohesion?

The GND Community Center and Recreation Area may promote social cohesion by increasing residents’ sense of belonging or identity with the neighborhood, and through increasing activities where resident’ interact with each other and build social networks.

Parks and recreation amenities are distinctive physical features that can contribute to residents’ sense of a neighborhood’s identity, which contributes to a sense of belong and fosters social cohesion (Puddifoot, 1996). A stronger sense of identity was found in smaller communities with more of a working class population (Puddifoot, 1996). In Gary/New Duluth, a high-quality recreational resource could be an attractive, visible, identifying attribute, similar to the pride and identity the community feels for Stowe Elementary and the revitalized Veteran’s Memorial.

Additionally, identity may be promoted in the community through a proposed LED screen in the GND Community Center and Recreation Area concept that will boldly announce and welcome residents to participate in community events and school functions.

The GND Community Center and Recreation Area proposes a whole host of activities, classes, etc. that will bring residents together in both organized and unorganized formats. Some of the proposed uses for the Community Center include: children's activities (after school and during school breaks), exercise and yoga classes, educational opportunities (e.g., tutoring, GED, college prep, language classes, University for seniors, etc.), leadership / citizenship classes, job search, ice skating in the winter, gardening in the summer (personal and/or in partnership with Seeds for Success), ceramics, book club, art and cooking classes, bicycle safety and repair, movie night, farmers' market, senior activities (e.g., conversation, cards / cribbage, interaction with students, mentoring, etc.), Zoomobile, Animal Allies (pet care, pet training, adoption), Police K-9 training and demonstration, first aid classes, and more (Mark Boben, personal communication, 2/22/2014). Additionally, the Community Center could be rented out and use for birthday parties, baby showers or wedding receptions, family events, Boy Scouts or Girl Scouts meetings, etc.

The current community proposal for the GND Community Center and Recreation Area includes a Community Garden, located between the Sport Court and the Dog Park just off of 101st Ave W in the conceptual master plan. (See Figure 67 in *Park Planning – Physical Activity*.) Gardening in the Community Garden could be personal, assigned plots; or plots could be organized through Seeds for Success, which is a program of Community Action Duluth that helps unemployed Duluth residents “attain economic stability by providing them with transitional employment growing vegetables in vacant lots” (Seeds to Success, 2014). At the January 9, 2014 meeting on the GND Community Center and Recreation Area, the GND Development Alliance suggested that the community garden could be a great opportunity to use a formalized activity to encourage interaction between students from Stowe school and older adults from the Heritage Apartments.

Finally, the GND Community Center and Recreation Area could increase social cohesion in the neighborhood by increasing the number of people out utilizing the area, or even walking to and from the GND Community Center and Recreation Area, which may result in increased interaction among residents, even if it is just a nod ‘hello’.

PHYSICAL ACTIVITY

What is physical activity and why is it important to health?

Physical activity refers to any activity that encourages the movements of one's body. Physical activities include walking, bicycling, weight-lifting, skateboarding, stretching, or even working around the house or in the yard. The 1999 Surgeon General's report on physical activity found that "people of all ages can improve the quality of their lives through a lifelong practice of moderate physical activity" (Surgeon General, 1999). See the box below for the major conclusions from this seminal report. The Surgeon General recommends regular activity, preferably at least 30 to 45 minutes of activity daily. This will reduce the risk of developing coronary heart disease, hypertension, colon cancer, and diabetes. Even people who are already physically active will benefit from increasing the intensity or duration of their activity (Surgeon General, 1999).

Physical activity has numerous beneficial physiologic effects. Positive health effects of physical activity include: lower mortality rates; decreased risk of cardiovascular disease mortality in general and of coronary heart disease mortality in particular; decreased risk of colon cancer; lower risk of developing non-insulin-dependent diabetes mellitus; lower rates of obesity; relieve symptoms of depression and anxiety and improve mood; and improve health-related quality of life by enhancing psychological well-being and by improving physical functioning in persons compromised by poor health (Surgeon General, 1999). Weight-bearing exercise, specifically, is essential to achieve peak bone mass in youth and maintain bone density for adults, reducing risk of falls later in life (Surgeon General, 1999). Physical activity can also be beneficial for person with arthritis (Surgeon General, 1999).

People are more likely to be physically active if they are confident in their ability to engage in regular physical activity (e.g., self-efficacy), if they enjoy physical activity, if they have support from others, if they believe physical activity has positive health benefits, and if they have low perceived barriers to being physically active (Surgeon General, 1999). Childhood and adolescence may be pivotal times for preventing sedentary behavior among adults by maintaining the habit of physical activity throughout the school years (Surgeon General, 1999).

Promoting physical activity to reduce preventable chronic disease and reduce mortality rates could have a large impact on the economy. The medical and health care costs attributed to cardiovascular disease, stroke, diabetes and obesity in the U.S. amount to hundreds of billions annually (CDC, 2013). However, the Trust for America's Health estimates that "an investment of \$10 per person per year in proven community-based programs to increase physical activity, improve nutrition, and prevent smoking and other tobacco use could save the country more than \$16 billion annually within five years—a return of \$5.60 for every \$1 spent" (TFAH, 2009). These are conservative estimates that represent medical cost savings only and do not include the significant gains that could be achieved in worker productivity and enhanced quality of life. In Minnesota specifically, the potential annual net savings of an investment of \$10 per person per year in "strategic disease prevention programs" would be \$316 million within 5 years and have a return on investment of \$6.20 for every \$1 spent (TFAH, 2009).

1999 Surgeon General Report on Physical Activity: Major Conclusions

1. People of all ages, both male and female, benefit from regular physical activity.
2. Significant health benefits can be obtained by including a moderate amount of physical activity (e.g., 30 minutes of brisk walking or raking leaves, 15 minutes of running, or 45 minutes of playing volleyball) on most, if not all, days of the week. Through a modest increase in daily activity, most Americans can improve their health and quality of life.
3. Additional health benefits can be gained through greater amounts of physical activity. People who can maintain a regular regimen of activity that is of longer duration or of more vigorous intensity are likely to derive greater benefit.
4. Physical activity reduces the risk of premature mortality in general, and of coronary heart disease, hypertension, colon cancer, and diabetes mellitus in particular. Physical activity also improves mental health and is important for the health of muscles, bones, and joints.
5. More than 60 percent of American adults are not regularly physically active. In fact, 25 percent of all adults are not active at all.
6. Nearly half of American youths 12–21 years of age are not vigorously active on a regular basis. Moreover, physical activity declines dramatically during adolescence.
7. Daily enrollment in physical education classes has declined among high school students from 42 percent in 1991 to 25 percent in 1995.
8. Research on understanding and promoting physical activity is at an early stage, but some interventions to promote physical activity through schools, worksites, and health care settings have been evaluated and found to be successful.

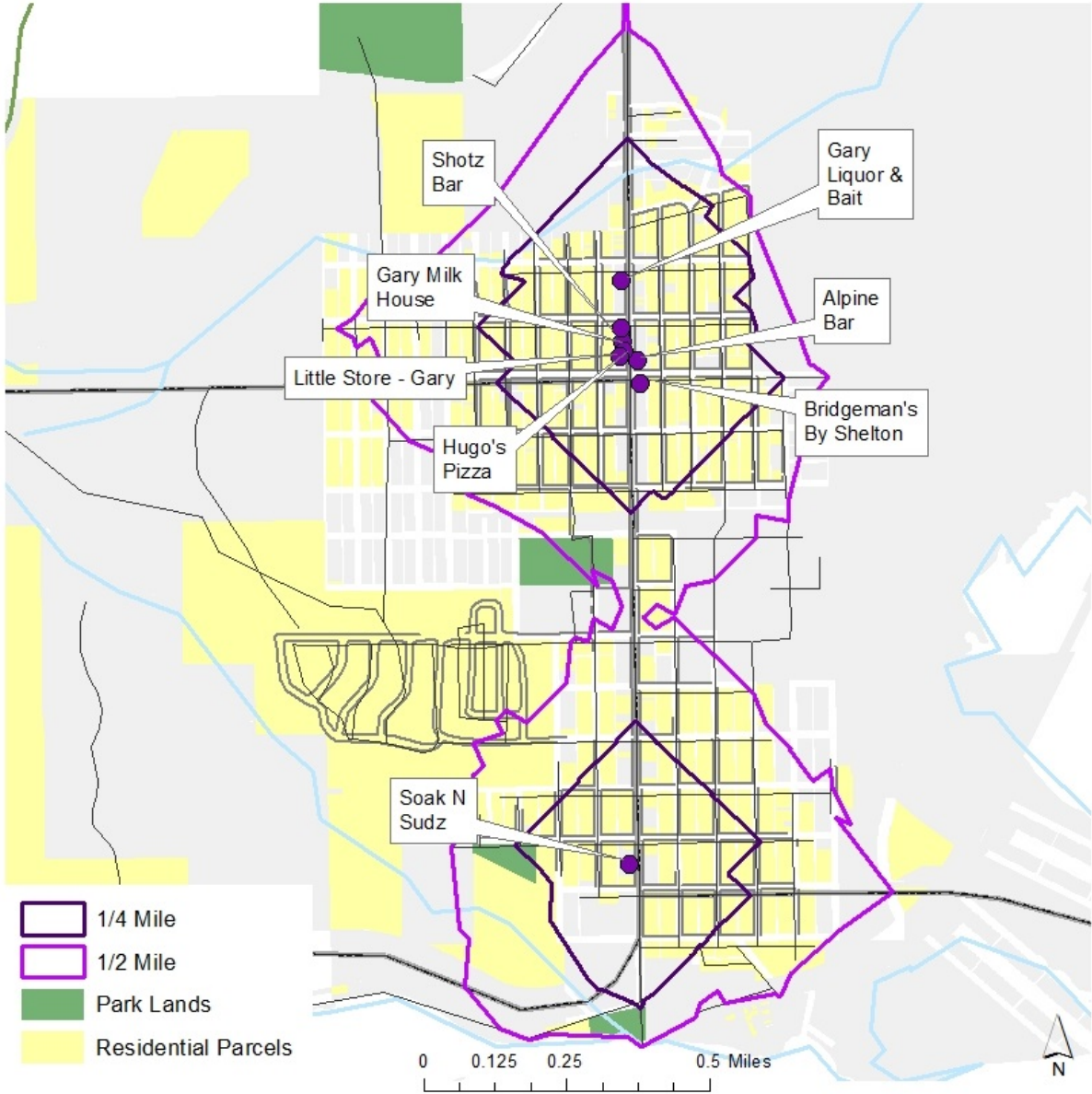
New Development Opportunities – Commercial Development

Existing Conditions Question: What percent of residents live within walking distance (¼ to ½ mile) of neighborhood-serving commercial retail and services?

Neighborhood-serving commercial retail and services are businesses that are frequented by local residents. These businesses include markets, grocery stores, liquor stores, hair salons and barber shops, coffee shops, restaurants, banks, laundromats, small medical or dental services, tailors or shoe repair shops, pharmacies, and retail. Reviews of past and current literature support the connection between walking for transportation and density, distance to non-residential destinations, and land use mix (Saelens and Handy, 2008; Greenwald and Boarnet, 2001). Having a density of non-residential destinations within a short walking distance of residential neighborhoods increases the likelihood of walking for transportation.

Most commercial activity serving the neighborhood is located in Gary, between Gary St and Reis St. This segment of Commonwealth includes the Alpine Bar, Gary Liquor and Bait, Shotz Bar, Gary Milk House, Hugo’s Pizza, the Little Store, and Bridgeman’s by Shelton. The only neighborhood serving commercial in New Duluth is the Soak N Suds laundromat. See Figure 39.

FIGURE 39: RESIDENTS WITHIN WALKING DISTANCE TO NEIGHBORHOOD SERVING COMMERCIAL



In addition to identifying the locations of commercial activity serving the neighborhood, the assessment calculated how many households and people are located within ¼ and ½ mile of the retail and services. MDH calculated that 636 of Gary/New Duluth’s 1,432 households are within ¼ mile of at least one neighborhood serving commercial location. In terms of population served, 1,001 people were found within ¼ mile of

neighborhood serving retail. Selecting for those older than 9 years, there were 869 people 10 or older within ¼ mile of neighborhood serving retail.

Some residents may be willing to walk as much as ½ mile or more to neighborhood serving commercial. MDH calculated that 1,230 of Gary/New Duluth's 1,432 households (or 1,709 people) were within ½ mile of at least one neighborhood serving commercial location. Selecting for those older than 9 years, there were 1,492 people 10 or older within ½ mile of neighborhood serving retail.

As previously mentioned, there are a number of sites along the Commonwealth commercial corridor that are vacant or blighted that could be renovated or developed to accommodate new businesses and services within walking distance of the majority of Gary/New Duluth residents. The primary limitation to new businesses providing goods and services is local consumer demand. A central component of Central Place Theory describes that frequently used and cheap services are offered in numerous small centers located close to consumers, while those less frequently used are located in cities that are larger, but also more distant (CPT, 2014). The placement of services is controlled by market demand and competition with the nearest center or peripheral settlement. If this theory is playing out in Gary/New Duluth, the area will need to attract more visitors or residents to support additional businesses.

Impact Question: Do the Gary/New Duluth SAP new development recommendations increase the amount of goods and services within walking distance and thereby increase accessibility and physical activity?

To understand whether the Gary/New Duluth SAP Commercial Development recommendations will impact physical activity, first one must consider whether there will be new commercial development that residents would want to walk to, and second one must consider if the new commercial development will be located in places that will increase walking or other forms of active transportation. The SAP does not make recommendations for specific types or locations of new businesses, so it is unknown what the effect of the SAP on walkable neighborhood serving commercial will be.

However, a number of the SAP recommendations could encourage new businesses within the neighborhood. For example, Recommendation B "Establish a working relationship with economic development groups such as Duluth Economic Development Authority (DEDA) to recruit business and industry to the area," could actively recruit new businesses, but they may not be goods and services that residents would walk to. Recommendation A to establish a business association and/or business improvement district could encourage a business environment that would draw new businesses (Mittiga, 2004). Recommendations D and G to revitalize blighted properties and encouraging consistent building design, which could be supported by the business improvement district (Recommendation A), also has the potential to create a more attractive atmosphere for new commercial enterprises (Mittiga, 2004).

If new business development occurred on Commonwealth in New Duluth instead of or in addition to Gary it could have a more dramatic increase in physical activity in New Duluth because residents of New Duluth often drive to Gary to access commercial and retail services. Residents are less likely to walk to the one existing neighborhood serving retail in New Duluth – the Soak N Suds laundromat – because it is difficult to carry large baskets of clothing even ¼ mile.

The Bay West evaluation of blighted and vacant properties in Gary/New Duluth highlighted nine commercial locations along the Commonwealth Commercial corridor in Gary and nine along the Commonwealth Commercial corridor in New Duluth that were considered Brownfields or blighted properties. If this analysis is any indication of where new businesses might be located, there is ample potential for new neighborhood-serving retail and services in both Gary and New Duluth.

Existing Conditions Question: How does the form of commercial development affect walking?

The main components of the built environment that affect walking and physical activity include: density and intensity of development; mix of land uses; connectivity of the street network; scale of streets; and aesthetic qualities of a place (Handy et al, 2002). Gary/New Duluth developed during a time of traditional neighborhood design, where on-street parking was more popular than more auto-oriented design that provides large parking lots facing commercial streets. This is a large benefit to the community from a walkability standpoint because the community does not have to convert the orientation of their buildings or overcome large parking lots that could inhibit customers on foot or bicycle.

Commonwealth Avenue is the commercial corridor of Gary/New Duluth that provides a mix of land uses for the surrounding residential area and a concentration of commercial activity. The street connectivity, measured by block size or density of intersections, is supportive of pedestrian activity on the two blocks of Commonwealth with the most commercial activity (between Gary Liquor and Bait and the Little Store).

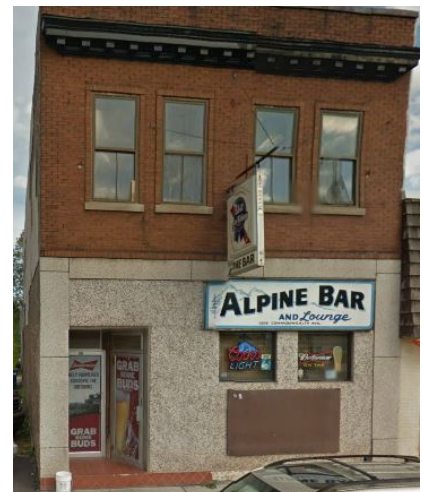
The scale of the street can be measured by the ratio between building heights and street widths, or the average building “setback,” the distance from the street to the building” (Handy et al, 2002). The width of Commonwealth Ave is wider than a traditional main street walking environment, but the building heights are human-scale and inviting. There is no setback, which is traditional for a community main street that developed in the early 1900s as Commonwealth did. Shotz bar, Alpine bar and Hugo’s Pizza come right up to the edge of the sidewalk. There are a number of boarded up buildings and closed businesses that similarly abut the sidewalk.

Five of the neighborhood serving commercial businesses have their building entrances off of parking lots, or set back behind automotive uses, including: the Milk House, Bridgeman’s, Gary Liquor and Bait, the Little Store, and Soak N Sudz (which appears to have been a drive-in based on its covered parking structure). The Milk House and Little Store entrances are set back behind or to the side of gas pumps. While this is understandable as a primary service of their business is the gas station, this does provide some safety and comfort concerns for pedestrians and bicyclists. Bridgeman’s has a large parking lot adjacent to the building, but this space is often utilized to host community events including festivals and outdoor movies. The entrance for Gary Liquor and Bait is located off of a side parking lot, not facing the street. However, both Bridgeman’s and Gary Liquors and Bait have walk-ups that

FIGURE 40: HUGO'S PIZZA



FIGURE 41: ALPINE BAR AND LOUNGE



are connected to the main sidewalk on Commonwealth so that pedestrians can avoid walking through the parking lot.

Aesthetic qualities that encourage physical activity include the design of buildings, including the size and orientation of windows, the location of the door relative to the street, decoration, and ornamentation; landscaping, particularly trees and the shade they provide; and the availability of public amenities such as benches and lighting (Handy et al, 2002). Hugo's and Shotz bar both have street level windows and doors that front the street. The windows can be difficult to see into due to dark interiors, and Shotz's window is fairly small for a street level window. Bridgeman's, the Milk House and the Little Store each have at least one window at street level, though it is set-back from the street. The main door of the Alpine Bar and Lounge faces the street and the building has windows at street level, but they are covered and you cannot see into the bar.



FIGURE 42: GARY MILK HOUSE

The streetscape of Commonwealth, including landscaping, street trees, and seating, is limited. The Gary/New Duluth community overall is highly vegetated, but there are no street trees on the sidewalk in the densest two blocks of commercial activity on Commonwealth. Nor is there any landscaping around businesses. Outdoor patio or sidewalk seating can be a big draw for pedestrians and bicyclists in fair weather. Bridgeman's provides outdoor seating (benches under a tent) for its customers during the summer as well as additional tents and seating during community events that it hosts. Otherwise, there are no businesses with outdoor seating. The only public seating on the entire corridor is at the bus stop shelters and the Veteran's Memorial.

Impact Question: Does the Gary/New Duluth SAP make recommendations to built-form and design elements that encourage active living and interactions between residents?

Recommendation G of the Commercial Development recommendations is "Encourage building designs and storefronts to be consistent with the existing building character of the commercial corridor along Commonwealth Avenue." The existing building character is in line with built-form and design elements that encourage active living, so this is a great start. However, more can always be done. The Commercial Development recommendations to revitalize blighted properties and for local businesses to develop an association can also positively contribute to improved built-form and design of the commercial retail and services in Gary/New Duluth. Some communities develop and adopt urban design guidelines, which can specify building heights; aesthetic characteristics, including construction materials and decorative features; landscaping; and placement of doors and window sizes. Any streetscape improvements will contribute to a better walking environment and enhance the aesthetic and functional appeal of the Commonwealth commercial corridor, and therefore may increase physical activity.

Existing Conditions Question: Does Gary/New Duluth currently have commercial businesses that encourage or discourage physical activity?

Businesses that encourage physical activity could include private or public gyms, outdoor activity enterprises, and recreational outfitters. The closest gyms include an Anytime Fitness and Apex JiuJitsu in West Duluth, a YMCA and Superior Kettlebell Gym in downtown Duluth, another Anytime Fitness northeast of downtown, and a Snap Fitness northwest of downtown. Other businesses that could encourage physical activity include the University of Minnesota- Duluth Recreational Sports Outdoor Program, Superior Zoo, Spirit Mountain Ski area, and recreation outfitters, such as Damage Boardshop, Play It Again Sports, and others. In an area surrounded by skiing, biking and walking trails, it could make sense for Gary/New Duluth to have businesses that cater to those activities, which could draw more visitors to the area.

Businesses that discourage physical activity could include anything that promotes a sedentary lifestyle, such as a movie theater, or an operation that discourages people wanting to be active outside near the business, which could include undesirable businesses, such as adult stores, or locally unwanted land uses, such as heavy industrial or a large parking facility. Earlier sections have described how the built environment in Gary/New Duluth may encourage or discourage walking and biking to access goods and services in the community. The community has a couple bars and a gun emporium, but no other businesses that might discourage physical activity. Nearby commercial operations, such as the landfill, or the US Steel Superfund site, are locally unwanted land uses. It is unknown how these sites may or may not affect physical activity.

Impact Question: Does the GND SAP make recommendations for commercial businesses that would increase (or decrease) physical activity?

The Gary/New Duluth SAP Commercial Development recommendations do not include any language that would specifically recommend a gym or other commercial enterprise that encourages physical activity. However, the HIA TAC and SAP Steering Committee have discussed the sensibility of an equipment rental shop for the community to build upon the natural resources and recreational assets surrounding Gary/New Duluth. The Gary/New Duluth SAP Park Planning recommendations to support redevelopment of the Gary/New Duluth Community Center and Recreation Area are promoting a non-profit business that would increase physical activity.

Existing Conditions Question: What percent of residents commute less than 1 mile or less than 5 miles to work? What percent of residents drive alone to work? Bike? Walk? Take transit?

Nationally, more than 60% of trips less than 1/2 miles in distance are made by walking (FHWA, 2010). However, nearly 70% of trips between 1/2 mile and 2 miles are made by vehicle, which are distances that can easily be walked or biked (FHWA, 2010). Approximately 35% of walking trips were less than or equal to 1/4 mile, 47% of walking trips were between 1/4 miles and 1 mile, and about 18% of walking trips were greater than 1 mile (Yang and Diez-Roux, 2012). The amount of walking varies by purpose; with the lowest probability of walking observed for work and the highest observed for recreation and pet-related activities (Yang and Diez-Roux, 2012).

Previous questions have discussed walking to goods and services. This section will review walking and active transportation to work. Figure 43 shows the mode of transportation to work for Census Tract 38 (Gary/New

Duluth and Fond du Lac residents). Approximately 1% of workers in the area walked work, none biked, and nearly 5% took public transportation, which likely involves some walking to and from bus stops.

FIGURE 43: MODE OF TRANSPORTATION TO WORK (2012 ACS 5-YEAR ESTIMATES)

	Workers 16 years and over	Car, truck, or van – drove alone	Car, truck, or van – carpooled	Public transportation	Walked	Bicycle	Taxicab, motorcycle, or other means	Worked from Home
Census Tract 38	1,487	85%	8%	5%	1%	0%	1%	1%
Duluth	41,863	75%	9%	5%	5%	1%	1%	4%
Minnesota	2,697,932	78%	9%	4%	3%	1%	1%	5%

Factors that could influence whether a worker would walk or bike to work, rather than drive, include: distance to work, vehicle ownership, type of employment, number of jobs, and income. Figure 44 shows travel time to work (a proxy for distance) for workers living in Census Tract 38 compared to Duluth and Minnesota. Most workers in the Gary/New Duluth area travel 15 to 29 minutes to work, and the average travel time was approximately 23 minutes. Only those workers traveling less than 15 minutes are likely to walk or bike to work, which is approximately 14% of workers. According to the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) data for Gary/New Duluth, less than six percent of residents worked within the 55808 zip code (US Census, 2011). Most workers are traveling to downtown Duluth or Superior, WI, distances that are too far to walk or bike (US Census, 2011).

FIGURE 44: TRAVEL TIME TO WORK (2012 ACS 5-YEAR ESTIMATES)

	Less than 15minutes	15 to 29 minutes	30 to 44 minutes	45 to 59 minutes	60 minutes or more	Mean travel time
Census Tract 38	14%	64%	12%	8%	2%	22.9 min
Duluth	47%	42%	7%	2%	3%	N/A
Minnesota	32%	38%	18%	6%	5%	22.7 min

Figure 45 shows the number of vehicles available by household for Census Tract 38, Duluth and Minnesota. Approximately 60% of households in the Gary/New Duluth area have access to 2 or more vehicles. These households are less likely to be dependent on public transit or active transportation, and would only walk or bike to work by choice. Households with one or no vehicles are more likely to take public transit or walk or bike to work because they are dependent on other modes of transportation. Only 4% of households have no vehicles.

FIGURE 45: NUMBER OF VEHICLES AVAILABLE PER HOUSEHOLD (2012 ACS 5-YEAR ESTIMATES)

	Occupied Housing Units	No Vehicles	1 Vehicle	2 or more vehicles
Census Tract 38	1,274	52 (4.1%)	450 (35.3%)	772 (60.6%)
Duluth	35,862	4,443 (12.4%)	13,017 (36.3%)	18,402 (51.3%)
Minnesota	2,101,875	148,725 (7.1%)	635,976 (30.3%)	1,317,174 (62.7%)

Figure 46 shows the mode of transportation to work by income for Census Tract 38. This data does not include walking or biking, but does include public transit as a mode of transportation. Over 60% of workers who used public transit to travel to work earned less than \$10,000 per year, or approximately 40 people. Nearly 37% of those who carpooled earned less than \$15,000 per year. Surprisingly, nearly 30% of those who carpooled earned between \$65,000 and \$75,000.

FIGURE 46: MODE OF TRANSPORTATION TO WORK BY INCOME (CENSUS TRACT 38; 2012 ACS 5-YEAR ESTIMATES)

	Workers 16 years and over	Car, truck, or van – drove alone	Car, truck, or van – carpooled	Public transportation
All Workers (est.)	1,487	1,261	123	68
Workers earning <\$10,000/year	15%	12%	20%	60%
\$10k to \$14,999	10%	9%	17%	0%
\$15k to \$24,999	13%	15%	5%	13%
\$25k to \$34,999	21%	24%	12%	0%
\$35k to \$49,999	16%	17%	0%	16%
\$50k to \$64,999	11%	12%	9%	0%
\$65k to \$74,999	8%	6%	29%	10%
\$75k or more	6%	7%	8%	0%
Total	100%	100%	100%	100%

Very few residents of Gary/New Duluth work in the community and have the ability to walk or bike to work if they so choose. The majority of households own at least one vehicle, and only 6% of the population walks or takes public transit to work. The opportunities for Gary/New Duluth residents to use active forms of transportation are very limited.

Impact Question: Will the Gary/New Duluth SAP new development recommendations increase the number of jobs within walking or biking distance?

The Commercial Development recommendations to recruit business and industry to the area (B), compile land inventory (C), and revitalize blighted properties (D) are designed with the hope that they will lead to the establishment of new businesses in Gary/New Duluth. Each new business will be an opportunity for new jobs, but the jobs are not guaranteed to go to local residents. In fact, depending on the job qualifications, local residents may or may not be a good fit for new job opportunities. See discussion from the *Commercial Development – Social Cohesion* section.

Small businesses play an important role in job creation, but larger firms may have a larger positive effect on employment over time (Dilger, 2013). Retail and food service jobs often provide lower salaries but may require minimal education or skills training (BLS, 2012B). Light industry or manufacturing (such as Ikonics or ME Global), which could be located on vacant industrial property adjacent to Gary/New Duluth, often offer higher paid jobs, but can require more skills training and education. The number of jobs, type of employment and compensation will all depend on the businesses that can be recruited to the area, which are unknown at this time. There are no recommendations in the SAP for specific industry recruitment. Therefore, it is not possible to quantify the number of jobs that could be created in Gary/New Duluth that residents could walk to, but it is realistic to say that any new jobs in the community would likely be walkable if they went to local residents.

Existing Conditions Question: Do current crime levels discourage walking and biking to retail and services in the neighborhood?

Studies indicate that higher levels of perceived neighborhood safety were associated with lower levels of physical inactivity (Weinstein et al, 1999). Certain populations may be more sensitive to crime, including women and older adults (Weinstein et al, 1999; Foster and Giles-Corti, 2008; Yabes, 1997); however, surveys rarely include children, so it is not possible to characterize how crime affects physical activity for those under 18.

How might real and perceived crime and safety concerns affect active transportation in Gary/New Duluth?

Figure 23 from the *Commercial Development – Social Cohesion* section described crimes and crime rates in Gary/New Duluth. Theft/larceny, burglary, and motor vehicle theft rates are higher in Gary/New Duluth than in the state on average, but fairly similar to Duluth. Also as mentioned in the section on *Commercial Development – Social Cohesion*, blighted, underutilized and vacant properties, burned out buildings, vandalism, and litter are associated with higher crime levels and fear among residents (Hollander, 2009; Skogan, 1990).

Due to crime levels and number of blighted properties and vacant lots in Gary/New Duluth, real and perceived neighborhood safety may be a concern for adults walking or bicycling in the area.

Impact Question: How will the Gary/New Duluth SAP new development opportunities recommendations affect crime levels? Specifically consider SAP recommendations for enhancement of the appearance of the area.

The discussion from the *Commercial Development – Social Cohesion* section on Commercial Development recommendations and crime applies here. If implemented with appropriate lighting and streetscape improvements, such as those described in SAP Motorized Transportation Recommendation D, the Commercial Development Recommendations to remove blight (D) and recruit new business activity (B) are likely to reduce or displace crime (Schumacher and Leitner, 1999). One study found that “burglaries and thefts in a Philadelphia precinct dropped 90%, after police helped neighborhood volunteers clean up vacant lots and plant gardens, falling from 40 crimes each month before the cleanup to an average of only four per month afterward” (TPL, 1994). If crime is reduced or the residents perceive their community as safer, they will have one less barrier to walking and bicycling in the area. Also see the *Transportation – Physical Activity* section for more discussion on crime and physical activity.

New Development Opportunities – Residential Development

Existing Conditions Question: Do households in Gary/New Duluth have access to parks and recreation opportunities?

Park proximity is associated with higher levels of park use and physical activity among a variety of populations, particularly youth (Kaczynski, 2007; Brownson, 2001). Children who live in close proximity to parks, playgrounds, and recreational facilities tend to be more active compared to children who do not live near those facilities (Bauman, 2007). A study of 3,000 youth ages 5 to 20 found that youth who had recreation or open space facilities close to home were two to three times more likely to take a walk over a two-day period than were youth who had no parks nearby (Frank, 2007). The distance people are willing to walk to a park varies. Parents with toddlers or small children are more likely to walk shorter distances, up to ¼ mile (Wolch et al, 2002). However, ½ mile is considered a reasonable walking distance for most people (TPL, 2011).

According to a study by Kaczynski et al. (2008) the most important predictor of physical activity in parks is the number of features the park had, such as trails, open space, wooded areas, playground, ball diamond, soccer field, etc. The presence of trails was the most significant predictor of physical activity. Amenities, such as a drinking fountain, restroom, picnic area, trash can, shelter, etc., also supported park use for physical activity.

Similar to parks, trail use increases with proximity to residences (Lieber & Fesenmaier, 1985; Gobster, 1995; Furuseth & Altman, 1991; Moore & Graefe, 1994; Ottensmann & Lindsey, 2008). A study in Massachusetts found that the likelihood of adults using a suburban rail-trail decreased by 42% for every ¼ mile increase in distance from a home to the trail (Troped et al, 2001). In Minnesota, a Minneapolis study found a sharp decline in trail use among bicyclists who had to travel 1.5 miles or further to access a trail (Krizek, 2007).

Gary/New Duluth is surrounded by excellent regional recreation opportunities, including three trail access points to an extensive regional and state park lands and trails. Within the neighborhood itself, there are Boy Scout Landing and two community parks, the Gary/New Duluth Park and Birchwood Park. See Figures 47 and 48 for the location of and distance to recreational opportunities. Opportunities for physical activity at the recreational sites within the community are limited. The Gary/New Duluth Park has a baseball field, a soccer field, a skate park, and the “shack,” which has been closed for a number of years. The park is under programmed, underutilized, and in disrepair (cite [City’s Park Plan Need Assessment](#)). Birchwood Park used to have a playground but it was removed by the City because of maintenance and liability. Boy Scout Land is a public water access point for boating on the St. Louis River. According to comments from the [City’s Park Plan Need Assessment](#), Boy Scouts Landing is a fantastic fishing spot and the parking lot is heavily used. It is DNR land but maintained by the City and there are future plans for construction.

FIGURE 47: ACCESS TO RECREATION (PARKS AND TRAIL ACCESS POINTS)

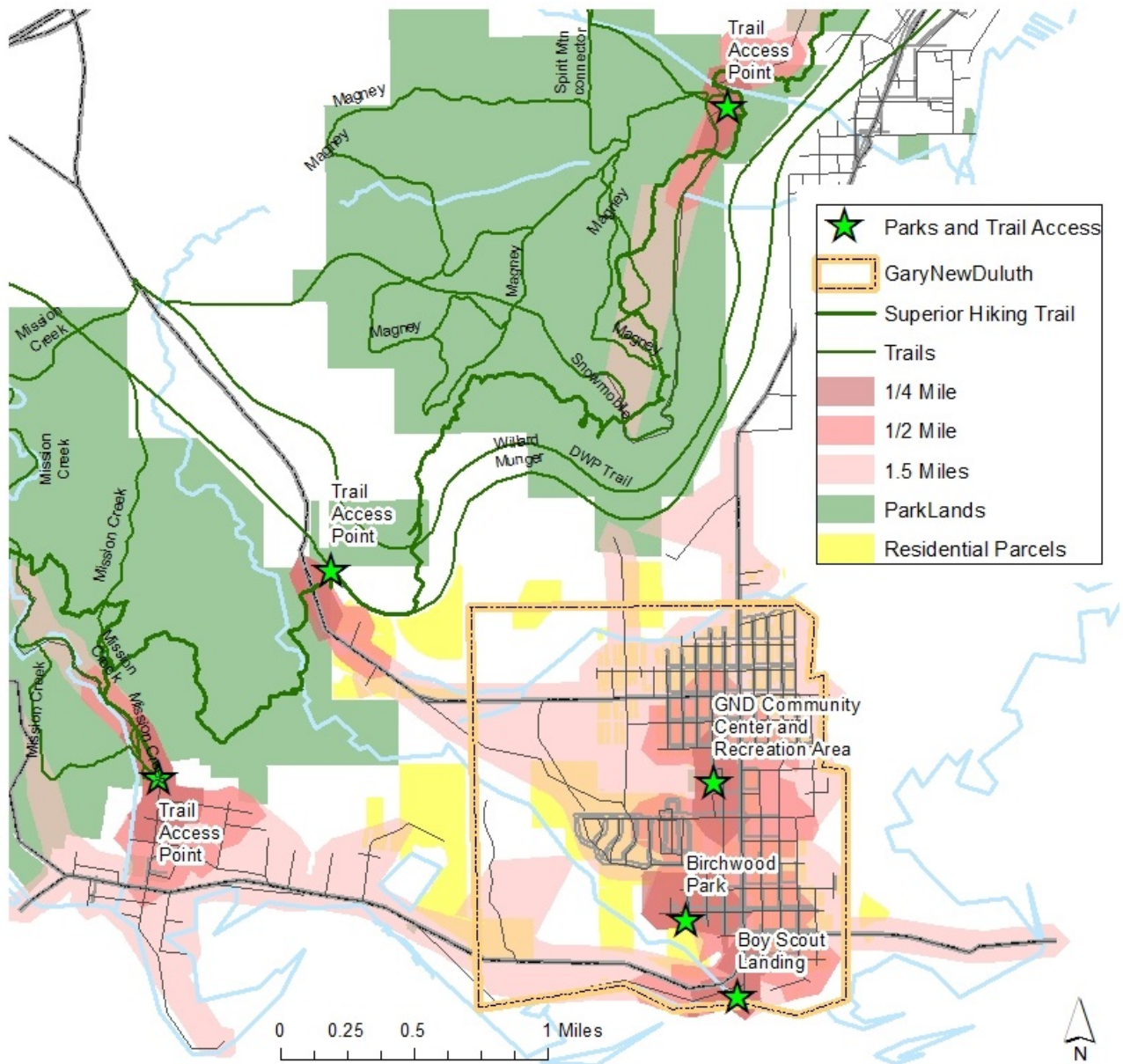


FIGURE 48: TRAVEL DISTANCE TO RECREATIONAL OPPORTUNITIES (PARKS AND TRAIL ACCESS)

	Total	Less than 5	Less than 10	Less than 18	65 and older
Within 1/4 mile of Park or Trail Access	201	10	26	51	16
Within 1/2 mile of Park or Trail Access	1,333	77	156	317	181
Within 1.5 miles of Park or Trail Access	2,689	163	329	601	376
Within GND neighborhood	2,705	163	329	605	377

Note: Population was calculated by selecting the Census Blocks that have their centroid within the distinct boundaries, including the ¼ mile service area, ½ mile service area, 1.5 mile service area and Gary/New Duluth study area.

The second most common feedback from the Gary/New Duluth community survey regarding residents’ favorite thing about Gary/New Duluth was access to parks, trails, nature and greenery (18 responses). However, when asked what they would most like to see change in Gary/New Duluth, the second most common response was more parks, trails, playgrounds and recreation opportunities, and the their most common response was more activities, especially for kids.

The 2010 Bridge to Health Survey included questions on physical activity, presence of trails near homes, and use of trails. Figure 49 provides a summary of the responses for the region and Duluth; responses were not available at a sub-city level. The responses indicate that trails are abundantly available to residents of Duluth: 93% of respondents indicated there were walking trails and 90% indicated that there were bike paths, shared use paths or bike lanes near their homes. However, less than half of the respondents indicated that they used the walking trails, bike paths, shared use paths or bike lanes.

FIGURE 49: PHYSICAL ACTIVITY AND PRESENCE AND USE OF TRAILS NEAR HOME (2010 BRIDGE TO HEALTH SURVEY)

	Moderate activity 5 or more days per week	Vigorous activity three or more days per week	Walking trails near home	Bike paths, shared use paths or bike lanes near home
Duluth	37% (27 - 47)	34% (22 - 45)	93% (89 - 97)	90% (85 - 94)
			<i>Use walking trails</i>	<i>Use bike, etc. paths</i>
			40% (30 - 50)	42% (29 - 54)
Region	43% (40 - 46)	30% (27 - 34)	73% (70 - 76)	64% (61 - 67)
			<i>Use walking trails</i>	<i>Use bike, etc. paths</i>
			47% (43 - 51)	36% (31 - 41)

The Bridge to Health Survey indicated that the primary barrier for Duluth respondents to using trails and bike lanes was safety issues not having to do with traffic (12%), followed by traffic problems (7%), and finally not having sidewalks (4%).

Having opportunities for physical activity and recreation within walking or biking distance is important for children, older adults and persons who do not have access to a vehicle. There are 499 residents under the age of 15 and 377 residents that are 65 or older who cannot drive or prefer not to drive. Approximately 4% of households in the community do not have a vehicle, and 35% have only one vehicle in the household. (See Figure 45, *Commercial Development – Physical Activity* section.) If opportunities for recreation are not within walking or biking distance, this severely limits options for physical activity. For example, there is one YMCA in Duluth. It is located downtown at 302 W First Street, 10 miles from Gary/New Duluth. There is also a YMCA in Superior, approximately 11 miles from Gary/New Duluth.

Another option would be to take the bus to recreational opportunities. Gary/New Duluth is served by the bus route #2 that runs from Downtown Duluth to Fond du Lac. On weekdays, bus service from Gary/New Duluth to Downtown starts at 4:30am and runs until after 10pm. Travel time to downtown is about 40 minutes. During peak travel times, service is as frequent as every 20 to 30 minutes. During off-peak times, service is every hour. A total of 27 buses run from Gary/New Duluth to Downtown on weekdays. A total of 16 buses run every hour

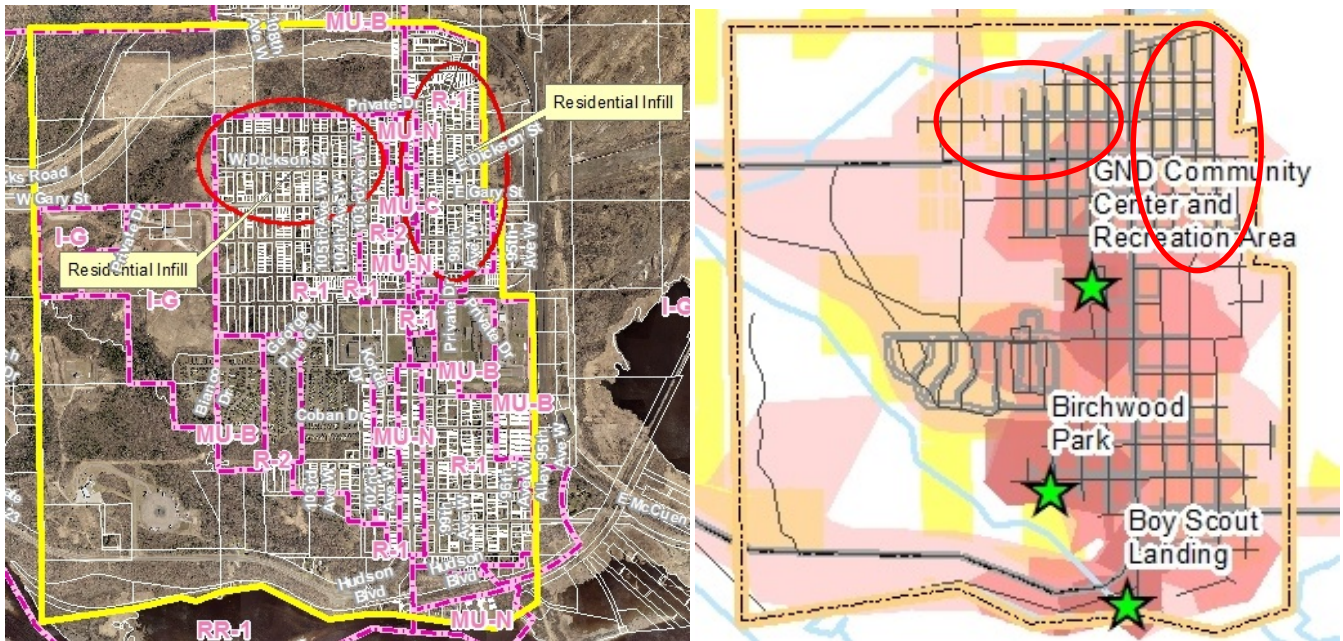
from Gary/New Duluth to Downtown on Saturdays between the hours of 6:45am and 9:30pm. On Sundays, 13 buses run every hour starting at 7:55am from Gary/New Duluth to Downtown.

Impact Question: Will new housing increase residents’ access to recreation opportunities?

The Residential Development Recommendation A. “Encourage residential infill on vacant lots within the developed portions of the neighborhood and available lands for housing within the study area,” has the potential to increase access to recreation opportunities if it either a) located new residential infill near existing trails or parks, b) develops new parks or recreation opportunities, or c) increases density to allow for increased transit service to existing recreational opportunities, such as the YMCA in Downtown Duluth.

The Gary/New Duluth SAP does not identify individual lots for infill, but rather residential areas of the community where residential infill efforts should be focused. The location of preferred residential infill is identified in Figure 50. Additionally, there are individual lots throughout the neighborhood that were not identified (John Kelley, personal communication, January 17, 2014). Comparing the locations of residential infill to the distance to recreation opportunities, highlights that residential infill will be outside of the ¼ mile walking distance to the Gary/New Duluth Community Center and Recreation Area, but between ½ mile and 1 mile walking distance.

FIGURE 50: GARY/NEW DULUTH RESIDENTIAL INFILL DESIGNATION AND ACCESS TO RECREATION



New recreational opportunities may be coming to the Gary/New Duluth community. The GND Development Alliance is spearheading a redesign of Gary/New Duluth Park, which will be called the Gary/New Duluth Community Center and Recreation Area. The redesign concept includes a full rehabilitation of the “shack” into a Community Center with a whole list of potential activities, and newly constructed active and leisure recreation facilities. See the *Park Planning – Physical Activity* section for more details. Boy Scout Landing has been updated with a newly paved parking lot; but there are no plans to improve Birchwood Park.

The density required to support transit services varies by location, activities, and research studies. Generally, residential density of 7 units per acre will support basic 30 minute bus service (Holtzclaw, 2007). For limited bus service, similar to what is provided in Gary/New Duluth, a minimum of 4 residential units per acre is required (Pushkarev and Zupan, 1982).

The Gary/New Duluth census blocks and study area are both the equivalent of 2 square miles, or 1280 acres. Gary/New Duluth's population is 2,705; which equates to approximately 1,353 persons per square mile. There are 1,220 households; which equates to approximately 1 residential unit per acre. Even if you cut out all the undeveloped land in the study area, the maximum density you would reach is two residential units per acre. Gary/New Duluth is well served by bus considering its residential density.

In summary, it is unlikely that new transit service will be provided to increase access to recreation opportunities; however, the planned concept for the Gary/New Duluth Community Center and Recreation Area will increase recreation opportunities for current residents and new residents within the ¼ and ½ walking distances.

Natural Environment

Existing Conditions Question: What natural environments in Gary/New Duluth provide recreation opportunity? Are they accessible by residents? (See Transportation Section)

Healthy and attractive outdoor environments that are safe to visit and utilize are consistently shown to increase basic levels of activity a small to moderate amount (Kaczynski and Henderson, 2007). Proximity to outdoor recreation opportunities is a critical variable for explaining physical activity levels. Creating and improving recreational spaces can increase the number of those who exercise at least three times per week by 25% (CDC 2001). In addition to parks, the closer people live to a bikeway, the more likely they are to use it (Troped et al. 2001).

Access to parkland and outdoor recreation spaces such as trails within walking distance of a child's home have also been shown to reduce the risk of overweight and obesity. Another study found that having at least one recreation or open space setting within one kilometer of youths' homes was consistently related to walking at least once in a two-day period and walking greater than a half-mile each day (Frank et al., 2005).

Individuals who live closer to parks may also use them more and increase the amount of time they spend being physically active. People prefer to spend time outdoors in green rather than barren areas because they are more aesthetically pleasing and people receive more positive benefits than artificial indoor environments.

Impact Question: Do the Gary/New Duluth SAP Natural Environment Recommendations provide new recreation opportunities?

The Gary/New Duluth Small Area Plan Natural Environment recommendations do not recommend any specific projects that would increase opportunities for physical activities. However, the SAP does recommend that opportunities are provided for the community and visitors to practice stewardship and enjoy Gary-New Duluth's natural features (B), which could include opportunities that are physical, such as park clean-ups or tree planting. Similarly, Recommendation D is "Encourage individuals, businesses and community organizations to work with the St. Louis River Alliance to protect, restore and enhance the health of the St. Louis Rive through public awareness and community action," which could include activities that are physical.

Additionally, these same recommendations to enhance and add natural areas could improve recreation and physical activity if they are connected to residents through sidewalks and trails for walking and biking. Scenic sites tend to attract a wider variety of users including the elderly and families with small children who are less likely to use active recreation features in the park like sports fields or basketball courts (Scott, 1997). Walking paths and other quiet recreation options are more compatible with natural areas and can be paired with stormwater features, natural landscaping, or wooded areas to provide ecosystems services to the area.

Transportation

Existing Conditions Question: Do Gary/New Duluth residents get recommended daily levels of physical activity? How many students walk to school? Stowe? Middle and High school?

The 2010 Bridge to Healthy Survey asked respondents how many days of moderate and vigorous activity they get each week. Duluth responses showed that 37% of respondents were moderately active five or more days per week and 34% of respondents were vigorously active three or more days per week. See Figure 51. Moderate activity may be lowest in the population 35 to 44 (24.7% (13.3-36.1%)) and population with less than high school degree (17.8% (3.4-32.3%)), but did not appear to be correlated with age, educational attainment, gender or poverty. Vigorous activity was higher in males (48.6% (31.3-65.8%)) than females (20.2% (10.8-29.5%)), and highest in the population age 18 to 34 (52.9% (31.2-74.6%)). It did not appear to be correlated to educational attainment or poverty status.

FIGURE 51: MODERATE AND VIGOROUS ACTIVITY (BRIDGE TO HEALTH, 2010)

	Moderate activity 5 or more days per week	Vigorous activity three or more days per week
Duluth	37% (27 - 47)	34% (22 - 45)
Region	43% (40 - 46)	30% (27 - 34)

Figure 52 shows the rates of overweight and obesity in Duluth and the Region. Obesity in Duluth was significantly lower than the Region, and may be higher in females (13%) than males (9%). Obesity was lowest in population 18 to 34 (2%) and may increase with age until 65 to 74 when it appears to decrease again. Obesity did not appear to be correlated with educational attainment or poverty in Duluth, but was correlated with poverty in Region: the population at 200% poverty or less had an obesity rate of 25% versus the population at more than 200% poverty which had an obesity rate of 15%.

FIGURE 52: OVERWEIGHT AND OBESITY (BRIDGE TO HEALTH, 2010)

	Overweight but not obese	Obese
Duluth	32% (24 - 40)	11% (8 - 14)
Region	34% (31 - 36)	18% (15 - 20)

Notes: Overweight and obesity were determined by calculating body mass index (BMI) using self-reported height and weight of survey respondent.

In addition to positive physical health benefits, physical activity has been shown to have positive mental health benefits as well, including relieving symptoms of depression and anxiety and improving mood (Surgeon General, 1999). Figure 53 shows the percent of Bridge to Health respondents who indicated they had anxiety or depression. Anxiety was slightly higher and depression slightly lower in Duluth than in the Region, but the difference was not statistically significant. Anxiety or panic attacks may be higher for females (10.4% (6.3-14.6)) than males (8%). It may also be worse in populations 45 to 64 (18% for ages 45 to 54 and 21% for ages 55 to 64). It was not significantly correlated with educational attainment, but may be higher in the population below 200% poverty (14%) than the population more than 200% of poverty (7%). Depression data results were similar to anxiety or panic attacks: may be higher in the population 45 to 64 years old and higher in the population below 200% of poverty. Depression may also be lower in the population with some college or college degrees, compared with the population with less than high school degree, high school degree, or vocational/associates degree. Gary/New Duluth residents have lower college graduation rates than Duluth and Minnesota; while correlation does not imply causation; mental health could be more of a concern for study area residents if they are reflective of the Bridge to Health survey respondents.

FIGURE 53: ANXIETY OR DEPRESSION (BRIDGE TO HEALTH, 2010)

	Anxiety or panic attacks	Depression
Duluth	9% (6 - 12)	11% (7 - 14)
Region	8% (7 - 10)	13% (11 - 15)

Barriers to active transportation include perceived safety, amenities and connections to destinations, and personal choice and interest, which can be affected by time, money, health and information (Gordon, 2004; Abildso, 2007; Osuji, 2006; Eyler, 2003). The HIA presented Bridge to Health data in previous sections showing that the vast majority of Duluth residents have walking trails, bike paths, or other paths/lanes near their home, but less than half of them use these amenities. Additionally, only 1% of Gary/New Duluth residents walk to work, and 5% take public transit, which likely involves some walking. This is likely because the vast majority of GND residents work outside of the GND community because jobs are not located in the immediate community. According to the 2006 Safe Routes to School report, 37% of Stowe Elementary students walk to school.

For any student who is not attending Stowe Elementary, it would not be possible to walk or bike to school. Duluth school district is open enrollment, meaning that students can choose what school they attend. If students enroll in a school within the school attendance area, the district provides transportation. If students enroll in a school outside the school's attendance area parents or guardians are responsible for providing transportation for the student. There are two middle schools: Lincoln Park Middle School and Ordean East Middle School. Lincoln Park Middle is eight miles and Ordean East Middle is 15 miles from Gary/New Duluth. Duluth also has two high schools: Duluth East High School and Denfield High School, a community school. Duluth East High School is near Ordean East Middle School, 15 miles from Gary/New Duluth. Denfield High School is approximately seven miles away in the Denfield neighborhood, adjacent to Lincoln Park. Regardless of the middle or high school that Gary/New Duluth residents choose to attend, they are all too far away to walk or bike.

One outcome of the 2006 Safe Routes to School report was that Duluth School District (ISD 709) Policy 5095 - Student Driving and Parking Vehicles at School was amended. The original language (paraphrased by the SRTS report) stated that “Elementary students shall not bring bicycles to the school building or grounds except by permission of the principal” (SRTS, 2006, p.30). The report noted that as a result, “infrastructure, such as bicycle racks, is not provided at Duluth Elementary schools” (SRTS, 2006, p.30). Now the language for ISD 709 Policy 5095 is as follows: “Non-motorized forms of transportation including bicycles and skateboards are allowed as long as they are used responsibly. The Principal of each school is given the authority and responsibility to regulate and control all forms of transportation to and from school and during the school day so that they are used in a responsible and safe manner” ([ISD 709 Policy 5095](#)). Middle and high school students are allowed to bike. The potential effect of this policy is that students in Gary/New Duluth may choose to bike or skateboard to Stowe, especially if they live more than a half or one mile from the school.

Existing Conditions Question: What are the current non-motorized transportation opportunities (incl. trails, sidewalks, public transit) in Gary/New Duluth and how close are they?

Transportation can be a ready form of physical activity. Physically active forms of transportation include walking, biking, skateboarding, rollerblading, propelling a non-motorized wheelchair, or even using public transit (which requires physical activity to get to and from transit stops). Active transportation benefits everyone by increasing physical activity and health and reduces the number of vehicles on the road. Additionally, active transportation is more equitable because it provides options and many of the modes cost less than owning a motor vehicle (Litman, 2013).

Safe and proper transportation infrastructure is required to motivate people to get out of their vehicles and use active forms of transportation. The presence of trails is a significant predictor of physical activity (Kaczynski et al., 2008), and trail use increases with proximity to residences (Lieber & Fesenmaier, 1985; Gobster, 1995; Furuseth & Altman, 1991; Moore & Graefe, 1994; Ottensmann & Lindsey, 2008). Also, the installation of bicycle lanes can increase the number of cyclists (Parker et al, 2013). It is important to consider where facility improvements are being made (i.e., are investments going to higher income/SES communities).

Active Transportation infrastructure may include local, regional, and state trails; bike lanes; sidewalks; safe intersection crossings; lighting and signage; and bus routes and stops. The following paragraphs describe the trail, bikeway and sidewalk networks in and around Gary/New Duluth. Safe intersection crossings and the pedestrian environment, including lighting and signage, are addressed in subsequent Existing Conditions Questions. Bus routes and stops are described in the previous section, *Transportation – Social Cohesion*.

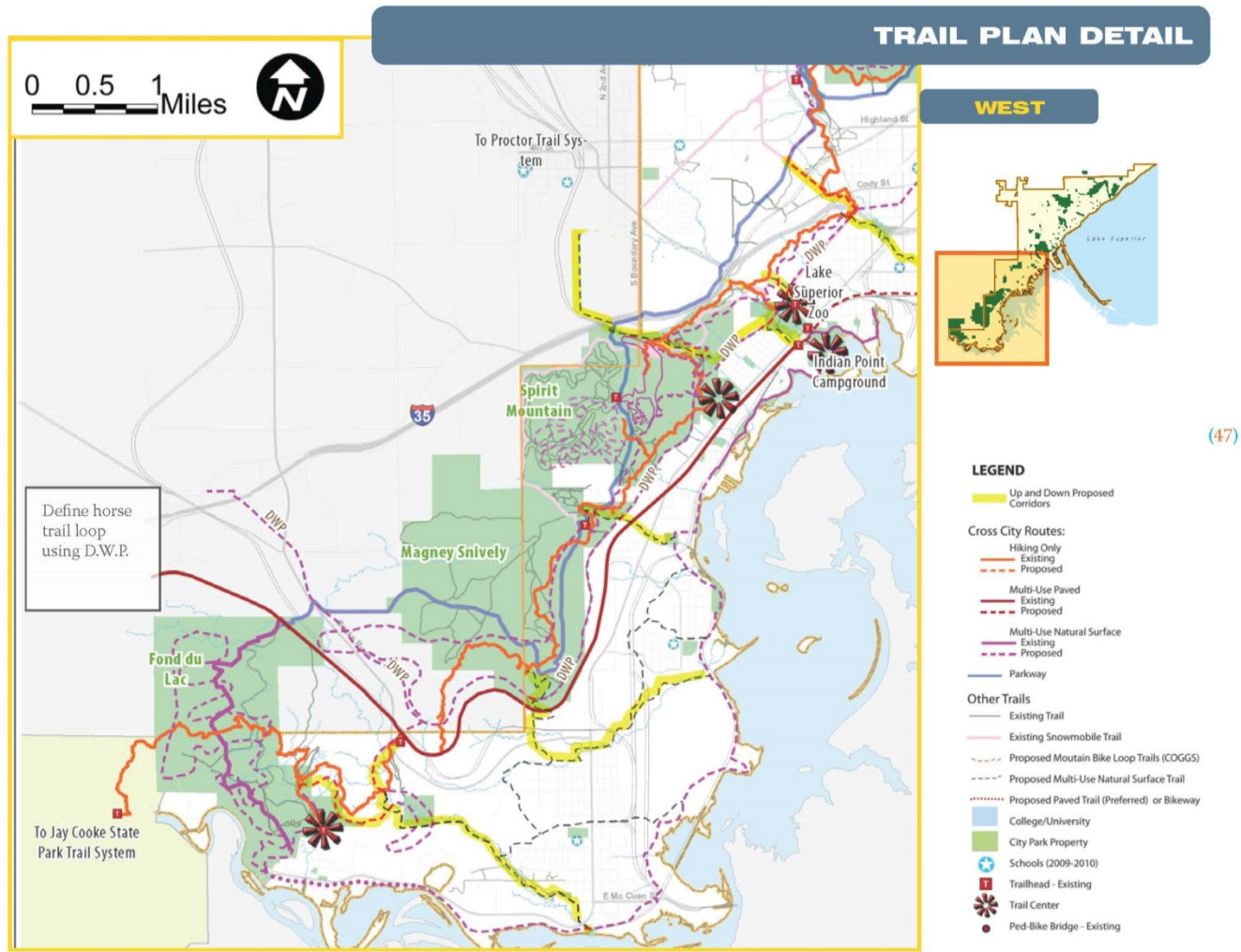
Duluth has a comprehensive trail system. The City contracted with HKGI to complete a Trail and Bikeway Master Plan in October 2011. The Master Plan outlines the City’s existing trail and bikeway system, including identification of trail gaps. Figure 54 shows that while Gary/New Duluth is surrounded by an extensive trail network, the neighborhood itself is underserved by trails. Additionally, there are no existing bike routes that traverse the community.

FIGURE 54: DULUTH TRAILS MASTER PLAN - GARY/NEW DULUTH UNDERSERVED BY TRAILS



In addition to identifying existing infrastructure and gaps, the Trail and Bikeway Master Plan outlines plans for future trail and bikeway connections. Figure 55 shows planned trail connections that will increase access to trails at the northern and southern ends of Gary/New Duluth. Also, the Master Plan indicates that Commonwealth Ave is a proposed bikeway; which could use the existing wide shoulders as bike lanes. The GND Community Center and Recreation Area plans to connect to the proposed new bike lanes to be installed on Commonwealth via a trail / bike path.

FIGURE 55: DULUTH TRAIL PLAN DETAIL - WEST



Chapter 4: Trail and Bikeway Plan

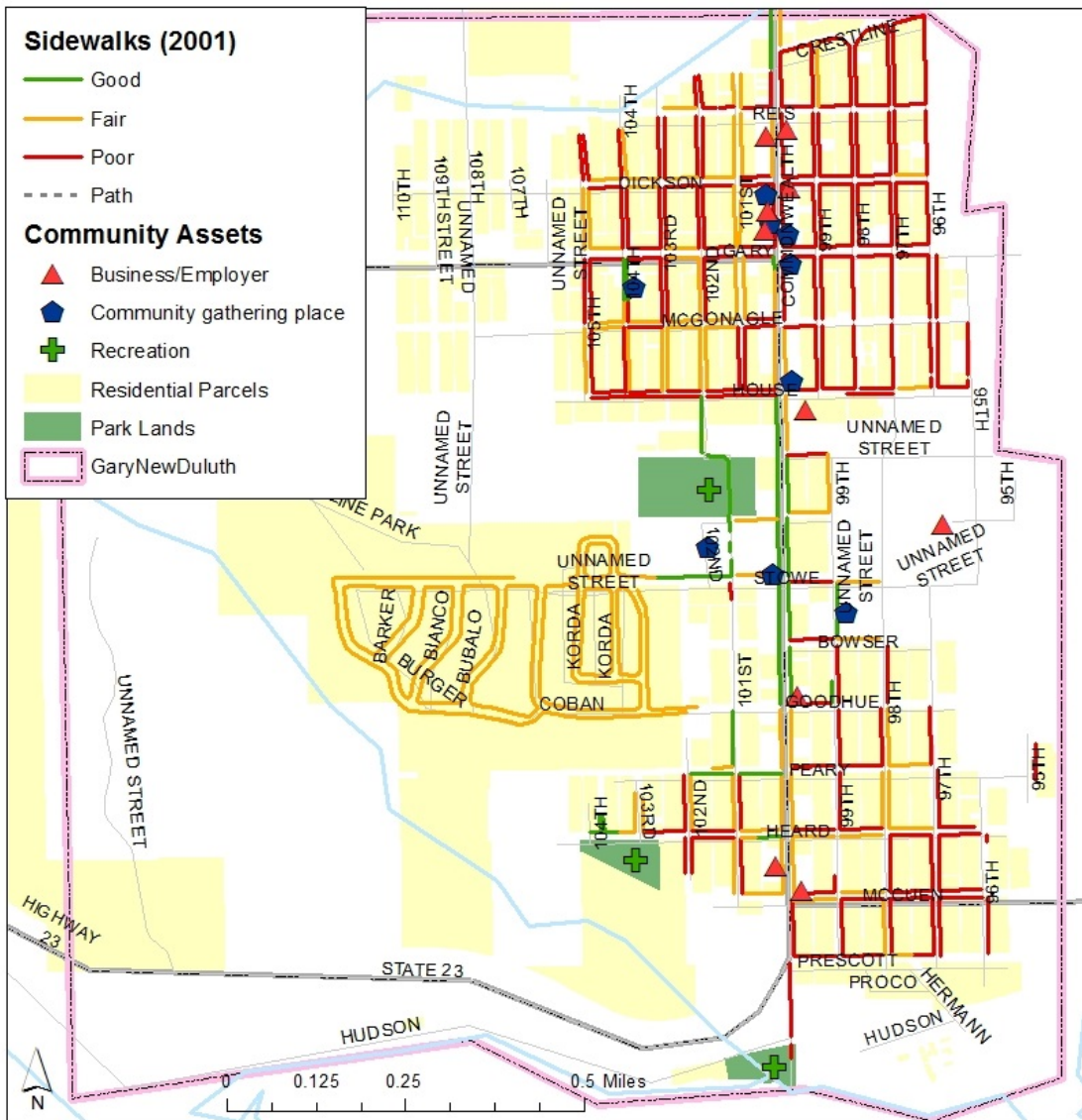
The Trail and Bikeway Master Plan addresses the Americans with Disabilities Act (ADA) regulations pertaining to outdoor facilities and trails. According to the regulations, all areas of newly designed or newly constructed and altered portions of existing trails connecting to designated trailheads or accessible trails to comply with ADA if they are constructed in partnership with the Federal Government, or using Federal grants or loans (United States Access Board, 2013). However, the report recognizes that compliance with this section will not always result in facilities that will be accessible to all persons with disabilities. These guidelines recognize that often the natural environment will prevent full compliance with certain technical provisions (City of Duluth, 2011).

One barrier to new trail development is the lack of publicly owned property for establishing public trails (Judy Gibbs, personal communication, January 9, 2014). There may be opportunities for easements (interest shown by property owners who are not utilizing land), or conditional use deeds. Snowmobile groups could work with property owners to establish trails. This sort of collaboration has occurred in other communities.

A sidewalk inventory was completed in 2002 by the Duluth-Superior Metropolitan Interstate Council (MIC, 2002). Not only did the report assess the location and condition of all sidewalks in the City, but it also incorporated location of “pedestrian generators” (e.g., schools, churches, parks and recreation areas, clinics, hospitals, community centers, senior centers and retail), bus routes and shelters, and the Functional Classification of adjacent roadways (MIC, 2002). “Poor sidewalk conditions within a two-block radius of multiple pedestrian generators were considered priority areas for sidewalk repair” (MIC, 2002). Sidewalk conditions were rated good, fair, poor, or identified as a gap. Planning District 1 included Fond du Lac, Gary/New Duluth, Morgan Park, Smithville, Riverside and Norton Park. As of the time of the study, there were 39 total miles of sidewalk in District 1, and 46% of the sidewalk miles were in poor condition (MIC, 2002). That compares to 39% of total sidewalk miles were in poor condition across the City.

Figure 56 shows the full extent of the sidewalk network in Gary/New Duluth and the condition of the sidewalk in 2002. The sidewalk inventory shows extensive sidewalk coverage along Commonwealth Ave, with networks of sidewalks in the surrounding residential areas of Gary and New Duluth.

FIGURE 56: SIDEWALK CONDITIONS IN GARY/NEW DULUTH (SOURCE: MIC, 2001)



The study found that a significant portion of the sidewalk infrastructure in Gary/New Duluth was in poor condition, and that the community was “still missing segments that hinder the connectivity of the sidewalk system” (MIC, 2002). Figure 57 provides a summary of findings for specific sidewalk segments.

FIGURE 57: SIDEWALK SEGMENT FINDINGS (SOURCE: MIC, 2002, P.16-17)

Sidewalk Segment	Findings
Goodhue from Vintage Acres to 97th Avenue West	This gap in the sidewalk system, if constructed, could potentially serve transit, retail and provide neighborhood connectivity.
House St from 98th Avenue West to Commonwealth	This is a system gap and surrounding sidewalk is in poor condition. This potential link could provide access to retail, a community center and transit service.
101st Avenue West from Stowe to Goodhue	Would provide access to a school, park and offer neighborhood connectivity.
Bowser from Commonwealth to 97th Avenue West	This segment gap would provide access to a church as well as transit service.
E McGonagle from existing sidewalk to 95th Avenue West	This area could improve access to transit service and provide neighborhood connectivity.
98th Avenue West from Stowe to Bowser	This sidewalk system gap, if constructed, would better connect the neighborhood and is located within two blocks of transit service.
99th Avenue West from Heard to McCuen	This segment is incomplete and would improve residential access to public transportation.
Peary from 103rd Avenue West to Commonwealth	If constructed this section would provide neighborhood connectivity.
97th Avenue West from Goodhue to Bowser	This is a gap in the neighborhood sidewalk system that if completed would provide connectivity.

Additionally, the MIC identified “key preservation areas,” which they qualified as sidewalk segments that “were inventoried in poor condition and found abutting or within two blocks of multiple pedestrian generators” (MIC, 2002). Figure 58 describes the three sidewalk segments that the MIC designated as key preservation areas in Gary/New Duluth.

FIGURE 58: KEY PRESERVATION AREAS (SOURCE: MIC, 2002, P.17)

Sidewalk Segment	Findings
Commonwealth from Gary to McGonagle St	Commonwealth is the highest functionally classed route in Gary-New Duluth. Poor sidewalks in this section provide access to transit (and a shelter), a community center, park and church.
101st Avenue West from Stowe south to midblock	Poor sidewalk conditions here serve a school, church, park and provide access to transit (shelter present).
Stowe from Commonwealth to 99th Avenue West	Deficient sidewalk facilities offer access to a church, park, senior center and transit facilities (shelter as well).

Since the sidewalk study was completed in 2002, the sidewalks along Commonwealth have been replaced and are all in good condition from Commonwealth Ave and Glencrest Court to Commonwealth and McCuen St on the west side of the street, and from Commonwealth Ave and Glencrest Court to Commonwealth Ave and Prescott on the east side of the street. Sidewalk continues down Commonwealth from Prescott to Hudson on the east side of the street, but the sidewalk is in poor condition. The key preservation area of 101st Avenue West from Stowe south to the existing sidewalk on Goodhue was also completed with new sidewalk in 2012 on the west side of 101st Ave W.

Sidewalk improvements were also made on House St from 98th Avenue West to Commonwealth, specifically related to ADA compliant intersections at 97th and House on 3 corners and sidewalk patches on north side of House St E. Additionally, there was sidewalk added to Peary St from 102nd Avenue West to Commonwealth.

Sidewalk guidelines are included in the Duluth UDC. Section 50-23.2 of the UDC states: “Unless the city engineer waives the requirement based on concerns of public safety or site/topography constraints: 1. Each proposed public or private street within the R-1, R-2, R-P, MU-N, MU-C, MU-I or MU-W districts shall include a sidewalk at least 5 ft. wide on both sides of the street; 2. Each proposed public or private street within the MU-B, I-G or I-W districts shall include a sidewalk at least 5 ft. wide on one side of the street” (City of Duluth, 2013).

The Institute of Transportation Engineers (ITE) Guidelines for Installing Sidewalks states that in residential areas with less than 1 unit per acres, sidewalks are preferred on one side of the street and that shoulders on both sides of the street are required, for new and existing streets (ITE, 1998). Additionally, any local street within two blocks of a school site that would be on a walking route to school requires sidewalk and curb and gutter.

Overall, Gary/New Duluth has potential for a significant amount of infrastructure to encourage active transportation, including nearby trails, a supportive sidewalk network (at least in the summer), and public transit service. The City and MIC have conducted studies to identify gaps, which if constructed would substantially increase options for residents in the community.

Impact Question: How will the Gary/New Duluth SAP multi-modal transportation recommendations change opportunities for recreation and physical activity (i.e., increase access to parks or other recreation opportunities), including improvements to public transit infrastructure and amenities? Consider all users, especially older adults and children.

The Gary/New Duluth SAP includes eight non-motorized transportation recommendations (A through H) that guide improvements to sidewalk and trail conditions and improvements to the pedestrian and bicycle system network to increase connections. If implemented, all of these recommendations will increase opportunities for active transportation and recreation. Below is a brief description of each of the recommendations and how they might be implemented to impact active transportation and recreation.

Recommendations related to Sidewalks

A. Encourage the City to establish a sidewalk repair program.

- *Work with residents on cost share for sidewalk repair.*

B. Improve existing sidewalk conditions to create a comprehensive safe and convenient network.

- *Work with City Engineering to allow for alternative walking surfaces/design in problematic areas to preserve the integrity of a natural or cultural feature.*
- *Focus sidewalk repair and reconstruction in priority areas: Stowe Elementary School, Neighborhood Streets, Commercial corridor along Commonwealth Avenue*

Recommendation A would potentially change the way that sidewalks are paid for and improved in Duluth. Currently, the City pays for sidewalk repair in one of two ways:

1. If the road on which the sidewalk will be constructed, improved, or replaced is also being improved or replaced, the City will use funding from the Neighborhood Street Improvement Program which is collected

by the Permanent Improvement Property Tax levy, assessed on all property owners across the city (MIC, 2002; Duluth 2013-2017 Capital Improvements Projects); or,

2. If the sidewalk construction, improvement, or replacement is initiated by private property owners or the City Council, all improvements will be paid for in whole or in part by special assessment. The costs of such improvements shall be assessed against benefitted property in a manner determined by the council to be a fair and equitable method of allocating such costs (City Code Sec. 45-76 and Sec. 45-82.4)

Recommendation B targets sidewalk improvements to specific high-traffic areas of the community. For sidewalk improvements along Commonwealth Ave, private businesses will be assessed for the improvements. To petition for sidewalk improvements a petition must be executed by the owners of the majority of the front footage of the property which will be assessed for all or a portion of the costs of such improvements (City Code Sec. 45-77). Assessments may cost more than business owners can afford. Gary/New Duluth does not qualify for Community Development Block Grants, which have been used in other communities for improvements such as sidewalk construction and repair (MIC, 2002). A similar burden would be felt by residents for sidewalk improvements on neighborhood streets and near Stowe Elementary School.

If the SAP Non-Motorized Transportation Recommendations A and B are implemented, residents would have increased mobility options and potentially improved safety conditions by not having to walk in the street. More residents might leave their cars behind to walk short trip distances or walk to public transit for longer trips. Both current and new pedestrians would have a safer walking environment by being removed from the street. Potential issues could arise during the winter if property owners are not able or willing to remove snow or treat ice on sidewalks, or if sidewalks extend in front of property that is not actively owned or managed. This is currently an issue along Commonwealth Avenue where much of the winter snow is not cleared from the sidewalks.

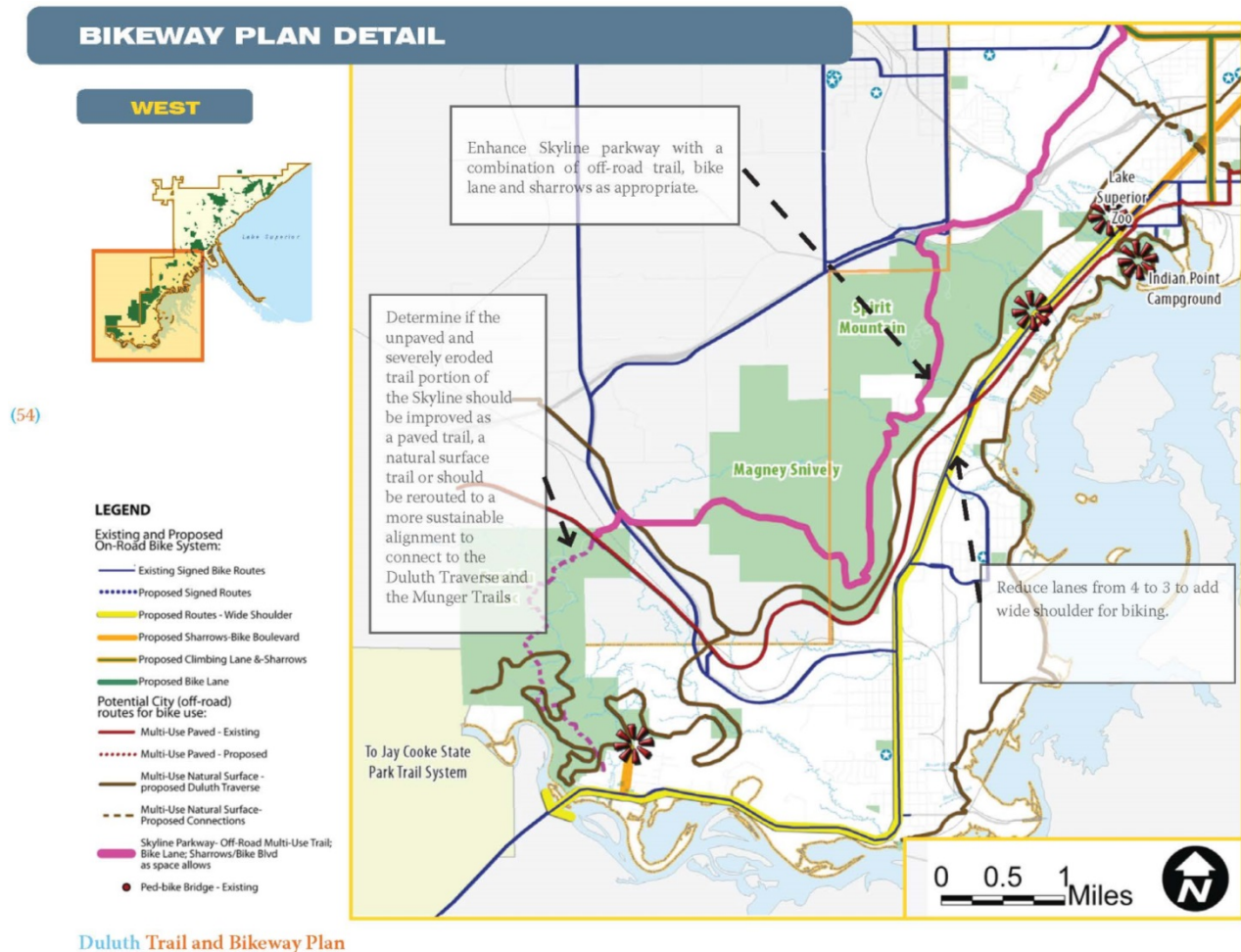
While most new development in Gary/New Duluth will be infill development on individual sites located within areas with existing or planned sidewalk infrastructure, it is reassuring to note that sidewalk infrastructure in new planned residential developments is address by the City's Unified Development Code. UDC Section 50-23 addresses Connectivity and Circulation, with very specific requirements for sidewalks in both new development and redevelopment projects, such as width and connections to existing networks.

Recommendations related to Bike lanes

E. Encourage Minnesota Department of Transportation to consider installing a designated bike lane along Common Wealth Avenue.

This recommendation is in line with planning direction from other sources. The [Duluth-Superior Metropolitan Bike Map \(2011\)](#) designates Commonwealth as a designated on-street bike route. The Duluth Trail and Bikeway Master Plan (2011) proposes Commonwealth as a proposed bikeway route, using the wide shoulder. See Figure 59.

FIGURE 59: DULUTH BIKEWAY PLAN DETAIL - WEST



Duluth Trail and Bikeway Plan

Designated or signed bicycle infrastructure improves safety for bicyclists by encouraging more riders and alerting motor vehicles to bicyclists' presence. In fact, improving streets to better accommodate bicyclists may lead to enhanced overall safety for all road users (Garrick & Marshall, 2011). Cities with high rates of bicycling have lower risk of fatal and severe crashes for all road users due to street network design (more specifically street network density than connectivity) and the presence of a large number of bicyclists, which both reduce vehicle speeds (Garrick & Marshall, 2011).

A study conducted in New Orleans on a new one-mile stretch of bike lanes found that after the new bicycle lane was built, the number of cyclists increased not only on the street where the new bike lane had been installed, but also on adjacent streets (Parker et al, 2013). In addition to increasing ridership, the new bike lanes encouraged bicyclists to follow the rules of the road, resulting in more cyclists riding with the direction of traffic, not against it as they had been (Parker et al, 2013).

The results of these studies suggest that implementing a bike lane on Commonwealth could potentially increase physical activity and reduce injury or death by: increasing bicycle ridership, increasing bicyclist safety, and increasing safety for all modes. Combined with the Transportation Recommendations to monitor traffic speeds

and use traffic calming treatments along Commonwealth, bike travel could become easier and safer for riders traveling within and through the neighborhood.

Recommendations related to Trails

C. Establish a network of recreational trails within the neighborhood to facilitate pedestrian and bicycle travel.

F. Link trails to adjacent neighborhoods, community facilities such community centers, parks, schools, and the commercial and retail activity along Commonwealth Avenue.

G. Where potential trail corridors are planned and not located on City property, work with adjacent property owners to secure appropriate easements.

Generally, a network of recreational trails within Gary/New Duluth and links to nearby facilities will increase opportunities for active transportation and recreation, leading to improvements in physical activity. Physical activity has many health benefits, but use of trails may have extended health benefits, such as mental health benefits of spending time in nature (Maller, 2005).

The Duluth Trail and Bikeway Master Plan proposes several new trails around and through Gary/New Duluth. If the SAP uses the Trail and Bikeway Master Plan as guidelines for how its recommendations could be implemented, there would be many new miles of new trails within close proximity of the neighborhood. In addition to focusing on the increased supply of proposed trails in the community, the community and planners should be cognizant of whether there are convenient trail access points in Gary/New Duluth, so that the trails do not simply cross through the neighborhood but are accessible to neighborhood residents.

It is important to note that access is not the only predictor of trail use. As the 2010 Bridge to Health Survey indicated, while the vast majority of Duluth residents have walking trails and biking paths near their home, less than half of them used the trails. It is important to understanding community-specific barriers to trail use and physical activity. Barriers to use may include time, lack of information, money, health, interest in the trail, opportunities to use the trail, skills, ability, crowding, perceived neighborhood safety, motivation, possible injury, fear of dogs, weather, traffic, cleanliness, and novelty (WI BEOH, 2011; Osuji, 2006; Eyler, 2003).

For new trail users, distance to trails is the primary factor influencing use, additionally safety, terrain, and convenience are important components (Gordon, 2004). “Common infrastructure barriers for trail users include safety, lighting, safe access points, lack of amenities, lack of connectivity to destinations, width of trail, connectivity of streets, mixed land use” (WI BEOH, 2011). Walking trails may assist persons in lower SES groups to initiate and increase their activity. Persons of higher SES may use trails to maintain, but not necessarily increase, their activity. Persons who are more sedentary may be more likely to benefit from walking trails. “Although not statistically different, persons who were not regular walkers (57.7%) were more likely to report increased activity due to trail use than were regular walkers (47.5%)” (Brownson et al., 2000).

The SAP Non-Motorized Transportation Recommendation F to link trails to community facilities, including parks, will also help increase trail use and physical activity (Librett, 2006). “The inclusion of trails at parks had the strongest association with physical activity” (WI BEOH, 2011).

The SAP Non-Motorized Transportation Recommendation G, working with property owners to obtain easements for trails, is important to facilitate the implementation of Recommendations C and F. The lack of public land to develop trails requires partnership with private property owners. The City has been successful with this for developing a network of snowmobile routes (Judy Gibbs, personal communication, January 9, 2014).

Other pedestrian and bicycle recommendations

F. Improve pedestrian and bicycle access to St. Louis River.

I. Improve pedestrian and bicycle wayfinding throughout the study area.

- ***Install directional signage for bike and pedestrian wayfinding throughout the study area as trail and bike routes are established. The directional signage will be part of a larger sign program that will be used throughout the City. Directional signage will be aligned with information provided city wide bicycle and pedestrian trail map.***

Currently, the most direct access to the St. Louis River from Gary/New Duluth is to take Commonwealth all the way south to Boy Scouts Landing. Boy Scouts Landing serves as a boat launch, but there is little more to the facility than water access. The Duluth Trail and Bikeway Master Plan proposes a Cross-City multi-use natural surface trail that would extend along the St. Louis River and multi-use natural surface trails through the neighborhood to improve connections. Trail improvements to and along the St. Louis River would potentially increase physical activity for residents, as well as potentially draw recreational users of the Cross-City trail into Gary/New Duluth.

As mentioned above there are a number of barriers to trail use including distance to trail, time constraints, interest in physical activity, etc. (WI BEOH, 2011; Osuji, 2006; Eyler, 2003). Additionally, lack of information is a constraint to trail use (Bialeschki and Henderson, 1988). In one study, trail users found out about the trails through a variety of methods, including happening to see it one day (35.3%), reading about the trail in a newspaper (12.4%), hearing from a friend (10.6%), and hearing about it from a relative (8.8%) (Brownson et al., 2000). Trail access points in Gary/New Duluth are difficult to “happen upon” unless you are looking for them. Trail access points are located outside of the neighborhood, miles apart from each other. Increasing signage and wayfinding could remove one barrier to trail use, and capture a significant proportion of the population that may not “happen upon” the trailheads.

This impact research question asked how the Gary/New Duluth SAP could change opportunities for recreation and physical activity, including improvements to public transit infrastructure and amenities. In response to improvements to public transit infrastructure and amenities, there are no recommendations to public transit service, infrastructure or amenities in the Gary/New Duluth SAP. As previously described, the area is already well served by public transit for its population and job densities.

Existing Conditions Question: How safe are roadways and intersections for pedestrians and bicyclists?

One indication of roadway and intersection safety is the number of motor vehicle, pedestrian and bicycle crashes that have occurred. In Gary/New Duluth between 2003 and 2012, there were 115 crashes of all types. Figures 60 and 61 show the location of crashes in Gary and New Duluth, respectively. The figures use a stacking feature, which indicates the locations that had the greatest concentration of crashes and the severity of those

crashes: red indicates a fatality; dark orange indicates an incapacitating injury; light orange indicates a non-incapacitating injury; and green indicates property damage only. The figures show that the intersections of Becks Road and Commonwealth Ave and Gary Street and Commonwealth Ave, as well as to the immediate right and left of the intersections, are problem areas for crashes. Most of the crashes involved only property damage. One crash was fatal.

FIGURE 60: ALL CRASHES - GARY (2003 - 2012) SOURCE: MNDOT'S CRASH DATABASE

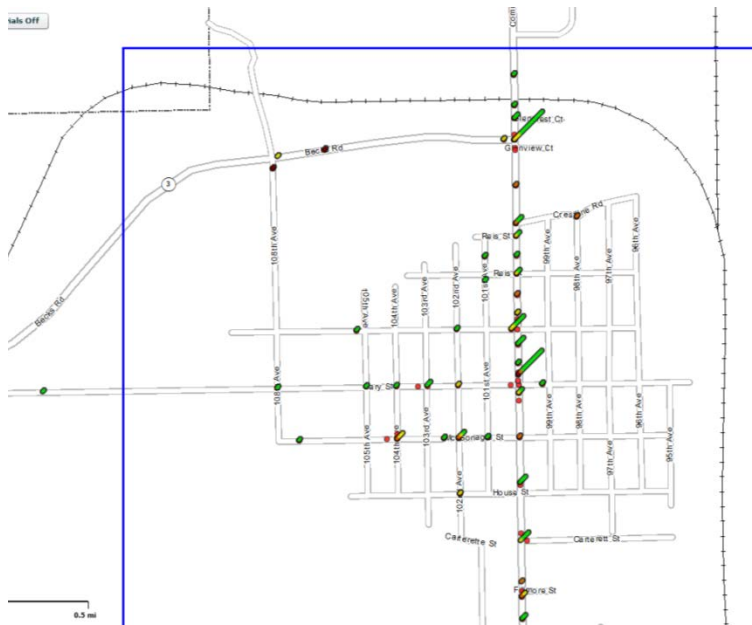


FIGURE 61: ALL CRASHES - NEW DULUTH (2003 - 2012) SOURCE: MNDOT'S CRASH DATABASE



The MnDOT crash statistics also provide information on whether the driver was under the influence or had been drinking (20 crashes, or 17% of crashes); weather conditions (for 16 accidents, road conditions were wet, for 20

accidents there was snow, slush or ice/packed snow); and whether the accident occurred at an intersection or not (60 accidents did not occur at intersections).

Of the crashes that occurred between 2003 and 2012, two were vehicle-pedestrian strikes and three were vehicle-cyclist strikes. (See Figures 62 and 63.) Of these five pedestrian and bicycle crashes, three involved individuals under the age of 18, one involved a chemically impaired pedestrian, and three involved either the cyclist or pedestrian failing to yield the right-of-way to the vehicles.

FIGURE 62: LOCATION OF PEDESTRIAN CRASHES (2003-2012) SOURCE: MNDOT CRASH DATABASE



FIGURE 63: LOCATION OF BICYCLE CRASHES (2003-2012) SOURCE: MNDOT CRASH DATABASE



One of the main pedestrian safety concerns in Gary/New Duluth is students walking to Stowe Elementary. Surprisingly, a Minnesota study revealed that 88% of pedestrian crashes on trunk highways occurred more than two blocks from school (MnDOT, 2007). Similarly, the MnDOT crash data for Gary/New Duluth showed no pedestrian collisions near Stowe Elementary between 2003 and 2012. According to the 2006 Duluth Safe Routes to School study most school age crashes occurred when a child dashed from behind parked cars; many crashes occur mid-block; and Kindergarten through 3rd grade students have difficulty understanding traffic control devices.

The 2006 SRTS study asked parents at a Stowe PTA meeting to provide input on roadway and traffic safety. The following are some of their comments:

- Gary Street is dangerous to cross, the entire length of the street into the business district from 105th into Commonwealth. There is a blind hill and cars average 45mph, many kids cross Gary Street to access school.
- Commonwealth has poor school zone/school crossing visibility and cars zip by students/crossing guards as they return to the curb with their crossing flags.
- Parents present felt that no child should be forced to cross the Hwy (T.H. 23/Commonwealth).
- Parents mentioned that Stowe students also cross at non-school crossings farther up Commonwealth in the business district area. One parent said that just this morning two kids ran across the Hwy in front of her at the Milk House. Commonwealth is a 4-lane Hwy with two lanes for traffic and two lanes for parking.

Other indicators of roadway and traffic safety include the number of speeding tickets issued in an area and the use of safety features including seatbelts, bicycle helmets and reflective devices. Data for these indicators were not available for this analysis.

Existing Conditions Question: Do crime or safety concerns deter residents from utilizing trails and other non-motorized transportation and recreation opportunities?

One barrier to trail use is safety, including crime and perceived personal and neighborhood safety (Osuji, 2006; Eyler, 2003; Yabes, 1997; Hunter and Huang, 1995). A study by Yabes (1997) indicated that safety concerns varied by gender, with women four times as likely to be concerned about personal safety as men, regardless of the activity involved. Current trail users may feel very safe when using trails (Brownson et al., 2000), but crime and perceived safety should be addressed to encourage new users and increase physical activity.

Various aspects of trail environments contribute to crime and perceived safety. An assessment by Reynolds et al. (2007) found that vegetation density had a negative association with trail use, but the presence of streetlights had a positive association with trail use. Streetlights “may facilitate safety both in terms of reducing crime and in preventing accidents and collisions on the trail” (Reynolds et al., 2007). However, increased vegetation density was seen as a safety factor. “Heavier vegetation could provide cover for individuals who may be interested in confronting trail users and at the same time makes it harder for witnesses who might provide help to see such events and intervene. In addition, dense vegetation may make it harder to see oncoming traffic and increase the risk for accidents on the trail” (Reynolds et al., 2007). So while natural landscapes can be an attractor for trail users and increase physical activity, there is some concern that vegetation may affect criminal activity which could modify the use of the trail.

In Gary/New Duluth, the 2006 SRTS study collected input from the Stowe PTA on the walking environment regarding safety. Parents’ concerns included poor lighting in the neighborhood – it was often very dark for kids walking to and from school – and lots of unleashed dogs. The Community Survey conducted as part of this HIA showed that 37% of respondents thought that traffic safety was sometimes, often or always an issue and 58% of respondents thought that safety related to crime was sometimes, often or always an issue. See Figure 64 for tallied responses.

FIGURE 64: COMMUNITY SURVEY RESPONSES - SAFETY

	Not an Issue	Rarely an Issue	Sometimes an Issue	Often an Issue	Always an Issue
Safety from an accident involving a car	33	40	28	10	4
Safety from crime	22	26	42	15	9

When asked to rank the key/priority issues that should be addressed in Gary/New Duluth from “not a priority” to “high priority”, crime prevention received the most “high priority” responses in the Community Survey. When respondents were asked the open-ended question “what would you most like to see changed in Gary/New Duluth,” nine mentioned addressing crime and five said more police presence. The community police officer in Gary/New Duluth reported that a Neighborhood Watch group had started in Gary/New Duluth in 2013, indicating that this is a real concern for residents (Officer Thomas Sewell, personal communication, October 10, 2013).

Impact Question: How will the Gary/New Duluth SAP transportation recommendations change crime and pedestrian and bicyclist safety?

SAP Transportation Recommendation A “Promote safe and comfortable travel in the neighborhood” by reducing traffic speeds and Recommendation C, which encourages physical measures to reduce traffic speeds and improve street safety, would improve safety for pedestrians and bicyclists and reduce severity of injuries if collisions occur (Aarts and van Schagen, 2006). Multimodal transportation recommendations to improve sidewalk and bicycle infrastructure might have the added benefit of calming and slowing traffic and increase safety for all users (see previous impact question).

To reduce speed limits on Commonwealth and throughout the neighborhood, the Minnesota Department of Transportation (MnDOT) must conduct an engineering and traffic investigation that analyzes factors like roadway design, physical characteristics, traffic volume, crash history, and observed speeds (Burrell, 2012). Possible speed reductions vary depending on road type. The following road types and speed reductions could be used in Gary/New Duluth:

- On a residential roadway, a local road authority may reduce the speed limit to 25 m.p.h. A “residential roadway” is a city street or town road whose total length is up to a half-mile. Minn. Stat. § 169.011, subd. 64.
- In school zones, a local road authority may prescribe a lower limit that is not less than 15 m.p.h. or more than 30 m.p.h. below the surrounding limit. School zones are defined as a segment of street or highway

that abuts school grounds where children have access to the roadway or where a school crossing is in place. Minn. Stat. § 169.14, subd. 5a.

- On park roads, speed limits can be adjusted to not less than 15 m.p.h., or more than 20 m.p.h. below the surrounding limit. Minn. Stat. §§ 160.263, subd. 4; 169.14, subds. 5c and 5e; 327.27.
- On streets that have a designated bicycle lane, speed limits can be set to not less than 25 m.p.h. Minn. Stat. §§ 160.263, subd. 4; 169.14, subds. 5c and 5e; 327.27.
- In mobile home parks, speed limits can be set at over 10 but no more than 30 m.p.h. Minn. Stat. §§ 160.263, subd. 4; 169.14, subds. 5c and 5e; 327.27.

Bicyclist safety may also be impacted by the proposed designated bike lane along Commonwealth Ave. The HIA TAC expressed concerns about how the bike lane would interface with current on-street parking and the potential conflicts that could arise. Transportation planners with the Metropolitan Interstate Council have been notified of these concerns and will work with the community to address these conflicts when the plan for the bike lane is developed.

The SAP Transportation Recommendations may indirectly impact crime in Gary/New Duluth by encouraging people to get out of their cars and walk or bike through the neighborhood instead of driving. As mentioned previously, the increase in presence of people on the street can have a positive impact on crime incidents.

Existing Conditions Question: Does the pedestrian environment encourage walking for transportation/recreation and reduce driving?

The previous sections of the HIA touched on a number of aspects of the pedestrian environment, including sidewalk inventory, streetscape amenities, pedestrian scale buildings, lighting, road speeds, pedestrian friendly intersection crossings, etc.

Gary/New Duluth does have an extensive sidewalk network, but much of the network is in poor condition (see the *Transportation – Physical Activity* section). Sidewalks along Commonwealth are not cleared of snow in winter, unless cleared by property owner. Much of the sidewalk does not have active property owners, and long stretches remain covered in snow, making it very difficult and dangerous to walk from residences to commercial activates or even bus stops in the winter.

There are little to no streetscape amenities, such as street trees and landscaping, benches and other street furniture, public art. Buildings along Commonwealth Ave vary in their pedestrian friendliness: all are the appropriate height for human scale; block lengths are appropriate for a commercial area but not too long to create mega-blocks that are difficult for pedestrians to navigate; some of the older buildings are oriented to the sidewalk, however many of the frequented shops are oriented toward the parking lot (e.g., the Milkhouse, Little Store, and Gary Liquor and Bait); and few to none of the buildings have large sidewalk-facing windows to welcome pedestrians. Commonwealth is well lit especially on the two blocks of highest commercial activity between Gary Bait & Liquors and the Milkhouse. However, as of November 2013, 14 lights were out.

Pedestrian crossings at two intersections near Stowe Elementary (Commonwealth and Stowe, and Commonwealth and Fillmore) are signed as pedestrian crossing with flashing lights, marked crosswalks, and pedestrian bump-outs. However, it is not marked as a school crossing, specifically, and as a result the speed limit does not change.

Overall, the community is walkable but could be more inviting for pedestrians. This is particularly true for children and less able-bodied adults. In many areas, pedestrians are still forced to travel in the streets with cars and other vehicles.

Impact Question: Does the GND SAP include recommendations for transportation amenities (e.g., benches, water fountains, programming, lighting, handicap accessibility, police or citizen patrol, etc.)?

The three keys to a friendly and welcoming pedestrian environment are safety, convenience, and comfort (ChangeLab Solutions, 2013). Gary/New Duluth SAP Transportation and Non-Motorized Transportation Recommendations to reduce traffic speeds, increase traffic calming treatments, encourage streetscape features, improve and repair sidewalks, and increase connections to trails, will improve the pedestrian environment. Providing sidewalks and safe street crossings is the most important part of making a street safe for pedestrians (Retting, 2003).

Aside from improving sidewalk conditions, the SAP Transportation Recommendation D “Encourage streetscape features, such as trees, landscaping, and street furniture that will contribute to the livability and unique character of Commonwealth Avenue and the entire neighborhood,” will likely have the second biggest impact on the pedestrian environment, by improving the third element of pedestrian friendly environments: comfort. Recommendation D has three subparts, which are listed below:

- As discussed in Goal 1, the recommended Business Association should work with business owners and the City to install interpretive display boards along Commonwealth Avenue promoting the natural and cultural history of the area.
- Install flower planters, in conjunction with City planting program, in front of businesses along Commonwealth Avenue.
- Improve appearance of street frontage along Commonwealth Avenue with benches and street art.

These recommendations will contribute to an improved pedestrian environment and will likely increase physical activity.

Park Planning

Existing Conditions Research Question: What current parks and recreation facilities or programs exist that promote or discourage physical activity?

The section on *Transportation – Physical Activity* included a discussion of moderate and vigorous physical activity levels in Duluth and health outcomes such as overweight, obesity and mental health. Duluth responses showed that 37% of respondents are moderately active five or more days per week and 34% of respondents are vigorously active three or more days per week. Levels of overweight were similar for Duluth and the Region, but obesity in Duluth was significantly lower than the Region. Anxiety and depression affected 9% to 11% of Duluth respondents, respectively, and differences between Duluth and the Region were not significant. Both anxiety and depression were higher in populations earning less than 200% of poverty. The Gary/New Duluth Community Survey asked residents how they perceived certain health concerns as issues for residents of Gary/New Duluth. (See Figure 65.)

FIGURE 65: PERCEIVED COMMUNITY HEALTH CONCERNS (GND COMMUNITY SURVEY)

	Not an Issue	Rarely an Issue	Sometimes an Issue	Often an Issue	Always an Issue
Overweight or diabetes	21	10	46	29	8
Depression or anxiety	22	16	45	24	6
Being physically active	42	24	27	16	11

Seventy two percent of respondents said that overweight or diabetes were health concerns that were sometimes, often or always an issue for residents; and 66% of respondents said that depression or anxiety were health concerns that were sometimes, often or always an issue for residents.

The Gary/New Duluth Community Survey asked residents how often being physically active was an issue and 45% of respondents indicated that being physically active was sometimes, often or always an issue. (See Figure 65, above.) The survey did not ask why being physically active was an issue. Barriers to physical activity can include lack of interest, time, money, or access to recreational opportunities (Osuji, 2006; Eyler, 2003; Brownson et al., 2000). The second most common feedback from the Gary/New Duluth community survey regarding residents’ favorite thing about Gary/New Duluth was access to parks, trails, nature and greenery (18 responses). However, when asked what they would most like to see change in Gary/New Duluth, the second most common response was more parks, trails, playgrounds and recreation opportunities, and the third most common response was more activities, especially for kids. The survey results indicate that residents appreciate the current recreational opportunities, but there is demand for more. And more opportunities within walking distance of most residents could increase the number of residents who achieve recommended levels of physical activity (McCormack et al., 2010).

The Gary/New Duluth park has an old baseball diamond that is not used for any league play; a soccer field in front of Stowe Elementary that is maintained by the school district; and a skate park that is in deteriorated condition (Judy Gibbs, personal communication, February 24, 2014). (See Figure 66.) Up until this past year the soccer field was used for Junior Varsity (JV) western games, but with the new turf field at Lincoln Park, play has shifted to that part of town for JV teams. Additionally, the park previously had a community center, referred to as the “shack”, but that is now closed and vacant. The other park in the community, Birchwood park, is now a vacant park since the City removed the playground equipment because they could not afford to maintain it. The school has a playground that is open to the public, but otherwise there are no informal or organized recreation opportunities within the neighborhood.

FIGURE 66: GARY/NEW DULUTH COMMUNITY CENTER AND RECREATION AREA - EXISTING CONDITIONS



As referenced in the *Residential Development – Physical Activity* section, a study by Kaczynski et al. (2008) showed that the most important predictor of physical activity in parks is the number of features the park has, such as trails, open space, wooded areas, playground, ball diamond, soccer field, etc. As it stands, the GND Park has minimal features and is in disrepair, unlikely to foster physical activity for the residents of the neighborhood.

Boy Scout Landing is another recreation area in the neighborhood. Boy Scout Landing includes a boat launch, fishing, and a recently re-paved parking area. There are no features that would encourage physical activity besides fishing; even the sidewalk to get to there is broken and part of it is little more than a cow path.

The other recreational amenities that Gary/New Duluth has are the state and local trails (see Figure 47 in *Residential Development – Physical Activity*). The trail access points are all at least one and a half miles away, which is a breaking-point distance for a person biking to a trail (Krizek, 2007), but too far for walking (TPL, 2011). The only other way to get there is to drive to the access points.

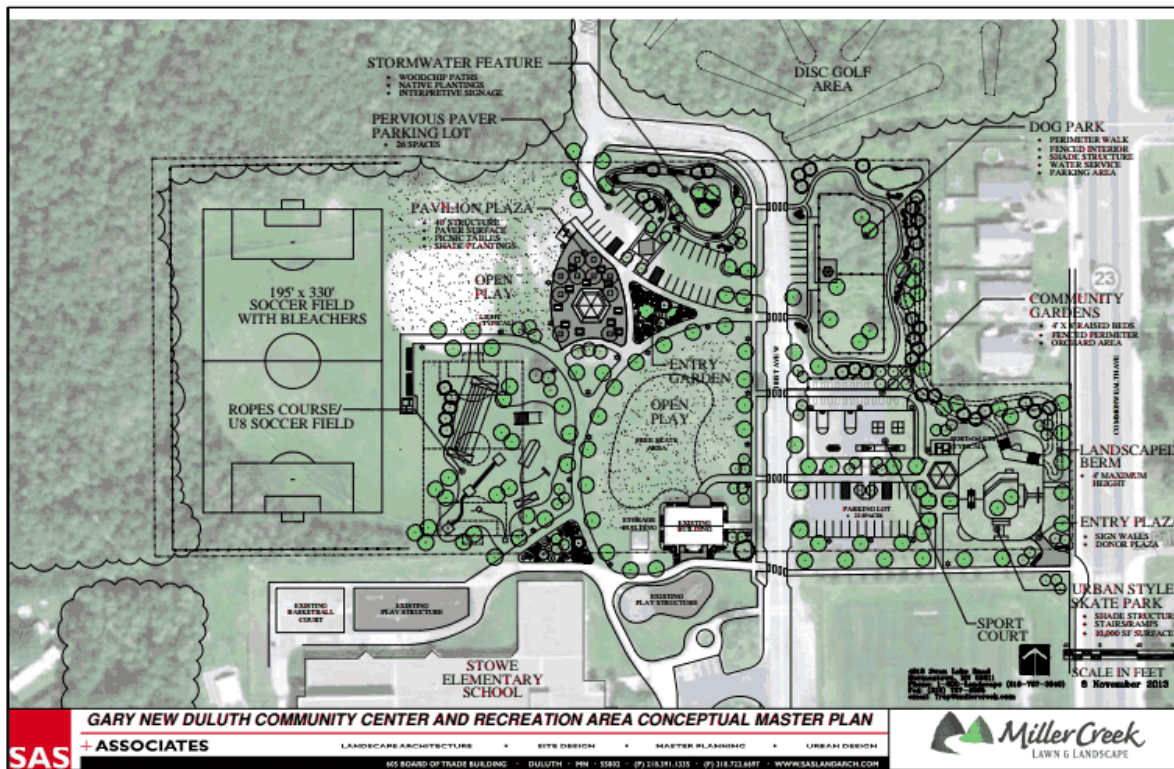
Impact Research Question: How will the proposed GND Community Center and Recreation area affect physical activity?

A group of individuals from the GND community and the community at large have established the GND Development Alliance to revitalize and transform the GND Recreation Area into a fully functioning GND Community Center and Recreation Area. The GND Development Alliance Board of Directors will provide leadership for the redevelopment, oversee operations and maintenance. As the project is a private sector initiative fund raising will be critical to success of the capital improvements and establishing an endowment to

ensure sustainability over time regardless of the City’s level of involvement / support or financial status. The Board is working with individuals, the community and the GND Community Club to ensure that the project address the needs and desires of the community. The proposal for the Gary/New Duluth Community Center and Recreation Area Conceptual Master Plan currently includes the following features (See Figure 67):

- Transformation of the Community Center
- Install new waterline
- Ice skating
- Baseball field becomes soccer or lacrosse field
- Youth soccer field or ropes course with climbing wall
- Open turf play area
- Picnic area
- Biking
- Skateboard park
- Play court
- Community garden
- Dog park
- Disc golf
- Additional Parking

FIGURE 67: GARY/NEW DULUTH COMMUNITY CENTER AND RECREATION AREA CONCEPTUAL MASTER PLAN



The disc golf portion of the Recreation Area, located in forested tax-forfeit land, will double as walking trails and/or biking trails to encourage bikers to stop at the GND Community Center and Recreation Area. The

Community Center is proposed to have lots of programming, as discussed in the *Park Planning – Social Cohesion* section. As previously mentioned, trails and programming are some of the most impactful ways to increase physical activity. If the Gary/New Duluth Community Center and Recreation Area is fully developed with all the features and amenities in the plan, this could be enough of a draw to encourage new residents to be physically active.

Hockey is a very important sport in Gary/New Duluth. There used to be three hockey rinks in Gary/New Duluth but they were underutilized. There are currently three rinks located in the adjacent community of Morgan Park. Hockey rinks can be community gathering places that contribute to the development of social cohesion as well as providing an opportunity for physical activity. At this time it does not make sense to recommend a hockey rink for the GND Community Center and Recreation Area.

Developing new facilities for the GND Community Center and Recreation Area could increase physical activity through more people walking or biking to the park. Figure 68 shows the number of residents by age category within ¼ mile, ½ mile of the GND Community Center and Recreation Area. More than 20% of Gary/New Duluth kids less than 5 years old would have increased access to recreation opportunities within ¼ mile of their home. Older kids are more likely to walk farther, and 82% of Gary/New Duluth kids less than 10 live within ½ mile of the GND Community Center and Recreation Area.

FIGURE 68: GARY/NEW DULUTH POPULATION PROXIMITY TO COMMUNITY REC CENTER/PARK

	Total Population	Less than 5	Less than 10	Less than 18	65 and older
Within 1/4 mile of Community Center	683	35	73	141	96
Within 1/2 mile of Community Center	2,287	128	270	500	336
Within GND neighborhood	2,705	163	329	605	377

The security and attractiveness of walking conditions, including the quality of sidewalks and crosswalks, minimal motor vehicle traffic volumes and speeds, and amenities such as shade and shelter from rain, landscaping and the presence of other pedestrians (Litman, 2012). The GND Community Center and Recreation Area proposes new and enhanced sidewalks on 101st Ave West in front of Stowe School, on Carterett Street, and on 102nd Ave West from Carterett to House Street. These roads serve as a primary route for children and people walking to and from the school and beyond.

Crime levels, blighted properties and vacant lots contribute to real and perceived safety in Gary/New Duluth (see discussion in *Commercial Development – Social Cohesion and Physical Activity*), which can negatively affect physical activity (Weinstein et al, 1999). The redevelopment of the GND Community Center and Recreation Area may increase surveillance and will improve the blighted “shack” and underutilized recreation area to functional, active uses, which could decrease or displace crime and improve safety (Hollander, 2009; Skogan, 1990). New investments in the Gary/New Duluth Park may therefore increase physical activity due to increased perceived safety. For example, a study in Philadelphia found that burglaries and thefts dropped 90% in one precinct, after police helped neighborhood volunteers clean up vacant lots and plant gardens (TPL, 1994).

Besides the GND Community Center and Recreation Area, Boy Scout Landing will be getting new investments. The site will be receiving DNR funds to repave the stretch of Commonwealth Ave that provides access to the parking area and boat launch. The road improvements will include a new sidewalk, which will greatly improve pedestrian conditions down to the Landing and potentially increase people walking to the St. Louis River.

ACCESS TO HEALTHY FOOD

What is access to healthy foods and why is it important to health?

Nutrition one of the three legs of the three-legged stool, including physical activity, nutrition and smoking, upon which public health prevention activities and community-based programs stand (TFAH, 2009). Activities are focused on these three areas because obesity and tobacco are the leading causes of chronic disease (MDH, 2014).

At its base, nutrition is about the nutrients, vitamins, minerals and energy that foods provide us. Nutrition as a dialogue in daily society often deals with the latest diet fad, and more recently has become an important public health and equity discussion as it relates to access to healthy foods. Public service campaigns promoting people to “eat an apple a day to keep the doctor away,” only works if people have access to the apples. Access can be described in terms of physical access, monetary access, or both, if it costs money to physically get to a store that sells healthy food and fresh produce. Shaw describes the three barriers to accessing healthy food as: physical (distance, physical barriers, transit access, etc.), economic, and attitudinal (different tastes and desires of individual consumers) (Shaw, 2006; Pine and Bennett, 2011).

Access to healthy food can include access to reliable transportation, in addition to proximity of healthy food retailers. Regular public transportation or vehicle ownership are the most common forms of increasing access to healthy foods, but they can also include grocery and meal delivery services, such as Schwan’s and Coborn’s in Minnesota, or programs like Meals on Wheels.

Communities that lack supermarkets or full service grocery stores are considered “food deserts.” Studies conducted across the US have found that “people living in low-income neighborhoods, minority neighborhoods, and rural communities face much greater challenges finding healthy food, especially those who lack good transportation options to reach full-service grocery stores” (Treuhaft and Karpyn, 2010). Areas without supermarkets or full service grocery stores often rely on gas stations or small convenience stores to stock foods. These smaller-footprint stores are less likely to stock healthy foods, offer lower quality items, and have higher prices than supermarkets (Treuhaft and Karpyn, 2010).

Studies find that residents with greater access to supermarkets or a greater abundance of healthy foods in neighborhood food stores consume more fresh produce and other healthful items (Treuhaft and Karpyn, 2010). Studies have linked a lack of access to grocery stores to serious health concerns, such as higher rates of obesity and increased risk of diabetes and cardiovascular disease (Ver Ploeg et al., 2009; Treuhaft and Karpyn, 2010; Pine and Bennett, 2011).

Some scholars also argue that there is a relationship between food deserts and the “civic-structure” of a neighborhood in that neighborhoods with strong community organizations and a sense of identity are better able to respond to the lack of a grocery store than un-cohesive or poorly organized neighborhoods (Morton, Bitto, Oakland, & Sand, 2005). (Pine and Bennett, 2011)

New Development Opportunities – Commercial Development

Existing Conditions Question: How many retail establishments sell fresh produce within ¼ mile of Gary/New Duluth? How much fresh produce do they sell? Do they accept SNAP and WIC?

There is a significant correlation between distance to a supermarket and consumption of healthy foods in lower-income populations. (Gordon, 2011; Inagami, 2006; Wrigley, 2002) While distance to a supermarket is not the only factor that affects healthy food consumption (cost and choice are also factors), a study by Wrigley demonstrated that a new supermarket developed near a low-income community resulted in 45% of the residents switching to the new supermarket and “those who switched to the new store from a limited-range/budget store significantly increased their fruit and vegetable consumption by 18% (or 0.44 portions per day).” (2002, p.18)

While Gary/New Duluth is fortunate to have two convenience stores that sell food, it does not have a supermarket or grocery store. The Gary/New Duluth Community Survey asked residents if fresh and healthy food was accessible to them. Over half of respondents said that fresh and healthy food was easily accessible. See Figure 69. However, improved access to food options or a grocery store was the most frequent response when residents were asked the open ended question about what they would like to see changed in Gary/New Duluth.

FIGURE 69: COMMUNITY SURVEY - ACCESS TO FRESH AND HEALTHY FOOD

	Not Accessible	Rarely Accessible	Sometimes Accessible	Easily Accessible	Not applicable to me
Fresh and healthy food	13	12	30	60	1

According to the US Department of Agriculture (USDA) Food Access Research Atlas, Gary/New Duluth is located in a low-income and low-(food) access census tract (USDA, 2013A), otherwise known as a food desert. Generally, food deserts are “urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food” (2013B). The USDA, Treasury and Health and Human Services (HHS) have defined a food desert as “a census tract with a substantial share of residents who live in low-income areas that have low levels of access to a grocery store or healthy, affordable food retail outlet” (USDA, 2013B). Census tracts qualify as food deserts if they meet low-income and low-access thresholds:

- They qualify as "low-income communities", based on having: a) a poverty rate of 20 percent or greater, OR b) a median family income at or below 80 percent of the area median family income; AND
- They qualify as "low-access communities", based on the determination that at least 500 persons and/or at least 33% of the census tract's population live more than one mile from a supermarket or large grocery store (10 miles, in the case of non-metropolitan census tracts).

Two retail establishments sell fresh produce within Gary/New Duluth: the Little Store and the Milk House. Both the Little Store and the Milk House accept SNAP (Supplemental Nutrition Assistance Program, formerly known as Food Stamps) benefits (USDA, 2013C), and the Milk House also accepts WIC (Women Infants and Children) benefits (MDH, 2013). Figure 70 shows that approximately 8% of households, or around 100 households, in Census Tract 38 receive SNAP benefits. Forty-seven percent of households receiving SNAP have one or more

people 60 years and older. This is more than twice the proportion of households receiving food stamps with one or more people 60 years and over than in Duluth or Minnesota. Anecdotally, this could be good for older adults in the community who typically are a difficult group to enroll in SNAP. It may be that the Morgan Park Senior Program has had a hand in ensuring older adults utilize the benefits that they qualify for. Thirty-one percent of households receiving SNAP have children under the age of 18. This is a much lower proportion of the households receiving SNAP than in Duluth and Minnesota; potentially a result of the higher representation of older adults enrolled in the SNAP program.

FIGURE 70: HOUSEHOLDS RECEIVING SNAP (FOOD STAMPS)
 SOURCE: 2011 ACS 5-YEAR ESTIMATES

	Households receiving food stamps	Households receiving food stamps - With one or more people 60 years and over	Households receiving food stamps - With children under 18 years
Census Tract 38	78%	47%	31%
Duluth	11%	18%	52%
Minnesota	7%	20%	55%

For a store to be eligible to accept SNAP benefits, it must sell food for home preparation and consumption and meet one of the following criteria:

- A. Offer for sale, on a continuous basis, at least three varieties of qualifying foods in each of the following four staple food groups, with perishable foods in at least two of the categories:
 - meat, poultry or fish
 - bread or cereal
 - vegetables or fruits
 - dairy products; OR
- B. More than one-half (50%) of the total dollar amount of all retail sales (food, nonfood, gas and services) sold in the store must be from the sale of eligible staple foods.

For a store to be eligible to accept WIC benefits, it must carry minimum quantities of infant formula, infant cereal, milk, cheese, eggs, dried peas, beans or lentils, canned beans, peanut butter, fresh fruit and vegetables, canned fish, juice, adult whole grain cereal, baby food fruits and vegetables, whole grains (bread, rice, oatmeal), and additional items upon request of customers. Additionally, there are maximum prices that retailers can sell WIC allowed foods (115% of the state average cost).

A rapid inventory of the Milk House showed a small selection of produce including carrots, lettuce, apples, tomatoes, bananas, and onion; additional fresh products including cheese, meat, and milk; and canned and dry goods. The Little Store had oranges, bananas, and milk, and non-perishable dry and canned goods.

The next closest SNAP retailer is Curtis Super America in Morgan Park. Beyond that, residents have to travel to West Duluth, Proctor, or the Village of Superior, WI. The next closest WIC grocery stores are Save A Lot and Super One Foods in West Duluth. All of these locations are at least 6 miles away. The West Duluth stores take approximately 18 minutes to travel from New Duluth to West Duluth on public transit (DTA, 2014). If someone wanted to get to Proctor, it would be another 17 minutes from West Duluth to Proctor, plus transfer time and waiting. There is no bus service to Superior, WI unless passengers go through downtown Duluth and transfer.

Existing Conditions Question: How far is the nearest super market, grocery store, farmers' market, or other healthy food retailer (i.e., not a gas station or convenience store)?

In addition to convenience stores, fresh and healthy foods can be purchased at super markets, grocery stores, farmers' markets, or acquired through food shelves or meal delivery programs. Super markets, grocery stores and other larger retail outlets are important because they often have a larger selection of fresh produce, more affordable prices and higher quality produce than convenience stores that are limited to certain quantities and prices based on local purchasing power (Hendrickson, Smith, & Eikenberry, 2006).

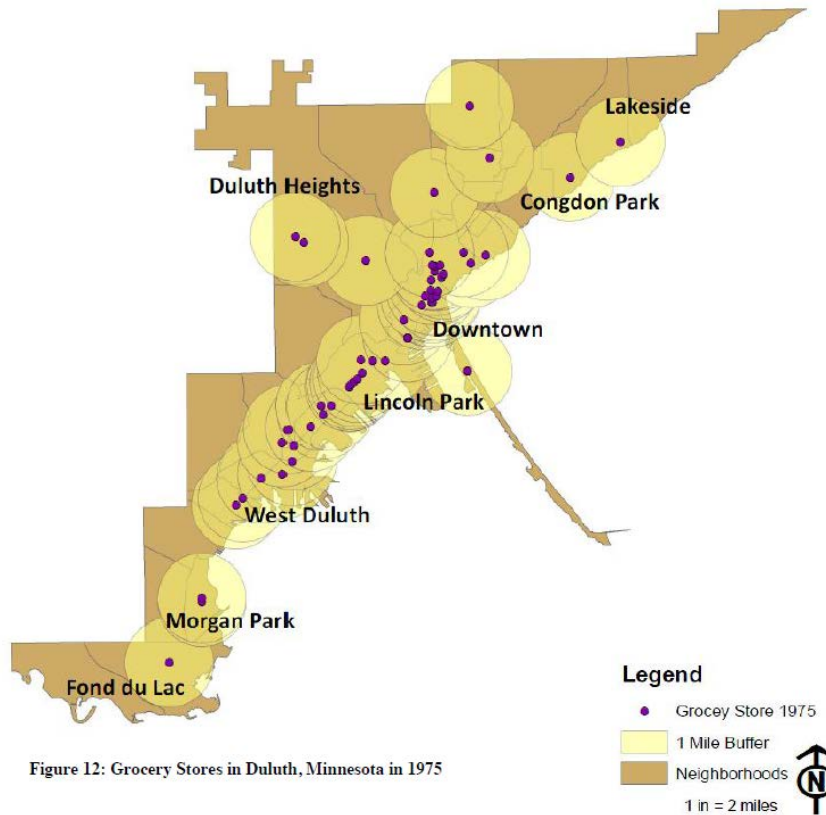


Figure 12: Grocery Stores in Duluth, Minnesota in 1975

FIGURE 71: GROCERY STORES IN DULUTH, MN IN 1975

The University of Minnesota-Duluth and UMN Extension conducted a survey in Lincoln Park to assess food access. They found that a traditional market basket of shopping goods on average cost \$11.45 when purchased at any of the traditional grocery stores, but this same basket of goods cost \$18.08 (an average of 58% more) when purchased from a Lincoln Park/West End convenience store (Pine and Bennett, 2011). However, this study did not add in the additional cost of driving to larger stores (or travel time), which may result in residents not saving as much. The study also acknowledge that convenience stores often have lower quality produce, partly because they have lower turnover of goods, and have more difficulty keeping a fresh stock of fruits and vegetables (Pine and Bennett, 2011).

The closest full service grocery store to Gary/New Duluth is Super One Foods in West Duluth, approximately 6 miles away from Gary. This was not always the case, the University of Minnesota-Duluth and UMN Extension study included a map of grocery stores in Duluth in 1975. (See Figure 71.) This figure demonstrates that grocery stores have become less accessible in recent years.

In addition to grocery stores, households may obtain fresh foods from farmers' markets, food shelves, or meal delivery programs. Gary/New Duluth does not have a farmers' market. Duluth's main farmers' market is located at 14th Avenue E and 3rd Street, to the east of downtown Duluth (Duluth Farmers' Market, 2013).

Food shelves provide free produce, groceries, and/or prepared food to persons and families who are struggling to put food on the table. According to the Bridge to Health Survey (2010), 12.5% of Duluth residents (compared to 7.6% of residents in the Region) use a community food shelf program in the past year. Food shelf utilization was twice as high for females as males (17% versus 8%); highest for the age group 18 to 34 years (20%); highest

for persons with less than a high school degree (57%); and higher for persons who earned 200% of poverty or less (34%). Second Harvest Northern Lakes operates a number of food shelves in Duluth. The closest one to Gary/New Duluth is the CHUM Food Shelf- West located at 4831 Grand Avenue (Second Harvest Northern Lakes, 2014). This food shelf operates on Tuesdays and Thursdays from 11am to 2pm.

Regarding meal delivery programs, Meals on Wheels service is provided to seniors in Gary/New Duluth by the Arrowhead Area Agency on Aging out of the City’s Morgan Park congregate mealsite. Another fresh food resource mentioned in the University of Minnesota-Duluth and UMN Extension study included food buying programs, such as SHARE (distribution site in West Duluth), Ruby’s Pantry (Central Hillside and new site in Morgan Park).

Impact Question: Does the Gary/New Duluth SAP increase the number of retail establishments that sell fresh produce or increase the amount of fresh produce sold at retail outlets?

The Commercial Development recommendations to recruit new businesses (B), compile available land inventory (C) and revitalize or remove blighted properties (D) could provide the required incentives to attract a grocery store, but a grocery store will only succeed if there is enough demand for its products.

The siting of grocery stores is driven by customer demand, cost of land, local taxes, and zoning (Ver Ploeg et al., 2009). The trend for grocery stores over the last couple decades has been towards bigger stores with larger selection in suburban shopping centers (Ver Ploeg et al., 2009). More recently, smaller footprint grocery stores are moving into urban areas, following the return of population to new developments in urban cores. In these urban areas, stores can capture customers from downtown office workers during the day and new residents in the evening, providing a customer base throughout the day. If Gary/New Duluth does establish more businesses and the US Steel site is developed with light industrial, it would help contribute to demand for local market or grocery store.

The USDA estimates that a family of four (two parents and two children) will spend between \$551.70 to \$1,250 every month depending on whether they follow a low, moderate or liberal cost food plan and the age of the children (USDA, 2013D). See Figure 72 for per capita monthly food expenditures.

FIGURE 72: AVERAGE MONTHLY COST OF FOOD AT HOME

SOURCE: USDA FOOD PLANS: COST OF FOOD AT HOME AT FOUR LEVELS, U.S. AVERAGE, JUNE 2013

	Thrifty Plan	Low-cost plan	Moderate plan	Liberal plan
Average per capita monthly cost	\$150	\$195	\$240	\$290

Note: Average per capita monthly cost was calculated by averaging the cost by age group and sex for the four USDA food plan levels.

The population of Gary/New Duluth is approximately 2,700; or around 3,200 if you include both the neighborhoods of Gary/New Duluth and Fond du Lac. Potential average monthly revenue for a market or grocery store, based on the low-cost USDA food plan could be \$526,500 or \$624,000, including Gary/New Duluth residents or both Gary/New Duluth and Fond du Lac residents, respectively. Annually, that could be \$6,318,000 to \$7,488,000 if all food at home was purchased within the neighborhood. The average sales per Minnesota grocery store is \$4,373,159 (Pine and Bennett, 2011).

According to data from the Food Marketing Institute (FMI) and the U.S. Census Bureau, nationwide there is an average of 8,800 residents per supermarket (Scully, 2011). However, some communities have shown that new grocery stores can be successful with lower residential densities (Scully, 2011). One source estimated the average population needed to maintain a grocery store in 2005 was 3,252 residents (O’Brien, 2008).

A 2007 Nielsen Company study found that 60 percent of consumers stated that a grocery store that “provides good value for the money” was the most important factor in deciding where to grocery shop. Only 23 percent of consumers cite proximity to home as the most important factor (Nielsen Company, 2007). However, local access to food is a major concern for youth under 16 and older adults that choose not to or cannot drive, and are either dependent on public transit or rides from friends or family.

Existing Conditions Question: How many restaurants are located within ½ mile of Gary/New Duluth? How many of them sell healthy food options (e.g., not deep fried foods, pizza or desserts)?

Restaurants are another important source of food for a community. If local restaurants do not have fresh and healthy options, residents are forced to choose unhealthy foods. The Gary/New Duluth Community Survey asked residents if fresh and healthy food was accessible to them. Thirty-eight percent of respondents said that fresh and healthy restaurants were not accessible or rarely accessible. See Figure 73.

FIGURE 73: COMMUNITY SURVEY - ACCESS TO HEALTHY AND AFFORDABLE RESTAURANTS

	Not Accessible	Rarely Accessible	Sometimes Accessible	Easily Accessible	Not applicable to me
Healthy and Affordable Restaurants	17	27	39	34	2

Hugo’s Pizza is the only restaurant in Gary/New Duluth. Shotz Bar and Alpine Bar and Lounge both offer food but their primary focus is beverages. Hugo’s Pizza sells pizza, burgers, subs, melts, soup, salad, dinner options including lasagna, spaghetti and meatballs, and fish and shrimp baskets, and a kids menu. The next closest restaurant is the Riverside Bar & Grill located at the Spirit Mountain Grand Avenue Chalet off of Highway 23 and 86th, approximately 3 miles up Highway 23 from Gary. The Riverside offers “traditional pub fare with a twist,” including appetizers, salads, soup, sandwiches, burgers, and flatbreads. Options in Gary/New Duluth for healthy food at restaurants are very limited.

Impact Question: Does the Gary/New Duluth SAP increase the number of restaurants within ½ mile or increase the amount of healthy food options sold at local restaurants?

The Commercial Development recommendations to recruit new businesses (B), compile available land inventory (C) and revitalize or remove blighted properties (D) could provide the required incentives to attract new restaurants to Gary/New Duluth. Commercial Development Recommendation A to establish a local business association or business improvement district could also provide support and resources for entrepreneurs that may be interested in opening up a restaurant or grocery in the area.

Additionally, if the City builds upon the natural resource amenities in the area, developing out the City’s trail system, Gary/New Duluth could become more of a destination. More visitors will create demand for stops along the way to have lunch or grab coffee. Visitors who are coming through the community because they are using

the trails and recreating may want healthy food options, which could increase the opportunities for residents as well.

Existing Conditions Question: Does Gary/New Duluth have one or more community gardens?

Community gardens can be an important source of fresh produce for households. There are no community gardens in Gary/New Duluth. The Gary/New Duluth Community Center and Recreation Area design plan does include a community garden. Ideas coming from the design concept include programming the garden with Stowe Elementary School and older adult residents of Heritage Apartments across Commonwealth Ave. Not only would this increase relationship building and social cohesion, but it would provide physical activity for youth and older adults and access to healthy food.

There is a small greenhouse in Gary/New Duluth called Clark's Greenhouse that provides flowers for the Veteran's Memorial. They are busy in the spring selling seedlings. They could be a partner for the future community garden at the Gary/New Duluth Community Center and Recreation Area and/or other urban agriculture projects in the community.

Impact Question: Will requiring land to be sold at fair market value inhibit the development of a community garden?

One of the Commercial Development recommendations is to sell tax forfeit land (owned by St. Louis County) at fair market value. If land is sold at fair market value it would likely be too expensive to operate a community garden which often generates little or no profit. However, the Gary/New Duluth Community Center and Recreation Area proposes a community garden, so this may not be an issue. If the community wanted to pursue an additional community garden, there is some City land near ME Global that could be used as a community garden. Additionally, if the community or non-profit wanted to develop a community garden, they have a couple options. They could obtain a conditional use deed from the county to manage a community garden, or they could buy the property from DEDA.

The City of Duluth does not have a formal urban agriculture policy yet. One barrier to urban agriculture, which is zoned for in most residential zones, is that produce is for personal consumption only. However, there is precedent for overcoming this barrier; the Duluth Grill did find a way around this. As of yet, Duluth's lack of official policies specifically governing urban agriculture has not hindered community gardens and urban agriculture activities (Wolfe and Frank, 2013).

New Development Opportunities – Residential Development

Existing Conditions Question: How many households in Gary/New Duluth have access to fresh produce (fruits, vegetables, milk, eggs, etc.) within ½ mile of their home?

The importance of distance to supermarkets or grocery stores and health has already been mentioned in the *Commercial Development – Access to Healthy Foods* section. Gary/New Duluth is a low-access community for food. According to the USDA, communities qualify as "low-access communities" if at least 500 persons and/or at least 33% of the census tract's population live more than one mile from a supermarket or large grocery store. Other studies have used shorter distances, closer to ½ to ¾ miles, or a 10-15 minute walk, to assess accessibility (Larsen and Gilliland, 2008). In Gary/New Duluth, the nearest grocery store or super market is at least 6 miles

away. The Milk House and Gary Little Store provide a small selection of fresh produce. Figure 74 shows the number of households and residents within ¼, ½, and 1 mile of at least one or the other convenience store. Less than half of the residents and households are within ½ mile of the convenience stores in Gary/New Duluth. Any distance longer than ½ would be difficult for a person to carry one or more bags of groceries. Distance to super markets disproportionately impacts those with limited mobility (e.g., those dependent on transit, walking or bicycle), including children and older adults.

FIGURE 74: DISTANCE OF GARY/NEW DULUTH HOUSEHOLDS AND RESIDENTS TO CONVENIENCE STORES

Distance to Convenience Store	Number of Households T = 1,145	Number of Residents T = 2,705
0.25 Miles	247 (22%)	635 (23%)
0.5 Miles	446 (39%)	1,095 (40%)
1 Mile	866 (76%)	1,986 (73%)

Children from food-insecure or moderately insecure households consume more of their daily calories during the day while at school and are more likely to eat school meals than children from food-secure households (Potamites and Gordon, 2010). As a result, meals provided for kids at school, and meals for kids during summer can be a significant and important source of nutrition and calories for children.

Child-focused programs, such as the Federal Free and Reduced Lunch Program and the Afterschool Nutrition Program, provide healthy meals to children (Pine and Bennett, 2011). Breakfast is offered at no cost at all schools in Duluth (Duluth Public Schools, 2014). Free lunches are available to children in households with incomes at or below 130 percent of poverty. Reduced-price lunches are available to children in households with incomes between 130 and 185 percent of poverty (USDA-ERS, 2013). In 2013, 366 students were enrolled at Stowe Elementary School, 66% of whom were enrolled in the Free/Reduced Price lunch program (MDE, 2013). Statewide in 2013, 38% of all 845,177 students were enrolled in the Free/Reduced Price lunch program. The higher proportion of students enrolled in Free/Reduced Price lunch program at Stowe indicates that these programs may be a particularly significant source of food for children in this community.

Stowe is also a site for summer meal programs funded by the USDA Summer Food Service Program. Meals are provided to children 18 years of age and under without charge, and adults who accompany their children can purchase a meal for \$3.60 (Duluth Public Schools, 2014). Breakfast and lunch meals are served from June through August every summer. Menus include a variety of food items, such as hot entrees, salads, sandwiches, vegetables, fruits, bread, milk, and dessert items (Duluth Public Schools, 2014). Local residents have noted kids and parents walking or biking to Stowe in the summer for the meals program because no school bus is provided. MDH determined that 593 of the 601 children under 18 in Gary/New Duluth (99%) live within 1 mile walking distance and 204 (34%) live within ½ mile walking distance of Stowe. As a result, walking or biking to meals may increase physical activity but access may still be difficult for students who live more than ½ or 1 mile from school.

Food security for older adults is determined not only by what they can afford, but their proximity to markets and grocery stores and senior services in their area. MDH determined that 130 of the 377 residents 65 years and older (34%) live within ½ mile of the Milk House and Gary Little Store; while only 58 (15%) live within ¼ mile of

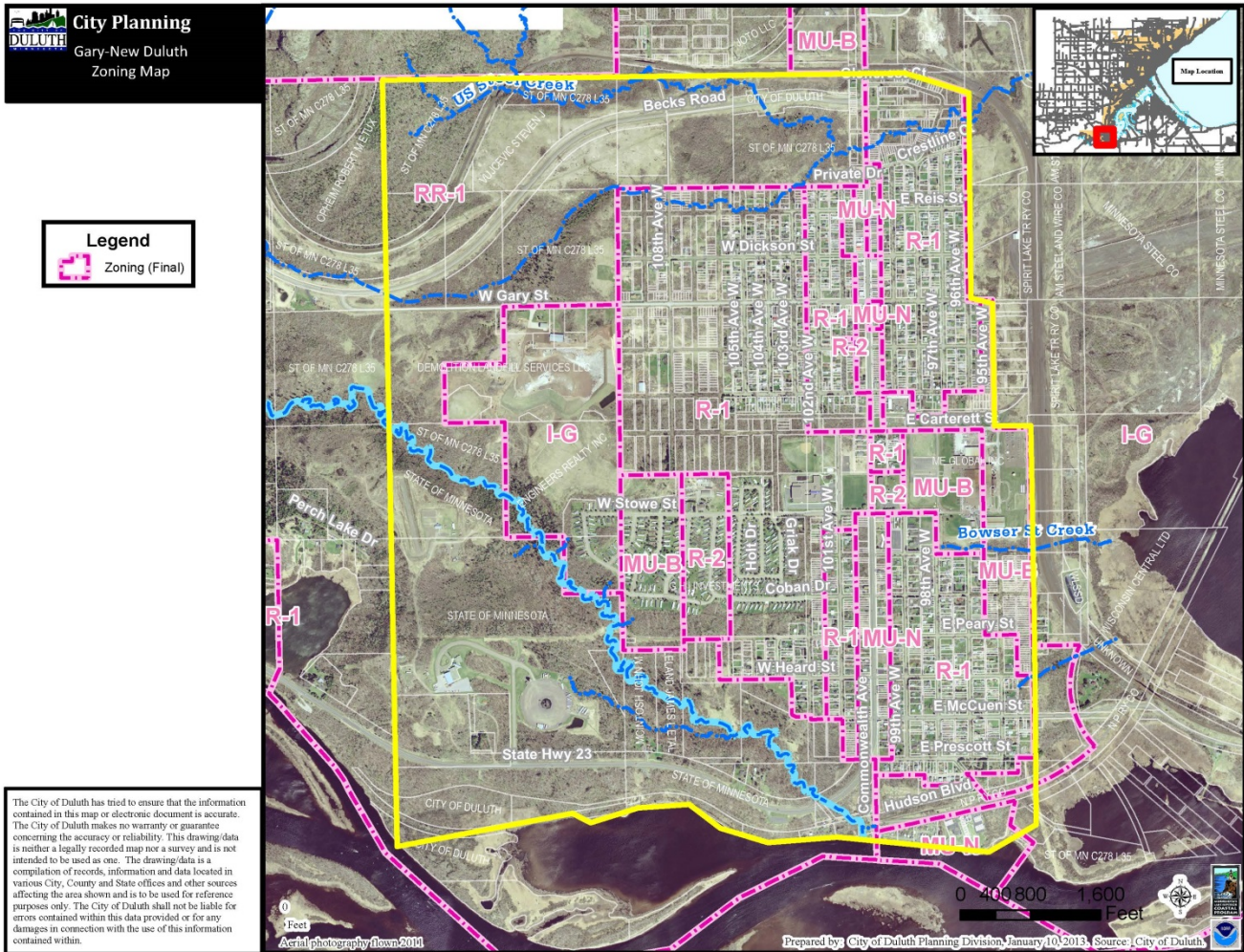
these two convenience stores. As mentioned previously, senior citizens living in Gary/New Duluth have access to the Meals on Wheels service out of Morgan Park. Additionally, the Morgan Park Senior Program provides daily lunch for seniors. The number of seniors who utilize this program varies by day and what food is being served. The number of older adults that live within ¼ of bus stops is analyzed in the *Transportation – Access to Healthy Foods* section.

Additional sources of fresh, healthy foods include Community Supported Agriculture (CSA) programs and homeowners' personal gardens. Superior Grown, an organization serving 17 counties in Northeastern Minnesota and Northwestern Wisconsin, provides a list of the CSAs in the region and a description of those with drop off sites in Duluth. CSA's with dropoff sites in Duluth include the following farms: Chelsea Morning Farm in Two Harbors, MN; LaFinca in Bruno, MN; and Northern Harvest Farm, Food Farm, Stone's Throw Farm, and YKer Acres in Wrenshall, MN. Each CSA provides different options for share purchases, including fresh fruits and vegetables, meats, dairy and eggs. While CSAs can be a great source of locally produced fresh foods, they often cost more than produce at a grocery store like SuperOne Foods and require access to a vehicle to reach the pick-up sites.

Residential gardens can be a regular source of fresh produce for residents. A survey conducted in the Lincoln Park neighborhood of Duluth showed that 48% of survey respondents described gardening as "somewhat important" for provisioning their households (Pine and Bennett, 2011). Bridge to Health Survey (2010) indicated that 22% of Duluth residents (versus 40% of residents in the entire Region) grew food at home or in a community garden in the past year. Personal gardening was highest for ages 45 to 54 (34%) and 55 to 64 (37%); highest for high school graduates (33%; college grads were second highest with 29%); and higher for earning more than 200% poverty (25% versus 11%).

Urban agriculture is defined by the Duluth Zoning code as: "the raising of crops and small livestock primarily for local sustenance, rather than commercial purposes, for sale and consumption within the immediate Duluth/Superior area" (Duluth, 2013). In Duluth, urban agriculture is a permitted use in the following Residential zones: Rural Residential-1 (RR-1), Rural Residential-2 (RR-2), Residential-Traditional (R-1), Residential-Urban (R-2), Residential-Planned (R-P), and Mixed-Use Planned (MU-P) (Duluth, 2013). Figure 75 shows the zoning for Gary/New Duluth. Urban agriculture is allowed in a significant portion of the community, except for small zones of Mixed Use-Business Park (MU-B) or Mixed Use-Neighborhood (MU-N), and one area of Industrial-General (I-G). It is unknown how many Gary/New Duluth residents garden and rely on their produce as an important source of their household's fruits and vegetables.

FIGURE 75: GARY/NEW DULUTH ZONING MAP (CITY OF DULUTH, PLANNING)



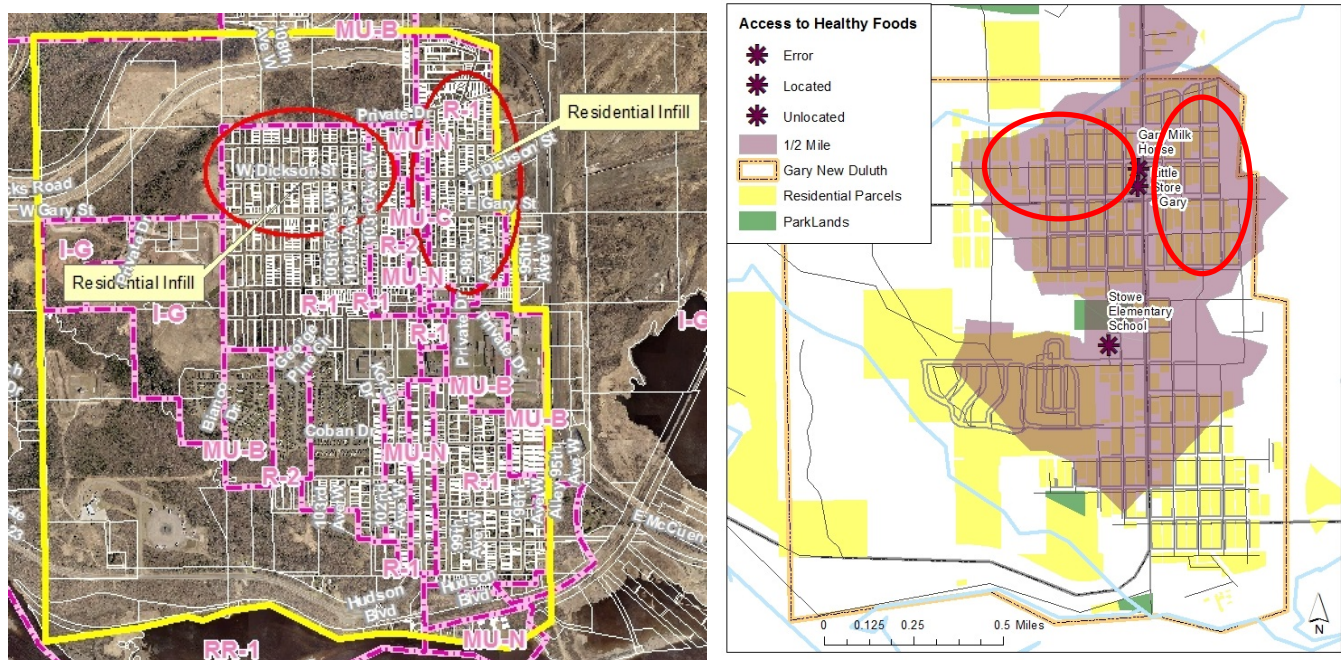
Impact Question: Do the Gary/New Duluth SAP residential development recommendations increase the number of households with access to fresh produce within ½ mile of their home?

The Residential Development Recommendation A. “Encourage residential infill on vacant lots within the developed portions of the neighborhood and available lands for housing within the study area,” has the potential to increase access to healthy foods if it either a) located new residential infill near existing healthy food access points (e.g., the Milk House, Gary Little Store, or Stowe Elementary), or b) increases density to allow for increased transit service to existing supermarkets and grocery stores, such as the SuperOne Foods in West Duluth.

The Small Area Plan does not identify individual lots for infill, but rather identified residential areas of the community where residential infill efforts should be focused. The location of preferred residential infill is identified in Figure 76. Additionally, there are individual lots throughout the neighborhood that were not identified (John Kelley, personal communication, January 17, 2014). Comparing the locations of residential infill to the distance to healthy food options, highlights that residential infill on vacant lots within the developed portions of the neighborhood will 1) likely increase the number of households within ½ mile walking distance to

healthy food options at the Milk House and Gary Little Store, but 2) will not increase access for children and students utilizing food programs at Stowe Elementary, and infill residential in New Duluth will not provide walkable access to existing convenience stores or restaurants.

FIGURE 76: GARY/NEW DULUTH RESIDENTIAL INFILL DESIGNATION AND ACCESS TO HEALTHY FOOD



Natural Environment

Existing Conditions Question: How many households have room to plant a family garden or fruit trees? Or raise bees or chickens? Or fish in the St. Louis River? (See Residential Development Section also)

Although this focus area of the HIA is specifically related to the Natural Environment’s impact on access to food, food cultivation does require some disturbing of the natural environment and therefore the discussion of access to food is broader than that which would be occurring naturally in the environment. The natural environment can provide access to healthy foods through wild or cultivated fruit trees and bushes or through activities such as fishing in local waterways.

The Gary/New Duluth area is generally conducive to new tree growth. The potential for additional tree growth is high based on factors such as the amount of private and public land that is not currently covered in pavement or buildings, the presence of grassy areas between the curb and sidewalks for street trees, and adequate levels of annual rain and sunlight (American Forests, 2009). The same factors, such as adequate vacant land that is not built on, makes the area a good target for fishing, chicken-raising, beekeeping, area-wide compost and mulching programs, and gardening, all of which support a healthy natural environment and promote local food production.

Many of these activities already occur in Gary/New Duluth and are permitted by the City. Boy Scouts Landing is a popular location for fishing in the community. In 2008, the City passed a chicken-raising ordinance which allows a person to obtain a license to raise up to five chickens outside of single-family dwellings so long as they do not become a nuisance (Duluth City Chickens, 2013). Bees have a direct relationship with food production systems and healthy ecosystems, as well as being an increasingly sensitive species in regards to human development and climate variables. Current City of Duluth regulations allow for the 'Keeping of Honeybees' for up to five hives with an annual license and \$10.00 fee paid to the city (City of Duluth, 2012). The City does not have any active programs for composting; however, St. Louis County provides some basic information about composting in individual backyards (St. Louis County, 2014). Finally, single family homes in the Gary/New Duluth area may have room to plant a small garden. See *Residential Development – Access to Healthy Foods* for a discussion on residential gardens.

If the natural environment is degraded to the point where it no longer supports these activities, human health and the ability to access locally cultivated foods will also likely be impacted.

Existing Conditions Question: Are contaminated sites identified in the area that would affect local soil or water condition?

Contaminated or blighted sites within GND can be both an impediment to new development and a negative impact on the environment. Additionally, the Gary/New Duluth is adjacent to the state's largest Superfund site, U.S. Steel, which carries a history of environmental contamination. MDH studies in 1998, 2002, and 2006 and found the following contaminants in soil, groundwater and surface water on site: tar, polycyclic aromatic hydrocarbons (PAHs), mercury, polychlorinated biphenyls (PCBs) and chlorinated organics, metals, acids and solvents, and benzene and toluene (MDH, 2014). Not all contaminants found were at or above levels of health concern. In fact, large areas of the site are likely free from contaminants at levels of health concern. Additionally, a significant amount of clean-up has already occurred on the site. MDH recommends reviewing prior uses of sites and testing to guide future environmental clean-up and redevelopment.

There are no definitive standards for soil contaminant levels safe for food production (EPA, 2011). The 2011 EPA Brownfields and Urban Agriculture report recommends a series of steps to converting a brownfield to agricultural use. The steps include: 1) identify previous use and determine whether previous use is high or low risk to site soil and water, 2) perform sampling, 3) interpret results, 4) manage risks (such as, performing a clean-up or implementing best management practices), and 5) begin farming. Best management practices include constructing physical controls to reduce windblown contamination from nearby sources, reduce weed establishment, improve soil quality and organic matter (use soil amendments and add topsoil or clean fill). The EPA recommends raised beds or container gardens to improve water drainage and prevent compaction of soil.

MDH has guidelines for fish consumption from adjacent waterways (including the St. Louis River and Lake Superior) broken down by specific populations, including children and women who may be pregnant, and men and women not planning to be pregnant. The guidelines are available on the [MDH – Fish Consumption](#) website.

Impact Question: How will SAP Natural Environment Recommendations affect urban agriculture, including, soil conditions, beekeeping and fruit trees, and fishing in the GND area?

The Natural Environment Recommendations A “Minimize adverse impacts on the natural environment through leadership and policy, and address impacts of past practices” and E “Encourage redevelopment of Brownfields identified in the study area,” could contribute to the remediation of soil and improve water quality in the study area and adjacent waterways. Remediated soils improved water quality will potentially reduce contaminants in produce grown on cleaned-up sites (EPA, 2011). Improvement water quality in waterways may result in less bioaccumulation of contaminants in fish, making them safer for regular consumption.

If the community wanted to promote beekeeping in the Gary/New Duluth SAP, a recommendation could be added to promote educational programs and installation assistance through the City or local organization for beekeeping.

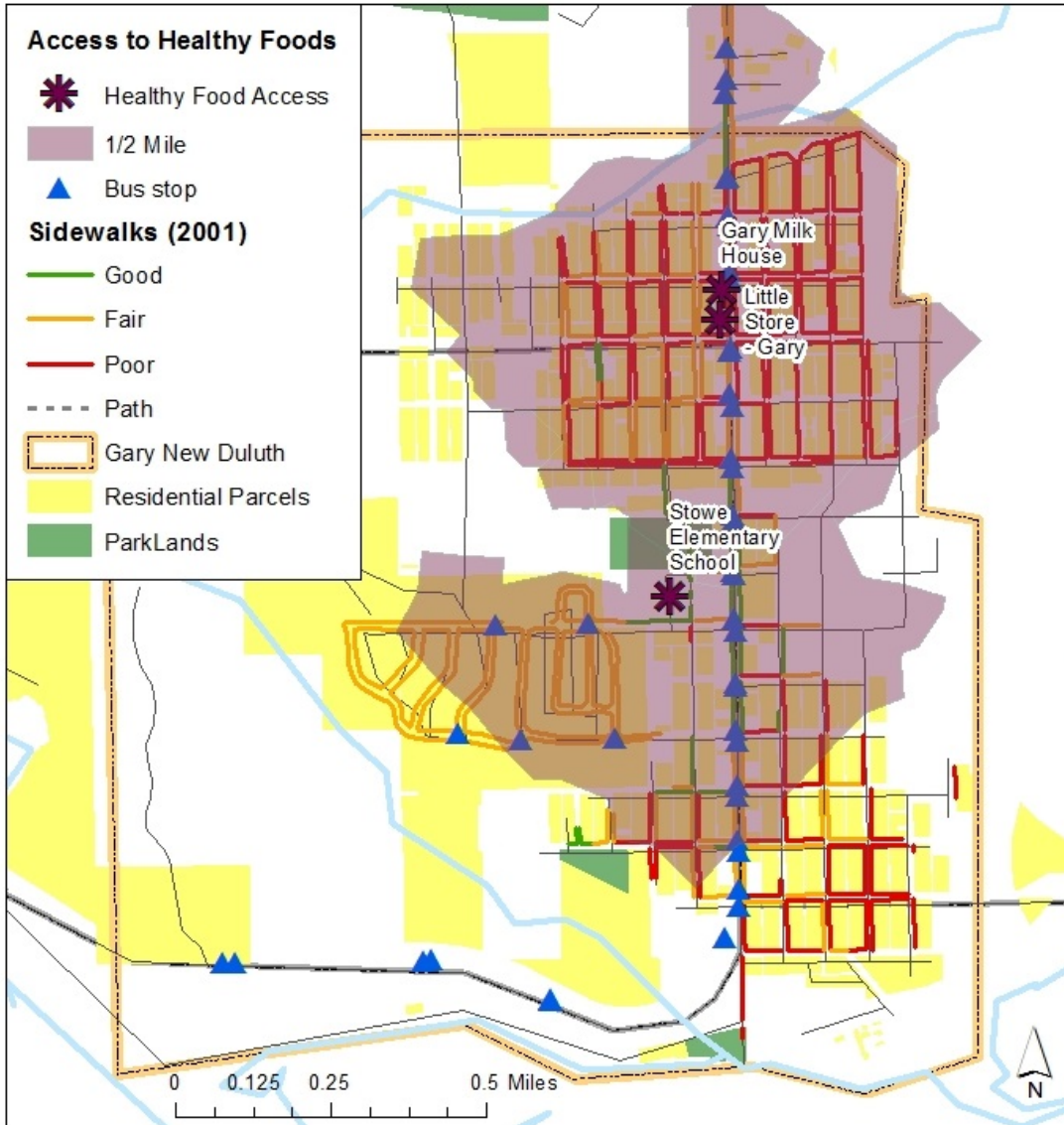
The *Natural Environments – Social Cohesion* section touches on the importance of trees for promoting environments in which people want to walk and recreate. Additionally, tree canopy can protect local waterways from excess runoff, reduce the impact of extreme heat events, and provide a setting conducive to local fruit trees and bushes to be grown. In 2012, the City planted 170 apple and 20 cherry trees through the Duluth Re-Leaf Program (City of Duluth, 2012).

Transportation

Existing Conditions Question: Does a sidewalk network exist that allows Gary/New Duluth residents to walk to healthy food retailers in the community? Can GND residents take a bus to a full service grocery store?

As mentioned in the previous section, sidewalks are one of the keys to encouraging more pedestrian activity and the most important factor for pedestrian safety. By providing sidewalks throughout the neighborhood to existing and future convenience stores and healthy food options, Gary/New Duluth residents will have increased access to healthy foods. Figure 77 shows the location of healthy food sites (including retailers and Stowe Elementary school) with the locations of bus stops and the sidewalk inventory showing indicators of sidewalk condition (poor, fair or good). This figure demonstrates that overall sidewalks are present on Commonwealth Ave and in the residential neighborhoods within ½ mile walking distance of the Milk House and Little Store, where groceries can be purchased locally. Unfortunately, most sidewalk conditions in Gary are fair to poor. The only major gap in sidewalk network in Gary, where walking distance is approximately ½ mile or less, is on McGonagle St from Commonwealth Ave to 95th Ave.

FIGURE 77: NON-MOTORIZED TRANSPORTATION ACCESS TO HEALTHY FOOD



As noted in previous sections, the nearest full service grocery store is located in West Duluth (Super One). Bus service is provided from Gary/New Duluth to West Duluth (see the *Transportation – Social Cohesion* section for a more detailed description of bus service). However, sidewalk conditions in Gary/New Duluth may discourage transit use because the walking environment to the bus stops is in poor condition, and the pedestrian environment once off the bus in West Duluth is uninviting and potentially dangerous. Transit riders get off the bus and need to cross a Kmart parking lot to get to the Super One grocery store. See Figure 78 for a depiction of the distance to and walking environment near Super One Foods.

FIGURE 78: DISTANCE TO AND WALKING ENVIRONMENT NEAR SUPER ONE FOODS



Impact Question: Does the Gary/New Duluth SAP recommend a new healthy food retailer or provide new/increased bus access, bike route(s) or pedestrian path(s) to existing healthy food retailers?

The most convenient option for increasing access to healthy foods, would be to provide a new healthy food retail option in Gary/New Duluth. However, if that option is not possible, the Gary/New Duluth Small Area Plan does include a number of Transportation and Non-Motorized Transportation Recommendations that could improve access to healthy food. The following Recommendations would improve access to healthy foods by improving the pedestrian or bicycling environment:

Transportation Recommendations

- A. Promote safe and comfortable travel in the neighborhood.
- C. Encourage the use of traffic calming treatments along Commonwealth Avenue and neighborhood streets including changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and improve street safety.
- D. Encourage streetscape features, such as trees, landscaping, and street furniture that will contribute to the livability and unique character of Commonwealth Avenue and the entire neighborhood.

F. Where potential trail corridors are planned and not located on City property, work with adjacent property owners to secure appropriate easements.

Non-Motorized Transportation Recommendations

- A. Encourage the City to establish a sidewalk repair program.
- B. Improve existing sidewalk conditions to create a comprehensive safe and convenient network.
- C. Establish a network of recreational trails within the neighborhood to facilitate pedestrian and bicycle travel.
- D. Encourage Minnesota Department of Transportation to consider installing a designated bike lane along Commonwealth Avenue.
- F. Link trails to adjacent neighborhoods, community facilities such as community centers, parks, schools, and the commercial and retail activity along Commonwealth Avenue.

The Gary/New Duluth SAP does not include any recommendations for improving transit access. Gary/New Duluth has good service for residential and commercial density.

Existing Conditions Question: Does the cost of transportation in GND limit the amount of money available for purchasing healthy food?

Gary/New Duluth is far enough away from the downtown Duluth, concentrations of goods and services, and the density required to support additional transit service, that it is basically a requirement for residents of the community own a vehicle. Figure 79 shows car ownership for households in Census Tract 38 (Gary/New Duluth and Fond du Lac), Duluth and Minnesota. As this table shows, 96% of households own at least one vehicle and 61% of households own two or more in Gary/New Duluth.

FIGURE 79: CAR OWNERSHIP: VEHICLES AVAILABLE (2012 ACS 5-YEAR ESTIMATES)

	Occupied Housing Units	No Vehicles	1 Vehicle	2 or more vehicles
Census Tract 38	1,274	52 (4%)	450 (35%)	772 (61%)
Duluth	35,862	4,443 (12%)	13,017 (36%)	18,402 (51%)
Minnesota	2,101,875	148,725 (7%)	635,976 (30%)	1,317,174 (63%)

The earlier section on *Residential Development - Social Cohesion* included a discussion of housing and transportation affordability in Gary/New Duluth. While housing is considered affordable (less than 30% of median household income) in Gary/New Duluth, when combined with transportation costs, it was no longer affordable (more than 45% of median household income) (CNT, 2014). If households are housing-transportation cost-burdened, they are less likely to have money available to purchase other necessary goods, including healthy food.

According to the Bureau of Labor Statistics (BLS) 2012 Consumer Expenditure Survey data, on average households in the Midwest spend 13% of their income on food (2% on fruits and vegetables); 31% on housing; and 18% on transportation (6% on gasoline and motor oil, 1% on public and other transportation) (BLS, 2012A). The average cost of transportation was \$8,604 per household. If it were possible to only take public transit, and each household purchased three transit passes (average household size is around 2.4) at \$40 each per month it would cost \$1,440 annually.

Admittedly, there are costs associated with the increased travel time of taking public transit and transferring buses. To calculate the additional cost of travel time, one could use a rough estimate of \$10/hour as the value of a person's time and multiply it by the travel time from Gary/New Duluth to downtown Duluth (40 minutes by bus or 17 minutes driving). Using this method, it would cost almost \$7 to take the bus (each way) and \$3 to drive (each way), in travel time alone. If you assume that a person will take one trip into and out of downtown five days per week, and once on the weekend, you can add \$4,368 to the cost of taking public transit, and \$1,872 to the cost of driving, per person annually. As result, even if you add in the cost of travel time it is still significantly less expensive to take public transit than to own a car. For housing-transportation cost-burdened households this could mean more money for expenditures on healthy food.

Particularly for its size, the City has an excellent bus system that greatly benefits those individuals who cannot afford a personal vehicle or choose not to drive their own vehicle. Also, Duluth has [STRIDE Services](#) for individuals with disabilities, again a huge benefit.

Impact Question: How will GND SAP transportation recommendations affect the cost of transportation and as a result the amount residents have to spend on healthy food?

The only way that the SAP Transportation Recommendations can affect the cost of transportation is by reducing driving through increasing walking, bicycling, and transit ridership. Gary/New Duluth SAP Transportation and Non-Motorized Transportation recommendations to improve the pedestrian environment by reducing driving speeds (A), encouraging traffic calming (C), improve the streetscape on Commonwealth (D), and improve the sidewalk network and conditions (Non-Motorized A and B), will improve the pedestrian environment for walking. Additionally, SAP Non-Motorized Transportation Recommendations to increase trails (C, F and G) and add a bicycle lane along Commonwealth Ave (D) will improve conditions for bicycling.

These recommendations may encourage residents to walk or bike to bus stops in the neighborhood and along the Commonwealth Ave commercial corridor, and therefore increase transit ridership. An increase in transit ridership would result in households having more money to spend on healthy food. However, there are no SAP Recommendations to change transit services, and based on population and job density it is not practical or feasible to recommend increases in service.

Park Planning

Existing Conditions Research Question: What current parks and recreation facilities or programs exist that provide access to healthy foods?

The connection between parks and recreation facilities and access to healthy foods is tenuous, unless the park and recreation system is providing youth meals for programmed activities (doesn't exist in Gary/New Duluth), or there are community gardens or other edible plants and trees. Currently, there are no community gardens in Gary/New Duluth, there is no programmed recreation that provides food at the Park, and there are no fruit trees or edible plants for public harvesting.

The Gary/New Duluth Community Survey asked residents if fresh and healthy food was accessible to them. Over half of respondents said that fresh and healthy food was easily accessible. See Figure 80. However, when asked

to rank key or priority issues for the community, 40% responded that Farmers’ Markets and Community Gardens were “high priority” (see Figure 81); and improved access to food options or a grocery store was the most frequent response when residents were asked the open ended question about what they would like to see changed in Gary/New Duluth.

FIGURE 80: COMMUNITY SURVEY - ACCESS TO FRESH AND HEALTHY FOOD

	Not Accessible	Rarely Accessible	Sometimes Accessible	Easily Accessible	Not applicable to me
Fresh and healthy food	13	12	30	60	1

FIGURE 81: COMMUNITY SURVEY - PRIORITY OF FARMERS' MARKETS AND COMMUNITY GARDENS IN GND

	Not a Priority	Low Priority	Medium Priority	High Priority
Farmers’ markets and community gardens	9	18	42	45

As noted in the *Residential Development – Access to Healthy Food* section, residential and/or community gardens can be a regular source of fresh produce for residents. A survey conducted in the Lincoln Park neighborhood of Duluth showed that 48% of survey respondents described gardening as “somewhat important” for provisioning their households (Pine and Bennett, 2011). Bridge to Health Survey (2010) indicated that 22% of Duluth residents (versus 40% of residents in the entire Region) grew food at home or in a community garden in the past year. Personal gardening was highest for ages 45 to 54 (34%) and 55 to 64 (37%); highest for high school graduates (33%; college grads were second highest with 29%); and higher for earning more than 200% poverty (25% versus 11%).

Impact Research Question: How will the proposed GND Community Center and Recreation area affect access to healthy foods?

The Gary/New Duluth Community Center and Recreation Area proposes a community garden, which could increase access to healthy foods for the gardeners, and could increase access to fresh foods for the community if any produce was sold from the garden. The City of Duluth does not have a formal urban agriculture policy yet. One barrier to urban agriculture, which is allowed in most residential zones, is that produce is for personal consumption only. However, there is precedent for overcoming this barrier; the Duluth Grill did find a way around this. And Duluth’s lack of official policies specifically governing urban agriculture has not hindered community gardens and urban agriculture activities (Wolfe and Frank, 2013). The Duluth Parks and Recreation Master Plan (2010) includes Action Step #44 which supports “more naturally functioning landscapes (native vegetation, rain gardens, community gardens, butterfly gardens, etc.) in all parks, regardless of their size.”

To help facilitate the success of the community garden, the GND Development Alliance could consider partnerships with established organizations working on access to healthy food, including Community Action Duluth’s [Seeds of Success](#) and the [Duluth Community Garden Program](#). The closest Seeds to Success garden is

located in West Duluth and the closest Duluth Community Garden Program is located in Riverside. Additionally, the Duluth Community Garden Program provides free garden kits to low-income families.

In addition to using gardening to increase access to healthy foods, the updated Community Center could be used as distribution for a farmers' market or mobile produce truck, if the community decides that is something they want to pursue. See *Commercial Development – Access to Healthy Foods* for a discussion of mobile produce markets, food hubs and farmers' markets.

RECOMMENDATIONS

In order to promote the positive impacts of the Gary/New Duluth SAP and reduce the negative effects, the HIA proposes a number of recommendations. The recommendations were developed by the HIA Technical Advisory Committee and HIA project team, with input from community members. Each recommendation includes a priority level (low to high) that was identified by the HIA Technical Advisory Committee based on a combination of the recommendation's significance for health impacts and feasibility the recommendation based on the City's activities and priorities. Appendix D provides a summary table of the recommendations, including the agency responsible for implementing the recommendation, the timeline for implementing the recommendation, evidence that the recommendation will be effective, and the priority level of the recommendation.

The HIA recommendations have been grouped by the health determinant topic areas of social cohesion, physical activity, and access to healthy food. Each group is then subdivided by the sections of the SAP (commercial, residential, natural environment, transportation, and park planning).

SOCIAL COHESION

In the [Commercial Development](#) section, the Gary/New Duluth SAP may promote social cohesion by strengthening relationships among business owners; offering new business and recreation amenities that act as informal gathering spaces for residents; increasing employment opportunities; increasing the sense of identity and belonging with signage and wayfinding; and decreasing crime and improving safety through the removal and redevelopment of blighted properties and appropriate lighting and streetscape improvements. The HIA proposes the following draft recommendations to further promote social cohesion in Commercial Development:

#C1. The proposed **Gary/New Duluth Business Association should network with West Duluth Business Group or other appropriate business groups, and add LISC as networking partner and investigate becoming an [At-Home Neighborhood](#)**, if possible. This recommendation could promote social cohesion by strengthening relationships among business leaders and community members, and encourage a sense of identity and belonging in the neighborhood through highly visible achievements and promotion of achievements. Other neighborhoods, including Morgan Park, West Duluth, and Lincoln Park, have had success as LISC At-Home Neighborhoods by developing neighborhood revitalization plans, identifying new opportunities for housing, and repurposing dilapidated buildings. This recommendation should be implemented as soon as the Gary/New Duluth Business Association is established (Gary/New Duluth SAP Commercial Development Recommendation A). The HIA TAC determined the priority level for this recommendation is High.

#C2. The City's public information coordinators and the Gary/New Duluth Community Club should coordinate to **increase media connections to promote the identity of Gary/New Duluth**, including connecting the City's Wikipedia page to Gary/New Duluth, Tweeting, and connecting with Perfect Duluth Day to ensure Gary/New Duluth events are publicized on the Duluth events blog. Promoting the neighborhood "brand" can increase identity and sense of belonging to place, which can contribute to social cohesion (Huang, 2013; Stabert, 2012). This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is Low/Medium.

#C3. Duluth Workforce Development should **connect residents with training opportunities and workforce development resources** (such as, [Duluth at Work](#), the Duluth Talent Database, etc.) to ensure that residents have the appropriate training for new jobs in the City and community. To increase access, trainings and/or neighborhood job fair should be held in the community at Stowe School or new Community Center. Increasing employment and access to empowering jobs that allow a person to provide for themselves and their family with dignity can promote social cohesion (World Bank, 2013). There are a number of jobs available at any given time in Duluth, but there is often a mismatch in the skills workers need or lack of information about open positions. This recommendation should be implemented immediately and continue on an ongoing basis. The HIA TAC determined the priority level for this recommendation is High.

#C4. The Duluth Economic Development Authority (DEDA) and Community Development should **focus recruitment on high jobs-density businesses to catalyze economic development, and prioritize development on the sites identified by the Gary/New Duluth blighted property list**. DEDA has a record of success with recruiting job-creating businesses to redevelop vacant and blighted properties, including the Ikonics project on the former Atlas Cement Plan site in the Gary/New Duluth area and expansion of the aircraft parts supplier AAR at a former Northwest Airlines site at the Duluth International Airport. This recommendation should be implemented in the next one to five years. The HIA TAC determined the priority level for this recommendation is Medium/High.

#C5. The community should work with the City and other partners to **develop a comprehensive wayfinding system that welcomes people to Gary/New Duluth**. The Canadian Northern (CN) bridge could be one of four sign points and gateways into Gary/New Duluth (similar to Superior's branding across Blatnik Bridge). If CN does not want a sign on the bridge, then a new sign could replace the existing basic green metal sign with white letters. Promoting the neighborhood "brand" can increase identity and sense of belonging to place, which can contribute to social cohesion (Huang, 2013; Stabert, 2012). See the box below for resources for developing a neighborhood identity. This recommendation should be implemented in the next one to five years. The HIA TAC determined the priority level for this recommendation is Medium/High.

Resources for Developing a Neighborhood Identity

- [Recipes for Building and improving community](#)
- [Using Arts to build community identity and pride](#)
- [The Branding of Cities: Exploring City Branding and the Importance of Brand Image](#)
- [City of Portland: Neighborhood Economic Development Strategy](#)

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In the **Residential Development** section, the Gary/New Duluth SAP may promote social cohesion by introducing new residents into the community increasing opportunities for new social ties. Additionally, social cohesion can be promoted by ensuring housing stock remains affordable to current residents, thereby reducing residential turnover and maintaining social networks. However, the Residential recommendations could decrease social cohesion if new residential infill housing units cost more and as a result property values and

taxes increase, displacing existing residents and breaking their social ties; and if income inequality between new and current residents increases. The HIA proposes the following draft recommendations to further promote social cohesion and mitigate negative impacts in Residential Development:

#R1. The Gary/New Duluth Community Club and Gary/New Duluth Development Alliance should **coordinate a community organized “welcome wagon” to welcome new residents**. When new residents are welcomed to a community it can help promote their sense of belonging to a neighborhood, develop new social networks and promote social cohesion. Examples of other communities that have welcoming committees include: the [Lost Creek Neighborhood Association Welcome Committee](#), and other communities described in this [Times of Northwest Indiana article](#). This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is Medium.

#R2. The SAP should include a recommendation to **support more diversified housing stock** to meet the needs of all citizens in all neighborhoods for all incomes, all ages, and all family groupings. This should include **support for transitional housing, such as single-level housing for seniors and persons with disabilities**. The SAP could either make a stand-alone recommendation or modify Residential Development Recommendation C to state, “Encourage a mix of housing types to meet the needs of all citizens of all incomes, ages and family groups, including single-family and multi-family Market Rate housing stock and transitional housing, such as single-level housing for seniors and persons with disabilities.” Providing a diversified housing stock will allow households with varied incomes, ages, and needs to find stable housing or remain in their current housing, specifically acknowledging the aging adult population and persons with disabilities who may require additional needs to be met to remain active residents in the community. Stable housing and low residential mobility fosters development and maintenance of social networks and fosters social cohesion (Livingstone, Bailey and Kearns, 2008). Begin by developing a map of residential properties identified for residential construction as part of implementation. This work could be done as a partnership between private sector (realtors, developers) and the City, including the Housing Redevelopment Authority (HRA) and DEDA. The map should be completed within the next year and development of housing should occur over the next one to five years. The HIA TAC determined the priority level for this recommendation is High.

#R3. Local organizations and agencies, such as St. Louis County Public Health, the Arrowhead Area Agency on Aging, and others, should collaborate to **support in-home care services or develop a residential-care home for seniors or those with disabilities**, which could provide jobs in the community, as well as transitions for people who live in the community and want to remain there. This recommendation promotes both jobs and stable housing, which are two key components to strong community cohesion. This recommendation should be implemented in the next one to five years. The HIA TAC determined the priority level for this recommendation is Medium.

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In the **Natural Environments** section, the SAP may promote social cohesion by preserving natural and well-vegetated areas and incorporating natural features into future development; increasing access to parks, trails and natural areas; and promoting development and programming that would preserve the environment and/or bring the community together to promote social bonding. The HIA proposes the following draft recommendations to further promote social cohesion in Natural Environment:

#N1. Duluth City Council should adopt **an urban tree canopy goal and strategy** to further increase Duluth's commitment to preserving and improving the natural environment in all neighborhoods. Currently the city's Engineering Department addresses street trees during road and sidewalk reconstruction, but there are no minimum tree planting requirements they must meet. Fruit trees should be considered in the goal to increase access to healthy food. Residents of neighborhoods with higher levels of natural and well-vegetated areas consistently score higher on measures of connectedness, social cohesion, community involvement, and lower in stress and anger (Croucher, 2008). Additionally, street trees may be associated with lower rates of crime, which can deter social cohesion (Kuo, 2001; Garvin, 2013). This recommendation should be implemented in the next one to five years. The HIA TAC determined the priority level for this recommendation is Low.

#N2. The University of Minnesota (UMN) Duluth and Extension should **conduct an Ecosystem Services Assessment** to quantify the benefits of the local urban forest and waterways in Gary/New Duluth. Quantifying the benefits of the natural environment helps build broad support for the environment. There are online tools and local experts who can apply the methodologies to the area, such as American Forests' [Urban Forests – Tools & Resources](#). This recommendation should be implemented in the next two to three years. The HIA TAC determined the priority level for this recommendation is Low.

#N3. The SAP should include a recommendation to **encourage new residential and commercial buildings to exceed the City's sustainability standards for high-efficiency building design and operation**. The new SAP Natural Environments Recommendation could state, "Encourage new residential and commercial buildings to exceed the City's sustainability standards outlined in the UDC, Section 50-29." Current Sustainability Standards require new multifamily residential and commercial development to meet a minimum number of points, which can be achieved through various options including developing on a Brownfield site, meeting Energy Star standards for energy efficiency, installing renewable energy systems, retaining pre-development vegetation, and providing reserved parking spaces for hybrid/electric/low energy vehicles. Sustainable building design can help protect our natural resources and environmental surroundings and promote a number of positive outcomes in a community including: healthy environments through the use of natural daylighting, social interaction of building occupants with comfortable common spaces, and a sense of identity if the building becomes an icon within a community. This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is Medium.



In the **Transportation** section, the SAP may promote social cohesion by decreasing traffic speeds, increasing use of traffic calming treatments, encouraging streetscape features, and improving sidewalk conditions which will all improve the pedestrian environment to encourage more walking and neighborly interaction, especially for older adults and youth who rely on active forms of transportation to get to social activities. The HIA proposes the following draft recommendations to further promote social cohesion in Transportation:

#T1. The City should **develop an overlay district with specifications for street lighting, marking unmarked street crossings, maintaining short blocks and frequent street crossings, orienting any new development to face the street, and increasing window coverage on street-facing commercial buildings**. (See Commercial Development HIA Recommendation #C6.) Residents of walkable communities tend to have higher levels of social cohesion (Rogers et al, 2010; Leyden, 2003). If a new overlay district were developed,

Gary/New Duluth could implement the overlay, thereby increasing the safety and comfort of the pedestrian environment through lighting, safe crossings, shorter blocks and human-scale development, which could increase the walkability of Gary/New Duluth and potentially increase levels of social cohesion. This recommendation should be implemented in one to five years. The HIA TAC determined the priority level for this recommendation is Medium.

#T2. In the spirit of accessibility and creating a welcoming/usable neighborhood for all, streets should be designed and maintained with all users in mind. The City Council should **approve the adoption and implementation of a [Complete Streets Policy](#)** in Duluth. This recommendation should be implemented within the next year. The HIA TAC determined the priority level for this recommendation is Medium.

#T3. The SAP Non-Motorized Transportation Recommendations should **address lighting and vegetation along sidewalks and trails to enhance safety**. The SAP could make a stand-alone recommendation or modify Non-Motorized Transportation Recommendation D to state, “Establish a network of recreational trails within the neighborhood to facilitate pedestrian and bicycle travel, while addressing lighting and vegetation along sidewalks and trails to enhance safety.” Safety concerns on trails can be a barrier to use, but residents who use trails experience more interaction with other users. This recommendation should be implemented in one to five years. The HIA TAC determined the priority level for this recommendation is Medium/High.

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In the [Park Planning](#) section, the SAP may promote social cohesion by developing the Gary/New Duluth Community Center and Recreation Area which may enhance residents’ sense of belonging or identity with the neighborhood and provide activities where residents interact with each other and build social networks. The HIA proposes the following draft recommendations to further promote social cohesion in Park Planning:

#P1. The City should **approve and tangibly support implementation of the Gary/New Duluth Community Center and Recreation Area concept plan**. The Gary/New Duluth Community Center and Recreation Area concept plan includes a number of features that would promote social cohesion, from informal interaction of recreation users to community-wide gatherings or organized classes. This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is High.

PHYSICAL ACTIVITY

Physical activity refers to any activity that encourages the movements of one’s body, including walking, bicycling, weight-lifting, skateboarding, stretching, or even working around the house or in the yard. Positive health effects of physical activity include: lower mortality rates; decreased risk of cardiovascular disease mortality in general and of coronary heart disease mortality in particular; decreased risk of colon cancer; lower risk of developing non–insulin-dependent diabetes mellitus; lower rates of obesity; relief of symptoms of depression and anxiety and mood improvement; and improvement of health-related quality of life by enhancing psychological well-being and by improving physical functioning in persons compromised by poor health.

In the [Commercial Development](#) section, the SAP may promote physical activity by attracting new businesses for residents to walk to and improving the pedestrian environment; increasing the number of jobs within walking or bicycling distance; and reducing crime through the development and removal of vacant and

blighted properties and increasing the number of people out and about in the community. The HIA proposes the following draft recommendations to further promote physical activity in Commercial Development:

#C6. The Gary/New Duluth Business Association should work with appropriate City departments to **develop Commonwealth Ave commercial corridor design guidelines** (including building heights; aesthetic characteristics, such as construction materials and decorative features; street and boulevard trees; landscaping; placement of doors and window sizes; and lighting and streetscape improvements, such as those described in SAP Motorized Transportation Recommendation D). Several components of the built environment affect walking and physical activity including: density and intensity of development; mix of land uses; connectivity of the street network; scale of streets; and aesthetic qualities of a place (Handy et al, 2002). The partnership could start by piloting a Streetscape Greening Program for the Business Association. Additionally, some design standards are included in the City’s Unified Development Chapter (UDC). Resources and best practices for design guidelines are listed in the box below. This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.

Resources and Best Practices for Design Guidelines

- [Minnesota Main Street](#)
- DEDA storefront loan program: 31 year program – over 100 projects; has shown that public investment gets higher caliber product, particularly in downtown
- [Downtown Grand Rapids Streetscape Design Guidelines](#)
- Street Trees/Greening:
 - [DID Greening and Public Realm Committee](#)
 - [Growing with Green: Business Districts and the Urban Forest](#)

#C7. When new commercial development occurs in the community, City Planning and Engineering should **ensure that the development promotes pedestrian access**, for example by including sidewalks to the new development if sidewalks do not already exist. To start with, the UDC has provisions for pedestrian connections. An additional resource for special regulations for sidewalks is the [Indiana Commercial Zoning Ordinance – Section 214 Special Regulations: Streets and Sidewalks](#). This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium/High.



In the **Residential Development** section, the SAP may promote physical activity by increasing the number of households within walking distance of recreation opportunities. The HIA proposes the following draft recommendations to further promote physical activity in Residential Development:

#R4. The City Planning Department and Parks and Recreation should work together to **ensure that new housing is connected to recreation amenities and/or include privately-owned green space built into the development** to promote physical activity and social cohesion. This may include, but is not limited to, supporting the SAP Natural Environment Recommendation C for conservation design. Proximity of

households to recreation opportunities is associated with levels of physical activity (Kaczynski, 2007; Brownson, 2001; Bauman, 2007; Lieber & Fesenmaier, 1985; Gobster, 1995; Furuseth & Altman, 1991; Moore & Graefe, 1994; Ottensmann & Lindsey, 2008). The UDC already has some provisions for connectivity. Additionally, resources are available on the concept of [Privately Owned Public Space \(POPS\)](#), including the [Greenway Association](#) in Minneapolis, MN and [Residential Open Space Option](#) in Midland, MI. This recommendation should be implemented within one to five years and continued ongoing. The HIA TAC determined the priority level for this recommendation is Medium.

#R5. The HIA Technical Advisory Committee strongly encourages the Gary/New Duluth Development Alliance to **implement the proposed community garden in the Gary/New Duluth Community Center and Recreation Area concept plan**. Community gardens provide an outlet for physical activity for residents that may not have access to residential gardens, such as the residents of the HRA apartments, and also provides access to fresh produce. This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is High.



In the **Natural Environment** section, the SAP may promote physical activity by increasing recreation opportunities, such as trail extensions and access to natural areas and the St. Louis River through sidewalks and trails; and providing active and engaging opportunities for the community and visitors to practice stewardship and enjoy Gary-New Duluth's natural features. The HIA proposes the following draft recommendations to further promote physical activity in Natural Environment:

#N4. The City Parks and Recreation, Community and Business Development and DNR should individually or in partnership **identify potential scenic natural sites for scenic overlooks and seating areas from existing natural amenities like the St. Louis River**. Additionally, they should locate passive recreation features like seating areas or even walking paths identified sites, and increase pedestrian access points from sites in the area to the regional trail system outside of Gary-New Duluth. This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.



In the **Transportation** section, the SAP may promote physical activity by decreasing traffic speeds, increasing use of traffic calming treatments, encouraging streetscape features, and improving sidewalk conditions will all improve the pedestrian environment to encourage more walking and active transportation; improving sidewalk network and overall conditions will improve safety conditions for residents by not having to walk in the street; and designating a bicycle lane, which also may improve safety for bicyclists and enhance safety for all road users. The HIA proposes the following draft recommendations to further promote physical activity in Transportation:

#T4. The SAP should include a recommendation to **update the Gary/New Duluth sidewalk survey**. This recommendation could be added as the first bullet point below Non-Motorized Transportation Recommendation B ("Implement recommendations from the 2002 Duluth Sidewalk Inventory identified for the Gary-New Duluth neighborhoods"). Focus should be around Stowe School and other high foot traffic areas. Providing a complete system of sidewalks is important for encouraging pedestrian activity in the community. The last comprehensive sidewalk survey was conducted in 2002. Past surveys have led to sidewalks repairs and replacements. One way to facilitate this process is to use interns, service

organizations, etc. to do survey. This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is High.

#T5. To quantitatively monitor the impact of these recommendations, the Gary/New Duluth Community Club, MIC, and City Planning Division could **conduct a walking survey of residents**, either by counting pedestrians or providing residents with a questionnaire to understand their walking habits, before and after recommendations are implemented. This recommendation should be implemented within the next year. The HIA TAC determined the priority level for this recommendation is Low.

#T6. **The proposed road improvement to Boy Scout Landing should be designed with rest areas for pedestrians on the steep hill**, for example a couple of benches on the hill. Rest areas are important for promoting physical activity for older adults and small children who may not have the stamina for walking long distances, or up steep inclines, without needing a place to rest. This recommendation should be implemented concurrently with the proposed Commonwealth Ave road improvements, or immediately following. The HIA TAC determined the priority level for this recommendation is Medium.

#T7. For **traffic calming recommendations**, City Engineering, Planning and Public Works, Minnesota Department of Transportation (MnDOT) and the Metropolitan Interstate Council (MIC) **should focus specifically on 1) the business area and in front of Stowe School on Commonwealth** (traffic calming could involve stop signs, center medians or line redesign), **and 2) the immediate vicinity of Stowe School and the Gary/New Duluth Recreation Area** along 101st Ave West, Carterett St and 102 Ave West to House Street. This recommendation will increase pedestrian safety and comfort in the two highest traffic areas for both cars and pedestrians. This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is High.

#T8. The SAP should include a statement about working with City of Duluth Public Works, MnDOT, and neighborhood organizations to **prioritize routes and coordinate snow removal efforts on sidewalks in the area**. The new Non-Motorized Transportation Recommendation could be included as a bullet under Non-Motorized Transportation Recommendation C (“Improve existing sidewalk conditions to create a comprehensive safe and convenient network”) and state, “Work with MnDOT to clear snow on sidewalks along Commonwealth Ave.” When sidewalks are covered in snow throughout the winter, pedestrians are discouraged from walking or their safety is at risk if they are forced to walk in the street with traffic. This recommendation should be implemented within one to three years. The HIA TAC determined the priority level for this recommendation is High.

#T9. The City’s Master Trail System Plan should **include trail connectivity to schools and recognize the importance of school connectivity to new developments with the provision of sidewalks and trails**. This should be a key principle in the Duluth Comprehensive Plan and zoning codes should be revamped accordingly. This recommendation should be implemented according to updates to relevant planning documents: the Comprehensive Plan update in 2016 and the next update to the Master Trail System Plan in 2021. The HIA TAC determined the priority level for this recommendation is High.

#T10. Include a recommendation in the SAP to **increase bicycle infrastructure**, such as parking near bus stops and commercial and recreational destinations, to encourage bicycle riding and transit ridership. To

achieve this recommendation, the Non-Motorized Transportation Recommendation I (“Improve pedestrian and bicycle wayfinding throughout the study area”) could be modified to state, “Improve pedestrian and bicycle wayfinding and infrastructure throughout the study area.” Providing bicycle infrastructure, such as bike racks, has been shown to increase ridership and therefore physical activity (Sens, 2010; Buehler, 2012). This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.



In the **Park Planning** section, the SAP may promote physical activity by developing the proposed Gary/New Duluth Community Center and Recreation Area concept. The HIA proposes the following draft recommendations to further promote physical activity in Park Planning:

#P1. The City should **approve and tangibly support implementation of the Gary/New Duluth Community Center and Recreation Area concept plan**. While this recommendation was included within Social Cohesion, it is also critically important for providing opportunities for physical activity in the community, which is why it is repeated here. This recommendation should be implemented immediately. The HIA TAC determined the priority level for this recommendation is High.

#P2. The Gary/New Duluth Development Alliance, MnDOT, and Parks and Recreation should partner to **direct bicyclists to the Gary/New Duluth Recreation Area off of Commonwealth Ave as a rest spot when biking to or from Fond du Lac**. There will be a picnic area and also concession stand in the Community Center. This recommendation should be implemented following the development of the Gary/New Duluth Community Center and Recreation Area. The HIA TAC determined the priority level for this recommendation is Medium.

#P3. The Gary/New Duluth Development Alliance should **consider providing equipment for rental at the Gary/New Duluth Community Center and Recreation Area**, possibly by accepting donations of used sporting equipment from community members. Many organizations provide sporting equipment for rental, including City Parks and Recreation, outdoor clubs, Universities and other institutions, etc. In fact, a similar system is in place at Hartly Park in Duluth. With an honor-system, there is a chance equipment would be stolen, but often when community members know that equipment has been donated for communal use it encourages honesty among users. This recommendation should be implemented within one to five years, following the development of the Gary/New Duluth Community Center and Recreation Area. The HIA TAC determined the priority level for this recommendation is Low/Medium.

ACCESS TO HEALTHY FOODS

Access to healthy food can include access to reliable transportation, or proximity to healthy food retailers, such as grocery stores, community gardens, meal delivery services, such as Schwan’s and Coborn’s, or programs like Meals on Wheels. Studies have found that residents with greater access to supermarkets or a greater abundance of healthy foods in neighborhood food stores consume more fresh produce and other healthful items, while lack of access to grocery stores is linked to serious health concerns, such as higher rates of obesity and increased risk of diabetes and cardiovascular disease.

In the **Commercial Development** section, the SAP may increase access to healthy food by recruiting new businesses if they include a grocery store or new restaurant, and increasing the number of jobs and households in the community to support a grocery store. The HIA proposes the following draft recommendations to further promote access to healthy foods in Commercial Development:

#C8. A partnership between Gary/New Duluth Community Club and the Local Business Association and should **consider conducting a market study on the potential of a food market in the community and identify options to provide fresh food**, such as mobile markets, food hubs or farmers' markets. Then **obtain zoning/permitting from City Planning for the desired option**. See the box below for a discussion of options and resources. This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.

MOBILE MARKETS, FOOD HUBS AND FARMERS' MARKETS

Mobile Markets: “Mobile markets operate from a truck, van, trailer, or other mobile device. Similar to farmers’ markets, mobile markets can serve various communities on a scheduled or rotating basis. However, given their ability to change locations at a moment’s notice, mobile markets can serve multiple communities in a short span of time. Mobile markets have gained popularity particularly in rural communities, where access to healthy food is limited and residents must travel long distances to access grocery stores that sell fresh food.”

Source: [Healthy Food Access Portal – Mobile Markets](#)

Food Hub: “Milwaukee-based food activist and farmer [Will Allen](#) has created what he describes as a “Food Hub,” which distributes fresh produce weekly to neighborhood institutions that in turn sell the produce to families with limited access to grocery stores. These food hubs work with local farms in and outside of the region to provide residents of Milwaukee with fresh, healthy food in a sustainable way on a weekly basis. This food distribution program requires planning for important details. For instance, this plan requires a space that is up to code for processing fresh vegetables and repackaging them for distribution. In addition, a program like this would also need to have a small grocery store attached to it that could be run and managed in a manner similar to Minneapolis’s Midtown Global Market, which rents retail stalls to local entrepreneurs. Duluth-based programs, such as Seeds of Success, Institute for Sustainable Futures, and the Sustainable Agriculture Project at the University of Minnesota Duluth are all interested in pursuing this model.”

Source: Food Access In Duluth’s Lincoln Park/West End Neighborhood, Pine & Bennett, 2011

Farmers’ market: Farmers’ markets are a recent trend on a traditional concept – bringing the produce from area farms together one day per week (or daily, depending on the size of the community) to sell directly to consumers. Farmers’ markets can have a reputation for costing more than grocery stores, but in recent years, farmers’ markets have increased access to fresh produce and healthy food by accepting SNAP, or food stamps, Electronic Benefit Transfer (EBT)/Access cards, and Farmers’ Market Nutrition Program vouchers. Duluth has one farmers’ market, located at 14th Avenue E and 3rd Street, to the east of downtown Duluth. A farmers’ market in Gary/New Duluth could potentially attract residents not only in Gary/New Duluth, but all of those that live west of downtown, making it a destination in the community.

Source: [Healthy Food Access Portal – Farmers’ Markets](#) and Duluth’s Farmers’ Market, 2013

#C9. The City in partnership with St. Louis County should **develop an urban agriculture plan** that includes guidance and resources for individuals and organizations that want to acquire or lease underutilized properties for urban agriculture, and minimizes the financial burden and red tape for obtaining leases and permits. Examples of urban agricultural plans and policies include [Minneapolis](#) and APA’s [Urban Agriculture: Growing Healthy, Sustainable Places](#) report. Other cities that have plans and policies include Seattle, Austin, Somerville, MA, Detroit, Oakland, Chicago, Baltimore, and more. This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.



In the **Residential Development** section, the SAP may increase access to healthy food by increasing the number of households within walking distance to existing markets and transit stops with service to grocery stores. The HIA proposes the following draft recommendations to further promote access to healthy foods in Residential Development:

#R7. The Gary/New Duluth Community Club should partner with not-for profit organizations, such as Seeds to Success, to **conduct a study to determine how many residents have residential gardens, how many rely on gardens as important food source, and determine demand for more gardens** (community gardens). This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Low.



In the **Natural Environment** section, the SAP may increase access to healthy food by enhancing and preserving the environment to support pollinators, improve soil health and reduce contamination in fish. The HIA proposes the following draft recommendations to further promote access to healthy foods in Natural Environment:

#N5. The UMN Duluth, UMN Extension and the School District should partner to **implement community education programs around beekeeping and gardening** to promote local food production and lifelong environmental stewardship. An example of a community education program is a young naturalist/young gardeners program in partnership with Stowe Elementary. In fact, Stowe Elementary was designed for “Educational Excellence with an Environmental Emphasis.” At Stowe Elementary they have children participate in planting trees, encourage students to recycle as much as possible, etc. which allows the school to produce only one cubic foot of waste a day from lunch, and much more. They have created a recycling program where kids are involved in extensive waste-reduction that includes the recycling of three kinds of paper, aluminum, cardboard, plastic, metal cans, and glass (Source: [Sustainable Twin Ports](#)). Additional resources are available through UMN Extension ([Honey Bees](#)) and UMN Duluth ([Edible Landscapes](#)). This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.

#N6. City Parks and Recreation, Western Lake Superior Sanitary District (WLSSD), and UMN Extension should work together to **explore the feasibility of a neighborhood or city-wide composting/mulching program**. Some resources are already available through St. Louis County ([Organics and Composting](#)) and UMN Extension ([Soils and Composting](#)). This recommendation should be implemented within one to two years. The HIA TAC determined the priority level for this recommendation is Low/Medium.

#N7. City Engineering and Park Maintenance should **increase native planting and natural landscaping** that absorbs water, requires less maintenance, and can support pollinators. Support for this recommendation comes from the Duluth Parks and Recreation Master Plan (2010), which includes Action Step #44 that supports “more naturally functioning landscapes (native vegetation, rain gardens, community gardens, butterfly gardens, etc.) in all parks, regardless of their size.” This recommendation should be implemented immediately and ongoing. The HIA TAC determined the priority level for this recommendation is Low/Medium.



In the **Transportation** section, the SAP may increase access to healthy food by improving the pedestrian environment through traffic safety measures, streetscape enhancements and sidewalk and bicycle infrastructure to existing markets. The HIA proposes the following draft recommendations to further promote access to healthy foods in Transportation:

#T11. The City of Duluth and the Duluth Transit Authority should partner on an **educational campaign on the benefits of riding public transit** (cost savings) and develop colorful, high quality materials that show transit connections to major destinations, such as grocery stores. This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Low.



In the **Park Planning** section, the SAP may increase access to healthy food by developing the proposed Gary/New Duluth Community Center and Recreation Area concept, which includes a community garden and could be used for a farmers' market or food hub. The HIA proposes the following draft recommendations to promote access to healthy foods in Park Planning:

#P4. The **Gary/New Duluth Development Alliance could consider partnerships with established organizations working on access to healthy food**, including Community Action Duluth's [Seeds of Success](#) and the [Duluth Community Garden Program](#). This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Medium.

#P5. A partnership between the Gary/New Duluth Development Alliance, Gary/New Duluth Community Club and Local Business Association should **consider using the updated Community Center for a farmers' market or mobile produce truck** (refer to HIA Commercial Development recommendation #C8). This recommendation should be implemented within one to five years. The HIA TAC determined the priority level for this recommendation is Low/Medium.

EVALUATION AND MONITORING

Evaluation and monitoring includes three components: process evaluation, impact evaluation, and monitoring health outcomes. Process evaluation considers whether the HIA was carried out according to the plan of action and applicable standards. For example, were stakeholders engaged through the mechanisms outlined in the Stakeholder Engagement Plan, and did the HIA meet the HIA Minimum Elements and Practice Standards. Impact evaluation seeks to understand the impact of the HIA itself on the decision-making process or on other factors outside the specific decision being considered. In the case of the Gary/New Duluth SAP HIA, this could include evaluating whether conducting the HIA affected the SAP Recommendations or possibly influenced the City to adopt or alter other policies to promote health, such as approving a city-wide Complete Streets policy.

Monitoring health outcomes focuses on developing a plan to track changes in health status or health indicators as a result of implementation of the plan. The Gary/New Duluth SAP HIA was particularly concerned with access to healthy foods; one example of monitoring would be to evaluate 5 years from now if residents' access to healthy food had increased. This could be measured by the number of households or persons with ½ mile of a healthy food retailer, or conducting a follow-up community survey that asked residents if they perceived their access to healthy foods increased since the adoption and implementation of the SAP. It is important to note that monitoring is an iterative process; as HIA Recommendations are monitored for their health outcomes they should be revised if they are found to have any unintended negative consequences or if they can be amended to lead to better health outcomes.

At its final meeting, the HIA Advisory Committee evaluated the impact the HIA had on the outcome of the Small Area Plan, evaluated the process of conducting the HIA, and developed a formal monitoring plan for on-going monitoring of HIA impact, incorporation of revisions, and long-term health outcomes. A summary of the evaluation and monitoring plans are included below.

EVALUATION

Evaluation is a critical component of HIA for advancing the field of practice. It can provide important lessons learned or best practices, as well as establish HIA as an impactful tool for affecting public policy. The evaluation step of Health Impact Assessment (HIA) is three-fold, and includes evaluation of the HIA process, the HIA's impact, and health outcomes.

Process Evaluation

Process evaluation assesses the design and execution of the HIA in light of its intended purpose and plan of action and applicable practice standards. The Gary/New Duluth process evaluation included both self-assessment by the HIA Coordinator and a discussion with participants and stakeholders.

The process evaluation answered a series of questions related to whether the HIA followed its intended purpose and plan of action; what challenges or barriers were encountered during the HIA process; whether the HIA met the HIA Minimum Elements and Practice Standards; and input from participants and stakeholders on their experience being involved in the HIA, including what they learned during the process, their satisfaction with the process, and any barriers or challenges they see with this HIA or others in the future.

Did the HIA follow its intended purpose and plan of action?

The purpose of the HIA was to 1) assess the potential health impacts of the Gary/New Duluth Small Area Plan, 2) increase community engagement in the planning process, and 3) make recommendations to improve the Small Area Plan for the benefit of the health of the community. The HIA accomplished its purpose. It met the first goal by completing the Assessment step according to the Minimum Elements and Practice Standards. It met the second goal of increasing the level of stakeholder engagement in the planning process by engaging new partners in the HIA TAC, making new contacts with community members and collecting community input through the community survey and feedback on Recommendations. The HIA met the third goal by developing recommendations to change or add language in the Small Area Plan to promote the health of the community, in addition to recommendations for other projects and programs to be developed by City departments and community residents and business owners

What challenges or barriers did the HIA encounter?

Overall the Gary/New Duluth SAP HIA encountered very few major challenges or barriers, and certainly nothing that could not be overcome. The few challenges or barriers encountered with this HIA mostly related to the nature of HIAs conducted concurrent to the development of a plan or policy, lack of specificity of SAP recommendations, an overly ambitious research plan, standard challenges with stakeholder engagement, participants' unfamiliarity with HIA, and finding a balance between developing content for stakeholders to react to versus having stakeholders develop content themselves.

Did the HIA meet the HIA Minimum Elements and Practice Standards?

This question will reflect on whether the Gary/New Duluth HIA met the minimum elements and practice standards for each step of the HIA. Overall, the HIA did adhere to the Minimum Elements and Practice Standards by including all six steps of HIA, including evaluation and monitoring; incorporating meaningful stakeholder engagement; and being forward looking rather than retrospective.

Input from participants and stakeholders

At the final HIA TAC meeting on May 12, 2014, the HIA TAC was asked to complete an evaluation form. There was a brief discussion of initial reflections from the group. Initial reflections from some of the HIA TAC included:

- It would have been great to have more people involved – how do you get more bodies interested?
- Concerns about how the SAP and HIA will get implemented, especially if we are relying on community initiative. It took this much effort to get the HIA TAC to come to the table, implementation seems (overly) ambitious.
- A compressed timeline for community/stakeholder involvement would have been better for maintaining momentum. The time between meetings was too long.

One of the HIA TAC members asked the HIA Coordinator what she would have had in an ideal process scenario. The HIA Coordinator responded that ideally, she could have utilized the HIA TAC more in developing scope, recommendations, and other deliverables for the HIA. Longer, more frequent meetings would have been great if HIA TAC didn't have to deal with the reality of other demands on their time and schedule constraints. A summary of the results from the formal evaluation questions follows below.

1. “What was your level of knowledge of HIA prior to this project?”

1 (none)	2	3	4	5 (expert)
4	3	2	0	0

2. How would you rate your level of knowledge of HIA now that you have participated in this project?

1 (none)	2	3	4	5 (expert)
0	0	6	3	0

3. What did you learn during the process?

The HIA TAC reported learning about the connections between planning and policy decisions and health outcomes, and the value of addressing these impacts in the planning process. They learned about the process of conducting HIA, and that HIA is structured yet flexible. The process also made them aware of the different plans and projects that the community and City were considering. One respondent indicated surprise at what people identified as important priorities for the community. Two respondents commented on the stakeholder engagement; one noted that very few local people were involved and the other appreciated the stakeholder involvement aspect of the process.

4. How much time did you spend on the HIA (including meetings, reviewing materials, etc.)? How does that compare to what you expected?

The HIA TAC estimated anywhere between 15 and 25 hours spent on reviewing materials and attending meetings throughout the process. Overall, this was comparable to what they expected and considered a reasonable amount of time. Two respondents indicated that they wished they had had more time to spend on reviewing materials, and another stated that more frequent meetings would have helped.

5. Do you think HIA was an effective tool for this project? Why or why not?

There was general consensus from the HIA TAC responses that HIA was an effective tool. One said that the tool had the potential to be effective depending on the implementation and evaluation of the small area plan and HIA. Another said that HIA had promise as a tool but it would have been beneficial if the process had begun with more training. For those who thought HIA was an effective tool, they noted that it was effective because 1) it brought stakeholders together and provided for a greater public engagement effort; 2) the health lens provided additional, valuable perspective to planning that is not often considered, especially for a less affluent, often overlooked community; or 3) it generated “very organic, practical & doable recommendations.”

6. How satisfied were you with the process?

1 (very unsatisfied)	2	3	4	5 (very satisfied)
0	0	4	4	1

7. What changes would you make if you were to lead or participate in an HIA?

Most respondents stated that they would include additional HIA training/instruction at the beginning of the process. One suggested increasing meetings to twice per month, each for two full hours, and another said that they would want to put more time into it. One stated that HIA would be more impactful if it occurred between planning and implementation to inform implementation of specific strategies, rather than very general objectives outlined in the small area plan. Another comment was that the HIA was overly academic and it could have been communicated in a clearer manner.

8. What barriers or challenges do you see with this HIA or others in the future?

The HIA TAC raised a number of concerns and potential barriers with this HIA and HIA in general. The first related to ensuring community participation and the difficulties getting the right people engaged in the process. A second issue related to the relatively “untested” nature of HIA; this is a new process for staff, the Planning Commission and the City Council. There were concerns that staff wouldn’t know how to implement the recommendations and this could be remedied in the future with work sessions or more integrated processes (i.e., the Lincoln Park SAP HIA). A third concern revolved around the demonstrable value of HIA, continuing HIA in future projects, and ensuring that it does not become “a series of familiar platitudes that look good on paper.”

9. What benefits did you gain from participating in this HIA? (e.g., partnerships, understanding how to incorporate health into other policies, etc.)

Benefits gained by participating in the HIA included developing new partnerships with other agencies, city staff, and neighborhood contacts; understanding the interconnectedness of decisions with health outcomes; and a deeper understanding and appreciation for HIA. One person commented that the process provided him more tools and methods for engaging community and coming up with recommendations for policy that may impact health. There was general sentiment that more people should be involved in this process and HIA in general so that partnerships could be even stronger and to ensure that everyone has a shared understanding of the concepts, language, etc.

10. Will you have an opportunity to utilize what you learned through this process in your work? (Yes/No/Not Sure) If so, how?

The overwhelming response was, yes, the HIA TAC would be able to incorporate what they learned into their individual work in the future. For some participants that includes working on HIAs in the future. For others it was related to specific skills or methods taken from HIA, such as using a health lens to address policy or plan implementation, or how to engage stakeholders in planning processes.

11. Was the HIA decision-making process transparent and inclusive? If so, how? If not, what do you recommend to ensure transparency and inclusivity?

Overall, the HIA TAC responded that the process was very transparent, with timely communication and dissemination of data and findings. There was some concern that the process should have included more of the affected populations, and the HIA TAC raised questions about how this could have been done more effectively.

Impact Evaluation

Impact evaluation attempts to judge to what degree the recommendations were adopted and implemented and how the HIA influenced the decision-making process. It can also assess whether the HIA had other important effects, such as building new collaborations among agencies, ensuring that stakeholder perspectives were considered, and increasing awareness of previously unrecognized health considerations. In most cases, influencing decisions to protect or promote health is a central objective but by no means the sole outcome of value (National Research Council, 2011).

HIA impact on the Small Area Plan

The Gary/New Duluth HIA impacted the Small Area Plan in two primary ways. First, the planner who was responsible for developing the SAP and four SAP Steering Committee members were part of the HIA Project Team and HIA TAC. By attending and participating in the HIA meetings and discussions, they likely took a certain amount of a health mindset with them to the meetings and discussions for the SAP. Second, the Gary/New Duluth SAP and HIA were approved by City Council, and subsequently implementation of the recommendations will begin. In fact, some implementation of the recommendations began during the process of developing the SAP and HIA. For example, the GND Development Alliance has been seeking City approval and support from partners for the Gary/New Duluth Community Center and Recreation Area, moving forward at record pace. Additionally, the City has begun to identify and remove blighted properties in the commercial corridor. Finally, in 2016 the SAP and HIA will be incorporated into the update to the City's Comprehensive Plan which will continue their status as living documents.

HIA impact on creating health in all policies awareness

Related to the first point above, the HIA process educated City staff in Long-Range Planning and Business and Economic Development Department about the health impacts of planning decisions and how to incorporate health into planning and policy making. The staff will build off of the experience with this first HIA to conduct a second HIA on a small area plan for the neighborhood of Lincoln Park. This second HIA will take a more integrated approach, further educating the City on health in all policies.

HIA impact on developing new cross-disciplinary and interagency collaborations

The opportunity to do this HIA developed new partnerships between MDH, City of Duluth, St. Louis County Public Health, and local organizations, such as the Arrowhead Area Agency on Aging and St. Luke's Hospital. MDH HIA Program staff did not have connections with City staff prior to this project. Going forward, this strong working relationship will undoubtedly lead to future collaboration between the agencies. Similarly, with St. Louis County Public Health, MDH had previously worked with staff who retired prior to the start of the Gary/New Duluth HIA. This HIA enabled MDH to develop a working relationship with that staff's replacement and others at

the agencies. These relationships also will likely lead to future collaboration and assistance on projects that are mutually beneficial for the agencies.

Improving relationships and collaboration between stakeholders

The HIA provided additional resources for stakeholder outreach and engagement that would not otherwise have been done if the SAP had been done alone. While many of the engaged stakeholders were the same ones who turn out for all community projects, the HIA was able to bring new community members into the process through the community survey and outreach at the Stowe Elementary open house. Hopefully this experience participating in a policy making process will make newly engaged stakeholders more comfortable and likely to participate in ongoing community improvement, such as the development of the GND Community Center and Recreation Area and implementation of the SAP, and future planning processes.

Outcome Evaluation

Outcome evaluation assesses whether the implementation of a decision has actual effects on health or health determinants. Evaluation of whether a decision has changed specific health outcomes may often be difficult or impossible because of the wide variety of factors that impact health outcomes, the inability to accurately track what factors may have influenced a particular health outcome, the length of time from implementation of a decision to observable changes in health indicators, and the lack of suitable comparison groups. There are no examples of HIAs in the United States that include outcome evaluation as described here (National Research Council, 2011).

MONITORING

Monitoring plans are important to make sure that and HIA recommendations are being implemented and having the expected or desired effects. Through monitoring, if it is discovered that the HIA introduced an unintended negative consequence through its recommendations, the recommendation can be revised so that it leads to better health outcomes. Monitoring may track direct health outcomes, such as the number of traffic accidents and injuries at an intersection after improvements were made, or it may track health determinants or exposures, such as air quality, that are linked to health outcomes (National Research Council, 2011).

The Gary/New Duluth SAP HIA identified three health determinants of concern to the community: social cohesion, physical activity, and access to healthy food. The following monitoring plan identifies the monitoring indicators specific to each health determinant, the agency responsible for monitoring the indicator, the timing of when the indicator will be measured, and the level of change that would trigger adjustments to the recommendations (i.e., “trigger threshold”).

Indicator	Agency Responsible for Monitoring	Timing	Trigger threshold
Social cohesion			
Commercial Development - Improvement in the business climate/cooperation and increase in the number of businesses.	City Planning, DEDA, GND Community Club, Visit Duluth/Parks & Recreation (wayfinding)	2016; Varies dependent on objectives noted in the HIA to improve the business environment.	Establishment of GND Business Association.
Residential Development – Process developed to welcome new residents to the community and a focus on people with disabilities / senior care	GND Community Club, City Planning, DEDA	First quarter 2015	Establishment of a “welcoming” process.
Natural Environmental – Plan developed for enhancing planting of trees, development of the GND Recreation Area and energy efficiency.	City Planning, GND Development Alliance, GND Business Association	First quarter 2015	Commencement of capital improvements at the GND Recreation Area.
Transportation – Completion of condition survey of sidewalk/street/trails condition	City Planning, GND Community Club, MIC, MnDOT	2015-2017	Survey completed with action plan.
Park Planning – Starting capital improvements all the way to completion of the GND Community Center and Recreation Area.	GND Development Alliance, Parks & Recreation	First quarter 2015	Commencement of capital improvements at the GND Recreation Area.
Physical activity			
Traffic calming - Monitor pedestrian-vehicle and vehicle-vehicle accidents	Law enforcement DPD MnDOT	2015 Annual monitoring & benchmarking	Noticeable/significant increase in accidents
Identify priority routes to school within walking radius to school (Stowe)	ISD 709 MIC Residents City MnDOT	Fall 2014	Routes made possible to public
Establish responsibility of clearing routes and identifying barriers to successful snow removal	ISD 709 MIC Residents City MnDOT	2014-2015	Non compliance

Indicator	Agency Responsible for Monitoring	Timing	Trigger threshold
Master trail plan should be updated to enhance connectivity to schools	MIC Parks & Rec City Planning	2021	Trail plan update
Trail projects that are new prior to 2021 should be planned with connectivity to schools in mind	MIC Parks & Rec City Planning	Any new trail projects prior to 2021	Lack of trail connections to schools
Construction of Gary/New Duluth Community Center and Recreation Area (P1)	City Parks & Recreation	2015-2016 monitor status of project	Construction incomplete
Repair or construction of previously identified sidewalk, bike-lane or trail miles (T4/T8/T9)	City Planning MnDOT City Engineering	2014-2018	No new sidewalks/Trails by 2018
Community garden implemented at Community Center	Community Group City's Community Development division	2015-2019	No garden by 2019
Sidewalk survey is updated	City Planning, GND Community Club, MIC, MnDOT	2015-2017	Survey completed with action plan.
Increase in bike rack counts at school	MIC	Annual	Decrease in counts, increase in accidents
Access to healthy food			
Percentage of Stowe school program menu that is comprised of fresh, preferably local, food to include vegetables, fruit, grains, meat	MDH with ISD 709	Annual review for the next 5 years	Establish current baseline with a 5% annual increase
Percentage of fresh produce offered at neighborhood restaurants and retailers	G/ND Business Association; consider tapping a UMD intern	Launch 6 months from the establishment of the business group	Establish current baseline; 5% annual increase
Establishment of one community garden (up to 40 plots) Does it include programming, such as education, access to tool/materials and a composting/mulching component? Does it include a farmer's market?	City's Community Development division. First needs zoning change by City Planning division.	In place by summer 2015, with fall 2015 monitoring.	No garden by 2015

The following procedures should be followed for adjusting recommendations if the results of monitoring any particular indicator show that the “trigger threshold” has been reached. The procedures identify the agency or organization responsible and the actions it should take to develop new recommendations.

Social Cohesion

If the Gary/New Duluth Business association has not been established by 2016, the City Planning department, DEDA, the GND Community Club, and Visit Duluth/Parks & Recreation (wayfinding) should meet to discuss 1) why the group has not formed yet, including what barriers exist preventing the group from formalizing and 2) whether it still makes sense for the Businesses association to form. If it still makes sense for the Business association to form, the partners involved should come up with a plan to overcome the identified barriers, such as funding sources and a timeline with explicit action steps for getting started.

If a process to welcome new residents to the community has not been developed by the first quarter of 2015, the GND Community Club, City Planning department, and DEDA should identify the essential resources and information to be distributed to new residents and develop a strategy for outreach.

If capital improvements at the GND Recreation Area have not begun by the first quarter of 2015, the City Planning department, GND Development Alliance, and GND Business Association should meet to discuss what barriers are preventing commencements of capital improvements. If capital improvements are scheduled to begin in a relatively short timeframe, additional efforts may not be necessary. However, if there is no scheduled start date, it may be necessary for project partners to work with local leaders to prioritize the project’s construction or remove any existing barriers.

If the update survey of sidewalk/street/trails condition has not been completed by 2017, the City Planning department, GND Community Club, MIC, and MnDOT should mobilize community members to complete the survey and develop an action/implementation plan.

Physical Activity

By 2015, if there has been a noticeable or significant increase in pedestrian-motor vehicle, bicyclist-motor vehicle or motor-vehicle only accidents, the Duluth Police Department, the northeast region state patrol district, MnDOT, and community members to identify problem areas and strategies to reduce conflicts.

If priority routes to school within walking radius to school (Stowe) have not been identified or made public to the community by fall 2014, the school district should meet with the MIC, residents, the City, and MnDOT to complete that assessment and disseminate the walking routes.

If by the winter of 2014-2015 there has been no improvement in the clearing of snow from specific sidewalks in Gary/New Duluth, the school district, MIC, City, MnDOT and residents should collaborate to identify barriers to compliance and/or alternative plans for snow removal, such as public-private partnerships, shared responsibility, or volunteer clearing.

Between 2014 – 2021 if new trail projects have not been planned or constructed with connectivity to school in mind, the MIC, Duluth Parks & Rec, and City Planning should identify ways to add or improve connections with available resources to promote access to school. Partners should document barriers to implementation if new

connections are not possible and strategies to either overcome barriers or identify alternate solutions. If the 2021 update to the Master Trail Plan does not include enhanced connectivity to schools, these same partners should report to the community why those connections have not been identified.

If construction of the Gary/New Duluth Community Center and Recreation Area has not begun, an appropriate response is outlined above under Social Cohesion.

If no new sidewalk, bike-lane or trail miles have been repaired or constructed by 2018, City Planning, MnDot, and City Engineering should meet to ensure that sidewalk improvements are scheduled in the Capital Improvements Plan, and that bikeways and trails are scheduled to be planned and implemented through the Trail Master plan. Residents may consider partnering with the GND Community Club to launch a campaign to raise awareness and/or funds for sidewalk or bike lane improvements.

If the community garden has not been implemented at Community Center by 2019, the Gary/New Duluth Community Club and the City's Community Development division should identify what actions have been taken to-date, what actions need to be taken to complete the community garden, and how to overcome any barriers to implementing the community garden. If circumstances have changed, and there is no longer a demand for community gardening space or activities, this should be identified so that the Recommendations may be updated.

If the sidewalk survey has not been updated by 2017, an appropriate response is outlined above under social cohesion.

If the number of bike racks at Stowe Elementary decreases, or there is an increase in the number of bicyclist accidents, particularly children going to school, the MIC should report this information to residents, the Community Club, and relevant City departments so that they can decide what action is needed to increase supportive biking infrastructure while maintaining safety.

Access to Healthy Food

If the baseline percentage of Stowe school program menu that is comprised of fresh, preferably local, food, including vegetables, fruit, grains, meat, has not been established, or if there has been no measurable increase from the established baseline, MDH should meet with the school district (ISD 709) to identify barriers, such as cost, relationships with local growers, demand for food items, food server education, etc. Then MDH and ISD 709 should develop strategies to overcome the barriers to ensure that local, fresh and healthy foods are getting to Stowe students.

If the baseline percentage of fresh produce offered at neighborhood restaurants and retailers has not been established, or if there has been no measurable increase from the established baseline, the Gary/New Duluth Business Association should evaluate possible reasons for the lack of progress. If efforts have been made but were unsuccessful due to lack of demand; the group might reconsider the recommendation and develop alternatives (e.g., advertising healthy options in neighboring communities). If progress has been limited by lack of effort, consider utilizing a University of Minnesota - Duluth intern to educate local businesses and promote resources to increase fresh produce in neighborhood retailers and restaurants.

If a community garden of up to 40 plots, whether located at the GND Recreation Area or elsewhere in the neighborhood, has not been established by summer 2015, work with GND Development Alliance or GND Community Club or Seeds of Success and the Duluth Community Garden Program to determine why and either work to increase access to existing gardens or develop a new strategy to implement a garden in GND. Consider whether the garden includes programming, such as education, access to tool/materials and a composting/mulching component? Does it include a farmer's market? If progress has been limited as a result of zoning barriers, work with the City Planning department to update zoning designations to allow for community gardens or rezone specific parcels of land with appropriate zoning.

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Appendix A
Community Survey

Do you have 5 minutes for your Neighborhood?

Gary/New Duluth Community Survey: This survey is part of a health impact and quality of life assessment being done by the Minnesota Department of Health (MDH) and the City of Duluth. The responses collected will help determine the health issues analyzed in a Health Impact Assessment of the community and the development of a Small Area Plan for the neighborhood. Participation in the survey is voluntary and all responses will be kept anonymous. There are no benefits or harms in taking the survey. The survey should take no more than 5 minutes to complete.

1. I am a resident of _____ neighborhood.
2. I am _____ years old.
3. Rank your opinion of the following health concerns from “Not an issue” to “Always an issue”:

	Not an issue	Rarely an issue	Sometimes an issue	Often an issue	Always an issue
Being physically active					
Eating healthy foods					
Seeing a doctor					
Having a good job					
Breathing clean air					
Drinking clean water					
Other:					

4. Rank your current ability to access the following types of stores and public services from “Not Accessible” to “Easily Accessible”:

	Not Accessible	Rarely Accessible	Sometimes Accessible	Easily Accessible	Not applicable to me
Fresh and healthy food					
Healthy and affordable restaurants					
Banks					
Senior citizen centers					
Parks and trails					
Medical care facilities					
Good jobs or job training centers					
Pharmacies					
Library					
Community centers					
Other:					

5. Rank how you perceive the following health concerns as issues for residents of Gary/New Duluth from “Not an Issue” to “Always an Issue”.

	Not an Issue	Rarely an Issue	Sometimes an Issue	Often an Issue	Always an Issue
Affordability of housing					
Overweight or diabetes					
Depression or anxiety					
Problems associated with alcohol					
Problems associated with drugs and other substances					
Asthma or respiratory conditions					
Safety from an accident involving a car					
Safety from crime					
Other:					

6. Rank the key/priority issues you think should be addressed in Gary/New Duluth from “Not a priority” to “High priority”?

	Not a Priority	Low Priority	Medium Priority	High Priority
Affordable housing				
Jobs and economic development				
Access to public transportation				
Parks, trails, open space and recreation				
Pedestrian safety and inviting walking environment				
Development that has minimal impact on the environment				
Air quality				
Water quality				
Access to goods and services				
Farmers’ markets and community gardens				
Crime prevention				
Other:				

7. What is your favorite thing about Gary/New Duluth?

8. What would you most like to see changed in Gary/New Duluth?

9. Is there anything else you would like to share about the Gary/New Duluth neighborhood?

10. Would you like to be contacted with opportunities for involvement in the Gary/New Duluth Small Area Plan and/or Health Impact Assessment?

Yes. How can we contact you?

Name _____

Email/Phone _____

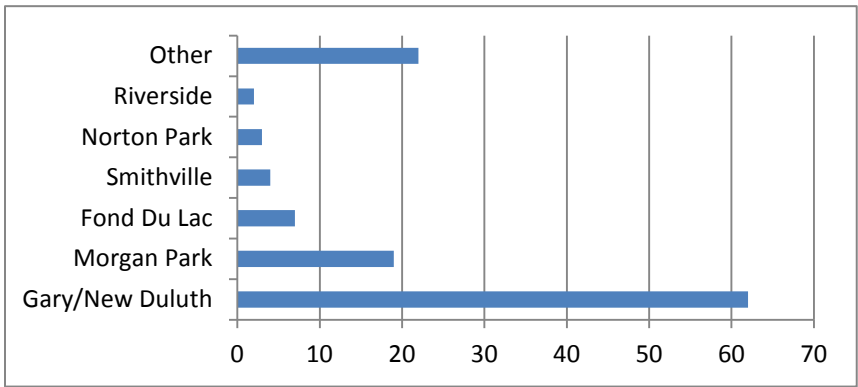
No

Thank you for your time and feedback.

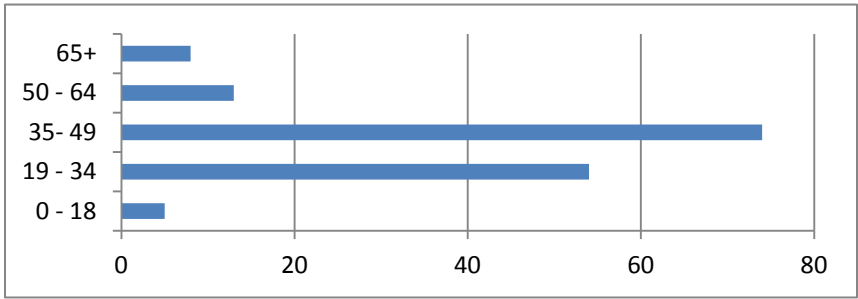
Appendix B
Community Survey Results

GARY/NEW DULUTH SAP HIA – COMMUNITY SURVEY RESULTS

1. I am a resident of _____ neighborhood.	
Gary/New Duluth	62
Morgan Park	19
Fond Du Lac	7
Smithville	4
Norton Park	3
Riverside	2
Other	22



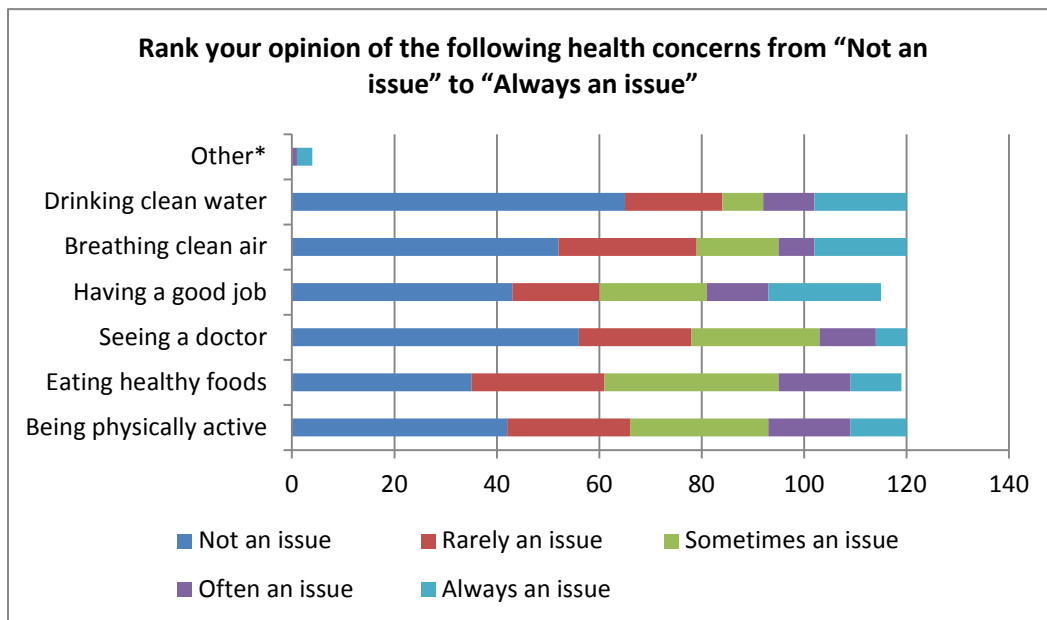
2. I am _____ years old	
0 - 18	5
19 - 34	54
35 - 49	74
50 - 64	13
65+	8



3. Rank your opinion of the following health concerns from “Not an issue” to “Always an issue”:

	Not an issue	Rarely an issue	Sometimes an issue	Often an issue	Always an issue
Being physically active	42	24	27	16	11
Eating healthy foods	35	26	34	14	10
Seeing a doctor	56	22	25	11	6
Having a good job	43	17	21	12	22
Breathing clean air	52	27	16	7	18
Drinking clean water	65	19	8	10	18
Other*	0	0	0	1	3

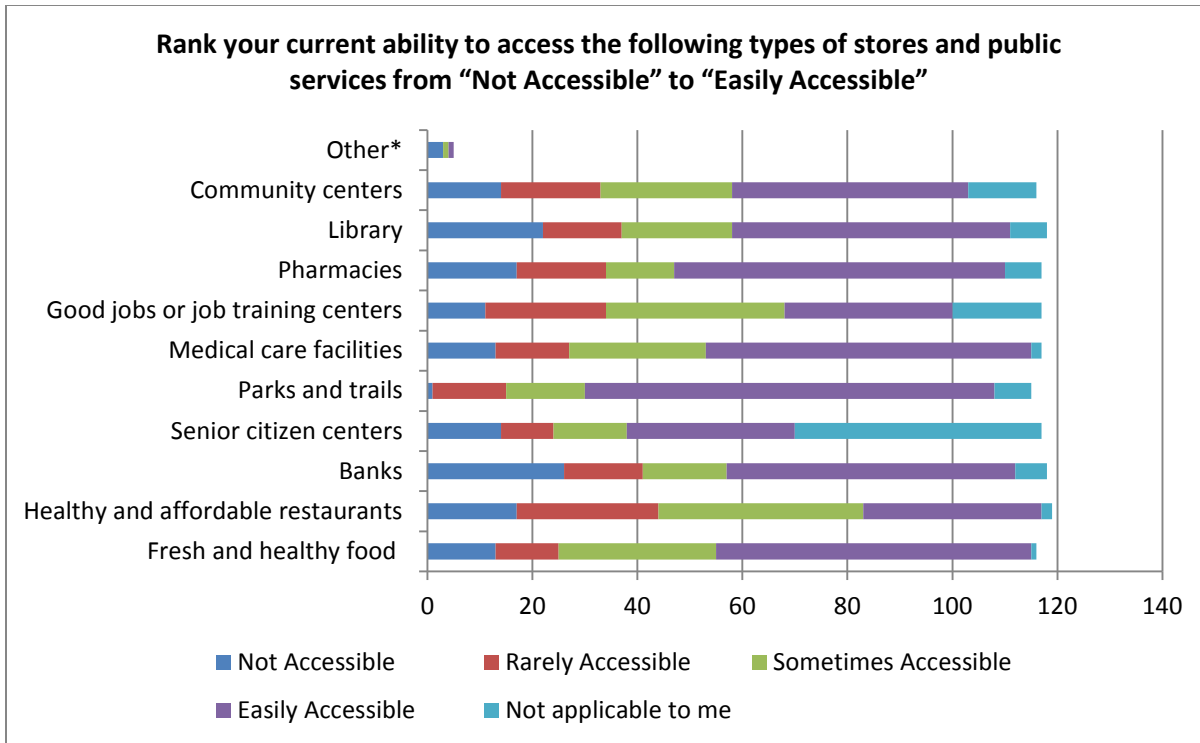
* YMCA/Afterschool activities for kids; diversity; Activities for the children; Smells



4. Rank your current ability to access the following types of stores and public services from “Not Accessible” to “Easily Accessible”:

	Not Accessible	Rarely Accessible	Sometimes Accessible	Easily Accessible	Not applicable to me
Fresh and healthy food	13	12	30	60	1
Healthy and affordable restaurants	17	27	39	34	2
Banks	26	15	16	55	6
Senior citizen centers	14	10	14	32	47
Parks and trails	1	14	15	78	7
Medical care facilities	13	14	26	62	2
Good jobs or job training centers	11	23	34	32	17
Pharmacies	17	17	13	63	7
Library	22	15	21	53	7
Community centers	14	19	25	45	13
Other*	3	0	1	1	0

* Parks, no skating rink, no rec center; transportation costs; Trails like the snowmobile trail are very hard to get to from Gary

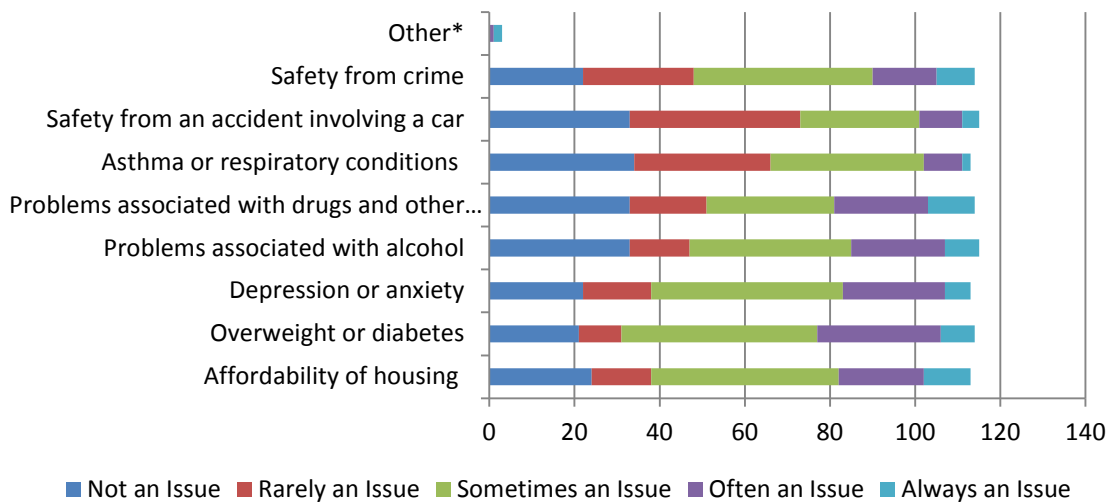


5. Rank how you perceive the following health concerns as issues for residents of Gary/New Duluth from “Not an Issue” to “Always an Issue”:

	Not an Issue	Rarely an Issue	Sometimes an Issue	Often an Issue	Always an Issue
Affordability of housing	24	14	44	20	11
Overweight or diabetes	21	10	46	29	8
Depression or anxiety	22	16	45	24	6
Problems associated with alcohol	33	14	38	22	8
Problems associated with drugs and other substances	33	18	30	22	11
Asthma or respiratory conditions	34	32	36	9	2
Safety from an accident involving a car	33	40	28	10	4
Safety from crime	22	26	42	15	9
Other*	0	0	0	1	2

* money for neighborhoods to improve; Finding housing (looking now)

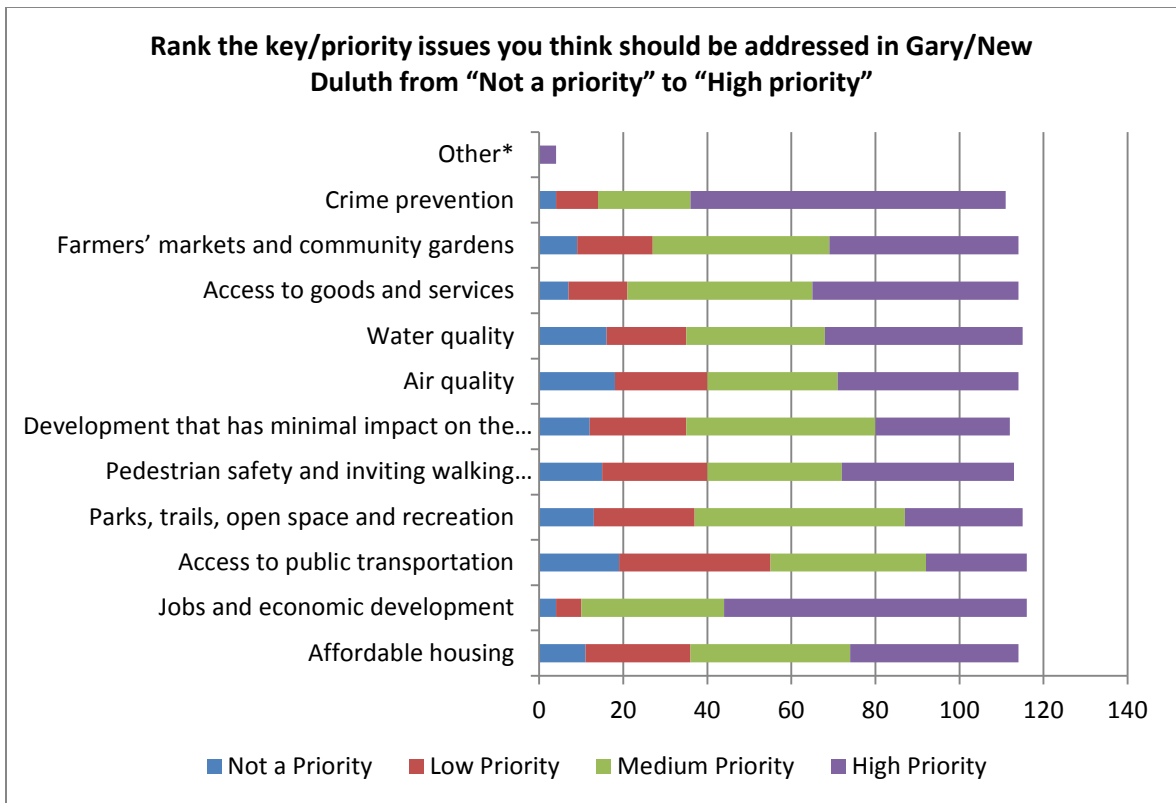
Rank how you perceive the following health concerns as issues for residents of Gary/New Duluth from “Not an Issue” to “Always an Issue”



6. Rank the key/priority issues you think should be addressed in Gary/New Duluth from “Not a priority” to “High priority”?

	Not a Priority	Low Priority	Medium Priority	High Priority
Affordable housing	11	25	38	40
Jobs and economic development	4	6	34	72
Access to public transportation	19	36	37	24
Parks, trails, open space and recreation	13	24	50	28
Pedestrian safety and inviting walking environment	15	25	32	41
Development that has minimal impact on the environment	12	23	45	32
Air quality	18	22	31	43
Water quality	16	19	33	47
Access to goods and services	7	14	44	49
Farmers’ markets and community gardens	9	18	42	45
Crime prevention	4	10	22	75
Other*	0	0	0	4

* More neighborhood involvement; More trails for snowmobile and ATV use would be nice in the Duluth area; Recreation for children/young adults; More places to eat



7. What is your favorite thing about Gary/New Duluth?

(Note: answers are separated by “;”)

School in neighborhood; It's country living in the city; Families with many generations; The people being friendly and a sense of community with people & businesses; Community; Safe comfortable neighborhoods; Small town atmosphere; It's quieter, safer and greener place to be and raise children; Small community; Secluded from main Duluth; People and love the area; Small, close community; Nice community to live in; Quiet, good history of the area; close knit community/small town feel; Is in city limits but more of a rural feeling. Good community to raise a family; The people are so friendly; Fond du lac neighborhood park, church, chambers grove, Jay Cooke Park, Mont du car; School; People; The shack should be reopened skating & shack for ice skaing. Kids need a place! Free hot lunch in summer at shack or Stowe school; summer programs; The friendly atmosphere; Lots of greenspace; The school, small size community; The long term residents; The school; It's quiet and nice people; Close to trails and outdoor activity; The way everyone makes you feel welcome; It's quiet and peaceful; It's a quiet community; location; How friendly most everyone is. That it is a safe neighborhood to raise kids; Stowe Elementary is one of the best schools in Duluth; Has almost everything in one little area :); It is a small community with a great elementary school; Quiet, not lots of traffic; Quiet, not much traffic on side roads; The community, it's small, quiet and friendly; That it still has a community atmosphere, although many new residents don't understand how to be a member of a neighborhood; Quiet neighborhood. Been here forever; I love how most everybody knows each other. I work at the Gary Little Store and everyone is so friendly :); Great community; Stowe school location; I love the community. Parks, wish there was at least a restaurant here; Quiet - not as busy as West Duluth; Excellent school close to my neighborhood; Well, seeing as I don't necessarily live

there, but frequent there, I love Stowe Elementary. The Gary Milkhouse has very friendly employees. Hugo's Pizza is phenomenal and the trails are fun!; Stowe is here; Friendly neighborhood, sense of community; The safe neighborhood; Local businesses; Beautiful people, scenery and less congestion; The way nature has been preserved. Lack of crime; The community feel; Living where City meets water and woods; Low crime, not a lot of low income housing (like it that way), good schools, and kind people and the Milkhouse. The veterans memorial - Terry Hinnenkamp is doing an amazing job maintaining it.; I like how quiet it is here. The people are very nice. More businesses around for more jobs in Gary; Quiet and my kids are away from the so-called gangs unless they go to town; The community commitment; Seems to be a calm safe area away from "town"; The school location; Everyone is very friendly; It's a small neighborhood; Nothing, I can't wait to move; Low crime rate, friendliness, crime watch with neighbors; Location; Nature; Small town living; Quiet; People, close community; Quiet, safe neighborhood; Family; Affordable housing, quiet, near munger trail; It's a small secluded area with lots of great parks and trails; It's not East Duluth; The community's design is intended for community mindset. That, and the trail systems; Friendly neighbors, space for home gardening, quiet area, great access to water activities, easy and safe walking areas, abundant wildlife in the area; The area; People are close, look out for each other and not afraid to report wrong doings; People are friendly and being near bus system; Good neighbors; The community structure and the people; I have good neighbors; The beauty; How everyone knows everyone, and when the whole community gets together to do things; ERTC Fire training center, mountain bike trails; LSC's fire school; I recently moved here from FL, I go to work, school, bank and groceries. I don't know anything about here.; Nothing; Trails and easy access to I-35; It's not a big town; Hugo's restaurant - they only place really to eat unless you eat at the gas station; It's small; Hugo's; Hugo's and Fire station; Smaller community; Hugo's; Milkhouse; Hugo's; Easy access to the river for fishing & hunting; LSC ERTC or the Milkhouse; The Milkhouse gas station & Hugo's pizza; Everybody is friendly; Easy access to nature; Easy access to nature; Milkhouse

Word search summary:

- Community (with adjectives including: small, quiet, safe, close, nice, and good): 24
- Access to Parks, Trail(s), Nature, greenery: 18
- Quiet: 17
- School or Stowe: 15
- Friendly: 13
- Safe: 8
- Hugo's: 8
- Milkhouse: 7

8. What would you most like to see changed in Gary/New Duluth?

More things/programs for people of color!; Riffraff out - Animal control - ; More businesses/food options & activities; Restaurants, park, banking; Affordable housing - access to fresh food; Health food store; More businesses and more frequent bussing. Also more housing; More public playgrounds; Business need new and more; Few more businesses; Grocery store!; economic development, having a café, road improvement; more community involvement, more for kids to do; A grocery store - more affordable food - healthy foods. We currently only have gas stations and need to drive to West Duluth to get any good affordable foods; I would like to see some properties better maintained; YMCA/Boys and Girls Club or other programs for kids & families; Upgrade businesses and utilities, streets; Better/more jobs; A BMX track for kids & grownups! Tied to citywide trail system west to east and Lake walk; More commerce; Riverside/Morgan Park & Gary residents are very

often low income, transportation is often an issue. The only stores from West Duluth to Fond du Lac are gas stations; Less congestion by both gas stations and Hugos and bars; A couple parks (besides the school one) maybe at each end of Gary; More businesses in the area; More apartments (low rent); Less crime/more business development/ more police presence; The sidewalks and roads need help; Housing and jobs; More small businesses like farmers markets; crime, drugs; Shopping and restaurants are limited; Need closer grocery stores. Too far away especially those who take the bus. Closer banks.; Better access to Munger Trail. More industry to help develop "Far West" Duluth; More for the children; There is NOTHING for kids to do, we need a community center (like the Valley Youth Center) in the summer. What about the ice rink at the school.; Open spaces set up in each quarter of GND to allow residents and kids a local place to get out and be active; Ride four wheelers on side roads; More parks for kids to play at. More trails for families to walk on.; A grocery store; Crime prevention; Crime - my daughter had her bike stolen this last summer and 3 bags of crushed cans; Children's year round community center; More business; Better accessibility to trails. More to do, explore, experience. Living quarters/buildings better taken care of.; More watch for crime and protect the safety of our children/neighborhoods; Availability of groceries and medicine; Crime rate (decrease); Grocery store, clinic, neighbors getting together; More ethnic groups of people, Boys and Girls club; Better walking from Morgan Park to Gary; Certain groups have limited park access to promote a single cause; Farmers' market, put the playground back at Birchwood Park. Repair sidewalk and put in parking at the veterans memorial. (Contact Terry Hinnenkamp - he has great ideas); I would like to see more work done on the sidewalks and roads. People having to take care of their yards; Neighborhood people to be more accepting. More housing; Job/economic development; A place to shop like grocery store or dollar store; All the rentals; Less bars; More cops on Gary street to cut down on reckless speeding; Less bars. More child interaction; Clean up the trashy people. Enforce a curfew on the kids and patrol more on side streets; More jobs; Noise level; Recreation for our children; No changes; Viet moved out; Neighborhood crime watch, good restaurant; Access to better food!!!; Grocery store, better access to quality, affordable food; Would like to see more police in the area. Also getting a hockey rink for kids again.; Groceries and a safe environment; Better public transportation access (currently hourly), police department office, increase staffing at fire hall, build recreation area for children and young adults, employment opportunities within the Gary/New Duluth area; More stores, better sidewalks; Less traffic at times (slower). I like the job our police department is doing!; More restaurants and businesses; Fewer bars; Employment and a safe playground for children; Nothing; Activities for the kids; I would like to see crime reduced greatly, with more law enforcement around. I don't like not feeling safe when I'm out and about.; Gary seems to have higher crime rate in recent years. Also it seems to not be as 'nice' of a community; The long drive there; More trails, hunting trails, more dining locations and jobs; More restaurants; Cleaned up; More stores; Housing - more opportunities; Grocery; Stores; More economic development, housing and cultural development; More modern community things like grocery stores, etc.; A nicer looking area; Maybe a hardware and/or auto parts store; Nothing; More jobs; Nothing. There's no reason to come here. You can drive 20 minutes north on 35 and get to the mall or Target. Or you can even go to Canal Park or the Lake Walk

Word search summary:

- Food/Grocery: 17
- More parks/trails/playgrounds/recreation: 15
- More activities (in general), especially for kids: 12
- More businesses: 11

- Crime: 9 (lower, reduce, less)
- More housing (affordable): 7
- Restaurant/dining: 6
- Police/cops: 5 (more)

9. Is there anything else you would like to share about the Gary/New Duluth neighborhood?

Love the neighborhood - Do not like animals . . . Dogs running around loose & barking - ; Work in progress; Possibly - vandalism to the school or playground - sad to see; N/A; its awesome! :); Great school systems, nice community center w/ events; I would like to see goods and services closer than West Duluth or Superior; No; Need better patrols to lower crime; Seems to be turning into a high crime, high drug related activity area. We desperately need a grocery type store in area and much better job opportunities, within walking distance. We have limited public transportation; Our kids need a place to go when school is out like valley youth center; Not it's good!; Crime has grown in a big way. We own a business in GND and crime has affected us in many ways . . . Vandalism.; I like it when I see patrolling police cars; After school program for kids - like VYC; There has been a steady increase in petty crime over the last few years, so a stronger community watch network and increased visibility of law enforcement; There has been a problem with vehicle break ins for about two years now. Need more police present in this community; I grew up in St. Paul so it is way different from what I am used to but I absolutely love it :); Everything is good to raise a family; Lots of history - tourism could be beneficial - more kayaks/canoe rentals to use!; Peaceful, quiet, and safe; ; I bought a house out here just for the small but pretty neighborhoods; Its racist out here, but we need more things for children to do.; n/a; Jim Shelton is amazing for what he does for our neighborhood. Gary has a strong sense of community and we want it to stay that way.; I would like to have access to the trails easier and maybe a walking path along the river so people can enjoy a walk; I love it here love Stowe school. I really hope to find a place here that's Section 8 and will allow my kids to keep their small dog. They have enough worries with their Dad sick; It is a peaceful and safe area to live in; n/a; Clean up some of the dilapidated buildings; N/a; I think too many poor people have moved here and they don't take care of their houses or yards. Kids run around at too early of an age. Drivers are awful, speeding, not stopping at stop signs; GND is Duluth's best kept secret; We could use a cop shop. Crime seems on the rise; Good neighborhood; Viet smells & they add bleach to try and hide it; Concerned about the dump in the area. I heard it violated some rules. Worried about pollution/contamination; I moved here 4 years ago and was surprised with how nice it actually was. I fear that a large part of that was the fact that there was the school. I am afraid that the school being closed, blight will set in; Thank you for caring!; Very proud of my neighborhood, we honor veterans and cherish the area. Born and raised in area and would like to see it return to better days for younger and older residents.; My family has been living in and around New Duluth since the 1920s; Would like more community gatherings; Bridgeman's is a good addition; Clean up the mess US Steel left us with; Clean up the mess Universal Atlas Cement left us with; Nothing - I was born and raised here and married my next door neighbor; Give tax break for a more well-kept home. More business needed; It needs a freeway; Good people; It just plain seems old and falling apart; N/A; It's calm and peaceful but I have to "go into town" for food and other services; no; N/a; No; No

Appendix C

Research Plan

RESEARCH PLAN

The following table describes the research plan for the assessment step of the Gary/New Duluth SAP HIA. The research plan includes research questions, indicators, data sources, analytic methods, and priority level of the question.

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
New Development Opportunities: Commercial Development						
Social Capital						
<p>What community gathering places (e.g., coffee shops, community centers, etc.) are available to residents? Are they equally accessible, welcoming, and appealing to all residents?</p> <p>Are current unemployment rates – especially long term and among young people – a limiting factor in the development of social capital?</p>	<p>How will the Gary/New Duluth SAP Commercial Development recommendations change opportunities for social networking and the development of social capital?</p> <p>Private/public gathering spaces?</p> <p>Employment opportunities?</p>	<ul style="list-style-type: none"> Community gathering places (Bridgeman’s, Milkhouse, Stowe) – for kids? Older adults? Unemployment in GND B.I.D & DEDA business recruitment 	<ul style="list-style-type: none"> Parcels Google search ACS Lit review on BIDs – ask DEDA about past recruitment 	GIS/table		
<p>What current places in Gary/New Duluth are associated with the neighborhood’s identity?</p>	<p>How will recommendations related to the entry monument features affect neighborhood identity?</p>	<ul style="list-style-type: none"> Bridgeman’s & Milkhouse, trails (Munger), Veteran’s memorial, Stowe Literature on neighborhood identity/branding 	<ul style="list-style-type: none"> Ask community members Lit. 	Lit review		
<p>Do blighted properties and current crime levels inhibit relationship and trust building among neighbors?</p>	<p>Will the Gary/New Duluth SAP help discourage and reduce crime?</p>			Lit review on BID & blight removal -> decrease crime		
Physical Activity						
<p>What percent of residents live within walking distance (¼ to ½ mile) of neighborhood-serving commercial retail and services?</p>	<p>Do the Gary/New Duluth SAP new development recommendations incorporate transit-oriented-development elements to increase the amount of goods and services within walking distance and thereby increase accessibility and physical activity?</p>	<ul style="list-style-type: none"> HH w/in ¼ and ½ mile of retail & services See land inventory for commercially zoned property (DEDA) or vacant commercially zoned land 	<ul style="list-style-type: none"> Parcels Google search DEDA 	GIS/table		

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
	~OR~ Does the Gary/New Duluth SAP make recommendations for community planning and design elements that encourage active living, creating opportunities for greater interactions between residents?	<ul style="list-style-type: none"> Focus on Commonwealth corridor 				
What percent of residents commute less than 1 mile or less than 5 miles to work? What percent of residents drive alone to work? Bike? Walk? Take transit?	Will the Gary/New Duluth SAP new development recommendations increase the amount of jobs within walking or biking distance?	<ul style="list-style-type: none"> Distance to work # HH with 1 or no vehicle Mode share 	<ul style="list-style-type: none"> Census Travel survey LEHD 	GIS/table		
Do current crime levels discourage walking and biking to retail and services in the neighborhood?	How will the Gary/New Duluth SAP new development opportunities recommendations affect crime levels? Specifically consider SAP recommendations for enhancement of the appearance of the area.	<ul style="list-style-type: none"> # assault, disturbing peace, theft, vandalism, vehicle break-ins Lit. on blight and crime (see above) 	<ul style="list-style-type: none"> Crime data Lit. Op Ed complaints 	GIS/table		
Access to Healthy Food						
How many retail establishments sell fresh produce within ¼ mile of Gary/New Duluth? How much fresh produce do they sell? Do they accept SNAP and WIC? How far is the nearest super market, grocery store, farmers' market, or other healthy food retailer (i.e., not a gas station or convenience store)?	Does the Gary/New Duluth SAP increase the number of retail establishments that sell fresh produce or increase the amount of fresh produce sold at retail outlets?	<ul style="list-style-type: none"> Convenience stores, supermarkets, etc. Farmers' markets Food banks # HH using SNAP and/or WIC Meals on Wheels (or similar services) 	<ul style="list-style-type: none"> Parcel Google search Call/survey biz. USDA 	GIS/table		
How many restaurants are located within ½ mile of Gary/New Duluth? How many of them sell healthy food options (e.g., not deep fried foods, pizza or desserts)?	Does the Gary/New Duluth SAP increase the number of restaurants within ½ mile or increase the amount of healthy food options sold at local restaurants?	<ul style="list-style-type: none"> Restaurants 	<ul style="list-style-type: none"> Parcels Google search (location, menu) Survey biz. 	GIS/table		
Does Gary/New Duluth have one or more community gardens?	Will requiring land to be sold at fair market value inhibit the	<ul style="list-style-type: none"> Discuss with planning dept & DEDA 	Urban Ag plan? Zoning?			(Also impacts

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
	development of a community garden?	<ul style="list-style-type: none"> Literature on E.D. & community gardens 				physical activity and social cohesion)
New Development Opportunities: Residential Development						
Social Cohesion						
How does residential stability promote or limit social cohesion in Gary/New Duluth?	<p>How will the Gary/New Duluth SAP Residential Development recommendations change opportunities for social networking and the development of social capital?</p> <p>Will increasing residential density (new residents) disrupt the social cohesion of the neighborhood?</p>	<ul style="list-style-type: none"> Rates of residential turnover (mobility rate) People who have been in the same household for multiple years Homeownership v. renters GND Community Club 	<ul style="list-style-type: none"> Census/ACS Literature 	GIS/table		
Is GND housing stock affordable to residents?	Will GND SAP residential development recommendations affect the number of housing units affordable to current residents? And potentially lead to gentrification and displacement?	<ul style="list-style-type: none"> # residents housing cost burdened Current home values v. market-rate? 	<ul style="list-style-type: none"> DEDA Parcel Real estate info? Literature 			
Does residential crime in the neighborhood affect social cohesion?	How will GND SAP residential development recommendations affect crime levels?	<ul style="list-style-type: none"> # burglaries, arson, other "home" crimes 	<ul style="list-style-type: none"> Crime data Literature (new residential development and crime levels) 			
Physical Activity						
<p>Do households in Gary/New Duluth have access to parks and recreation opportunities?</p> <p>Number of households with 1 or no vehicles?</p>	<p>Will new housing increase residents' access to recreation opportunities (parks and trails)? (Will they be located near existing trails/parks? Develop new parks?)</p> <p>Will residential density be enough to support increase public transit service? [TOD]</p>	<ul style="list-style-type: none"> % HH w/in ½ mile regional trail, ¼ of local park, or ½ mile of gym, YMCA, etc.? Location of vacant parcels zoned residential Lit review – required density for frequent 	<ul style="list-style-type: none"> City/state parks & trails Parcels Google search Lit review 	GIS/table		(See Divine Mercy HIA for literature)

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
		bus service				
Access to Healthy Foods						
How many households in Gary/New Duluth have access to purchase fresh produce (fruits, vegetables, milk, eggs, etc.) within ½ mile of their home?	Do the Gary/New Duluth SAP residential development recommendations increase the number of households with access to fresh produce within ½ mile of their home? Will the SAP direct new housing to be within ½ mile of retail and services that provide fresh, healthy foods?	<ul style="list-style-type: none"> • HH w/in ½ mile of retail est. selling healthy food • CSA's • No guidance on new residential dev – see lit review (max walk distance to grocery store/markets) 	(see Comm dev.) <ul style="list-style-type: none"> • Parcel • Google search • Call/survey biz. • USDA • MDA 	GIS/table		
What percent of households are housing-cost burdened (paying more than 30% of income on housing) which decreases money available for basic needs, such as healthy food?	Will new housing development positively or negatively impact the number or share of households that are housing-cost burdened?	<ul style="list-style-type: none"> • Market rate housing value v. GND home values • Moderate & severe housing cost burden • Duluth requirements for affordable housing? 	<ul style="list-style-type: none"> • Parcel • DEDA – real estate data? • Census/ACS • Duluth statute 	GIS/table		
Does Gary/New Duluth have one or more community gardens?	Will requiring land to be sold at fair market value inhibit the development of a community garden?	<ul style="list-style-type: none"> • Discuss with planning dept & DEDA • Literature on E.D. & community gardens 	Urban Ag plan? Zoning?			(Also impacts physical activity and social cohesion)
Transportation/Multi-modal Transportation						
Social Cohesion						
How does current pedestrian traffic (as mode of transportation or recreation) positively or negatively impact community cohesion?	How will the GND SAP transportation recommendations affect pedestrian traffic?	<ul style="list-style-type: none"> • # people commute by foot • # students walk to school 	<ul style="list-style-type: none"> • Census • SRTS report • Bridge to Health survey 			
Does current bus service limit mobility of older adults (who rely on public transit to participate in community and civic life)?	How will the GND SAP transportation recommendations affect older adult mobility and social participation?	<ul style="list-style-type: none"> • Bus route/schedule • Location of pop 65+ • Senior centers (etc.) 	<ul style="list-style-type: none"> • Parcel • Duluth transit/MIC • ACS • Talk to 			

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
			Catherine Sampson (AAA)			
Physical Activity						
<p>What are the current non-motorized transportation opportunities in Gary/New Duluth and how close are they? (incl. trails, sidewalks, public transit)</p> <p>Does a sidewalk network exist that allows Gary/New Duluth residents to walk to goods and services in the community?</p>	<p>How will the Gary/New Duluth SAP multi-modal transportation recommendations change opportunities for recreation and physical activity? Consider all users, especially older adults and children.</p>	<ul style="list-style-type: none"> • Locations of local, regional and state parks and trails, bike routes, sidewalk inventory, bus route • Sidewalk inventory 	<ul style="list-style-type: none"> • City/state trails • Bike lanes (Duluth/MIC) • Bus route (Duluth/MIC) • Sidewalk inventory 	<ul style="list-style-type: none"> • GIS/ table • Update sidewalk inventory? /walking tour or audit 		
<p>How safe are roadways for pedestrians and bicyclists?</p> <p>Do crime or safety concerns deter residents from utilizing trails and other non-motorized transportation and recreation opportunities?</p>	<p>How will the Gary/New Duluth SAP multi-modal transportation recommendations change crime and pedestrian and bicyclist safety?</p>	<ul style="list-style-type: none"> • Crash statistics (by age) • Crime stats • Lit review (depending on recommendations) 	<ul style="list-style-type: none"> • DPS • Ask Office Sewell 			
<p>"Does the pedestrian environment encourage walking for transportation/recreation and reduce driving?" (Concord HIA)</p>	<p>Does the GND SAP include recommendations for transportation amenities: benches, water fountains, programming, lighting, handicap accessibility, police or citizen patrol, etc.?</p>	<ul style="list-style-type: none"> • Lit review: good walking environments • Walkability audit • Neighborhood watch 		Walkability audit		
<p>Do Gary/New Duluth residents get recommended daily levels of physical activity?</p>	<p>Do GND SAP transportation recommendations increase access to parks or other recreation opportunities?</p>	<ul style="list-style-type: none"> • Percentage of adults who get the recommended levels of physical activity • Percentage of adults who are overweight or obese • Percentage of adults who have ever had depression 	<ul style="list-style-type: none"> • St Louis County – Bridge to Health Survey • St Louis County Student Survey 			

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
How many students walk to school? Stowe? Middle and High school?		% students walk to school	<ul style="list-style-type: none"> SRTS report 			
Are there designated (signed or striped) bike lanes or routes on roads in the neighborhood?		<ul style="list-style-type: none"> Walking audit Duluth bike routes 	<ul style="list-style-type: none"> Walking audit Google maps, MnDOT, Duluth, MIC? 			
	Does the GND SAP make improvements to public transit: infrastructure and amenities at bus stops, increase the number of bus stops, frequency, etc.?					
Access to Healthy Foods						
Does a sidewalk network exist that allows Gary/New Duluth residents to walk to healthy food retailers in the community? Can GND residents take a bus to a full service grocery store?	Does the Gary/New Duluth SAP recommend a new healthy food retailer or provide new/increased bus access, bike route(s) or pedestrian path(s) to existing healthy food retailers?	<ul style="list-style-type: none"> Sidewalk inventory Bus routes & grocery stores along route 				
Does the cost of transportation in GND limit the amount of money available for purchasing healthy food?	How will GND SAP transportation recommendations affect the cost of transportation and as a result the amount residents have to spend on healthy food?	<ul style="list-style-type: none"> Bus fare & cost of travel time Avg cost of car ownership (lit review) H+T calculation (% HH > 45% H+T) 	<ul style="list-style-type: none"> Duluth/MIC Lit review Housing & Transportation Affordability index 	Transp. cost calculator?		

Appendix D
Recommendations Table

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
Commercial Development HIA Recommendations					
#C1. The proposed Gary/New Duluth Business Association should network with West Duluth Business Group or other appropriate business groups, and add LISC as networking partner and investigate becoming an At-Home Neighborhood , if possible.	Local Business Association; Local Initiatives Support Corporation (LISC); Duluth Economic Development Authority (DEDA)	As soon as the Local Business Association is formed	See achievements of current At-Home neighborhoods (Morgan Park, West Duluth, Lincoln Park): reinvestment in properties, programming and resources	High	Yes
#C2. The City’s public information coordinators and the Gary/New Duluth Community Club should coordinate to increase media connections to promote the identity of Gary/New Duluth, including connecting the City’s Wikipedia page to Gary/New Duluth, Tweeting, and connecting with Perfect Duluth Day , Destination Duluth , and Visit Duluth to ensure Gary/New Duluth events are publicized on the Duluth events blog.	Duluth public information coordinators (PICs); GND Community Club	Immediately	Promoting neighborhood “brand” can increase identity and sense of belonging to place, which can contribute to social cohesion (Huang, 2013; Stabert, 2012)	Low/Medium	Yes
#C3. Duluth Workforce Development should connect residents with training opportunities and workforce development resources (such as, Duluth at Work , the Duluth Talent Database, etc.) to ensure that	Workforce Development; LISC; Chamber of Commerce	Immediately, ongoing		High	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
residents have the appropriate training for new jobs in the City and community. To increase access, trainings and/or neighborhood job fair should be held in the community at Stowe School or new Community Center.					
#C4. The Duluth Economic Development Authority (DEDA) and Community Development should focus recruitment on high jobs-density businesses to catalyze economic development, and prioritize development on the sites identified by the Gary/New Duluth blighted property list.	DEDA; Community Development	1 – 5 years	Examples of past DEDA business recruitment: AAR, Ikonics	Medium/High	Yes
#C5. The community should work with the City and other partners to develop a comprehensive wayfinding system that welcomes people to Gary/New Duluth. The Canadian Northern (CN) bridge could be one of four sign points and gateways into Gary/New Duluth (similar to Superior’s branding across Blatnik Bridge). If CN does not want a sign on the bridge, then a new sign could replace the existing basic green metal sign with white letters.	GND Business Association (once formed); GND Community Club; GND Development Alliance; City of Duluth (Parks & Rec, Engineering, etc.); Minnesota Department of Transportation (MnDOT); CN Railroad	1 – 5 years	Huang, 2013 See Assessment for “Resources for Developing a Neighborhood Identity”	Medium/High	Yes
#C6. The Business Association	Local Business	Within 1-5 years	Design Standards in Unified	Medium	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
<p>should work with appropriate City departments to develop Commonwealth Ave commercial corridor design guidelines (including building heights; aesthetic characteristics, such as construction materials and decorative features; street and boulevard trees; landscaping; placement of doors and window sizes; and lighting and streetscape improvements, such as those described in SAP Motorized Transportation Recommendation D).</p> <p>Could start by piloting a Streetscape Greening Program for the Commonwealth Ave Business Association.</p>	<p>Association; Planning Department; Public Works; City Engineering; MnDOT</p>		<p>Development Chapter (UDC)</p> <p>Minnesota Main Street</p> <p>DEDA storefront loan program (31 year program – over 100 projects; has shown that public investment gets higher caliber product, in downtown)</p> <p>Downtown Grand Rapids Streetscape Design Guidelines</p> <p>Street Trees/Greening</p> <ul style="list-style-type: none"> • DID Greening and Public Realm Committee • Growing with Green: Business Districts and the Urban Forest 		
<p>#C7. When new commercial development occurs in the community, City Planning and Engineering should ensure that the development promotes pedestrian access, for example by including sidewalks to the new development if sidewalks do not already exist.</p>	<p>City Planning and Engineering (this could be enforced through zoning or an overlay district)</p>	<p>1-5 years</p>	<p>Indiana Commercial Zoning Ordinance – Section 214 Special Regulations: Streets and Sidewalks</p> <p>The UDC has provisions for pedestrian connections.</p>	<p>Medium/High</p>	<p>Yes – have some provisions in code to require sidewalks in subdivisions</p>
<p>#C8. A partnership between Gary/New Duluth Community Club and the Local Business Association should consider conducting a</p>	<p>Approval: City Planning</p> <p>Organization:</p>	<p>1-5 years</p>	<p>Lincoln Park for example – they do this through Fair Food Access campaign (have weekly farmers’ market)</p>	<p>Medium</p>	<p>Yes</p>

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
market study on the potential of a food market in the community and identify options to provide fresh food, such as mobile markets, food hubs or farmers' markets. Then obtain zoning/ permitting for the desired option.	Partnership between GND Community Club and Local Business Association		Mobile markets Food Hub: Will Allen		
#C9. The City in partnership with St. Louis County should develop an urban agriculture plan that includes guidance and resources for individuals and organizations that want to acquire or lease underutilized properties for urban agriculture, and minimizes the financial burden and red tape for obtaining leases and permits.	City Planning; St. Louis County	1-5 years	Examples of urban agricultural plans and policies include: <ul style="list-style-type: none"> • Minneapolis • APA's Urban Agriculture: Growing Healthy, Sustainable Places report Other cities that have plans and policies include Seattle, Austin, Somerville, MA, Detroit, Oakland, Chicago, Baltimore, and more.	Medium	Yes - Duluth is changing zoning code to allow urban ag in mixed-use zones.
Residential Development HIA Recommendations					
#R1. The Gary/New Duluth Community Club and Gary/New Duluth Development Alliance should coordinate a community organized "welcome wagon" to welcome new residents.	GND Community Club; GND Development Alliance	Immediately	Article with examples on neighborhood welcoming committees Lost Creek Neighborhood Association Welcome Committee	Medium	Yes
#R2. The SAP should include a recommendation to support more diversified housing stock to meet the needs of all citizens in all neighborhoods for all incomes, all ages, and all family groupings. This	Partnership between private sector (realtors, developers) and City - Duluth Housing & Redevelopment	Map: 0 – 1 years Development: 1 – 5 years, ongoing	Livingstone, Bailey and Kearns, 2008 Affordable and Accessible Housing options (LifeTransition.info)	High	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
should include support for transitional housing, such as single-level housing for seniors and persons with disabilities. Develop a map of residential properties identified for residential construction as part of implementation.	Authority (HRA), and DEDA				
#R3. The SAP should consider including a recommendation for bringing in an in-home care service or develop a residential-care home for seniors or those with disabilities, which could provide jobs in the community, as well as transitions for people who live in the community and want to remain there.	Duluth HRA; St. Louis County Public Health; Arrowhead Area Agency on Aging; Community Development	1 – 5 years	Affordable and Accessible Housing options (LifeTransition.info)	Medium	Yes
#R4. The City Planning Department and Parks and Recreation should work together to ensure that new housing is connected to recreation amenities and/or include privately-owned green space built into the development to promote physical activity and social cohesion. This may include, but is not limited to, supporting the SAP Natural Environment Recommendation C for conservation design.	City (could include Planning Department and Parks and Recreation)	1 – 5 years, ongoing	<ul style="list-style-type: none"> • UDC has provisions for connectivity • Literature: Kaczynski, 2007; Brownson, 2001; Bauman, 2007; Lieber & Fesenmaier, 1985; Gobster, 1995; Furuseth & Altman, 1991; Moore & Graefe, 1994; Ottensmann & Lindsey, 2008 • Concept: Privately Owned Public Space (POPS) <ul style="list-style-type: none"> ○ Greenway Association ○ Midland, MI Residential Open Space Option 	Medium	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
#R5. The HIA Technical Advisory Committee strongly encourages the Gary/New Duluth Development Alliance to implement the proposed community garden in the Gary/New Duluth Community Center and Recreation Area concept plan.	GND Development Alliance	1 – 5 years		High	Yes
#R6. The Gary/New Duluth Community Club should partner with not-for profit organizations, such as Seeds to Success, to conduct a study to determine how many residents have residential gardens, how many rely on gardens as important food source, and determine demand for more gardens (community gardens).	GND Community Club; Not-for profit organizations (Seeds to Success, etc.)	1 – 5 years		Low	Yes
Natural Environment HIA Recommendations					
#N1. Duluth City Council should adopt an urban tree canopy goal to further increase Duluth’s commitment to preserving and improving the natural environment in all neighborhoods. Consider fruit trees to increase access to healthy food.	City Council; City parks maintenance; City Engineering; City Tree Commission	1 – 5 years	American Forests: Urban Forests – Tools & Resources Resources may be available through Re-Leaf Duluth.	Low	Yes
#N2. The University of Minnesota (UMN) Duluth and Extension	UMN Duluth; UMN Extension	2-3 years	Quantifying the benefits of the natural environment helps build	Low	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
should conduct an Ecosystem Services Assessment to quantify the benefits of the local urban forest and waterways in Gary/New Duluth.			broad support for the environment. There are online tools and local experts who can apply the methodologies to the area. Might be better on citywide level. See American Forests: Urban Forests – Tools & Resources		
#N3. The SAP should include a recommendation to encourage new residential and commercial buildings to exceed the City’s sustainability standards for high-efficiency building design and operation.	City Planning and Construction Services	Immediately (any new buildings or retrofits should be encouraged to be highly efficient)	UDC 50-29: Sustainability Standards Example: Lincoln Park Middle School has daylighting, motion sensors, energy recovery, etc. (Source: Northland News Center)	Medium	Yes
#N4. The City Parks and Recreation, Community and Business Development and Minnesota Department of Natural Resources (DNR) should individually or in partnership identify potential scenic natural sites for scenic overlooks and seating areas from existing natural amenities like the St. Louis River. Additionally, they should locate passive recreation features like seating areas or even walking paths identified sites, and increase pedestrian access points from sites in the area to the regional trail system outside of Gary-New Duluth.	City Parks and Recreation; Community and Business Development; DNR	1-5 years	Godbey, 2009; Mowen et al., 2007	Medium	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
<p>#N5. The UMN Duluth, UMN Extension and the School District should partner to implement community education programs around beekeeping and gardening to promote local food production and lifelong environmental stewardship. (Example: a young naturalist/young gardeners program in partnership with Stowe.)</p>	<p>UMN Duluth or UMN Extension; School District</p>	<p>1-5 years</p>	<ul style="list-style-type: none"> • UMN Extension: Honey Bees • UMN Duluth: Edible Landscapes • Stowe Elementary: designed for “Educational Excellence with an Environmental Emphasis.” At Stowe Elementary they have children participate in planting trees, encourage students to recycle as much as possible, etc. which allows the school to produce only one cubic foot of waste a day from lunch, and much more. They have created a recycling program where kids are involved in extensive waste-reduction that includes the recycling of three kinds of paper, aluminum, cardboard, plastic, metal cans, and glass (Source: Sustainable Twin Ports). • Chawla L, Derr V. The development of conservation behaviors in childhood and youth. Oxford Handbook of Environmental and Conservation Psychology. New York, NY: Oxford University Press; 2012. 	<p>Medium</p>	<p>Yes</p>
<p>#N6. City Parks and Recreation, Western Lake Superior Sanitary District (WLSSD), and UMN Extension should work together to explore the feasibility of a neighborhood or city-wide</p>	<p>Parks and Recreation; Western Lake Superior Sanitary District (WLSSD); UMN Extension</p>	<p>1-2 years</p>	<p>St. Louis County: Organics and Composting UMN Extension: Soils and Composting</p>	<p>Low/Medium</p>	<p>Yes</p>

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
composting/mulching program.					
#N7. City Engineering and Park Maintenance should increase native planting and natural landscaping that absorbs water, requires less maintenance, and can support pollinators.	City Engineering; Park Maintenance	Immediately	The Duluth Parks and Recreation Master Plan (2010) includes Action Step #44 which supports “more naturally functioning landscapes (native vegetation, rain gardens, community gardens, butterfly gardens, etc.) in all parks, regardless of their size.”	Low/Medium	Yes
Transportation HIA Recommendations					
#T1. The City should develop an overlay district with specifications for street lighting, marking unmarked street crossings, maintaining short blocks and frequent street crossings, orienting any new development to face the street, and increasing window coverage on street-facing commercial buildings. (See Commercial Development HIA Recommendation #C6.)	City Engineering City Planning	1 – 5 years	<ul style="list-style-type: none"> • UDC has building design standards • Literature: Retting, 2003; ChangeLab Solutions, 2013 	Medium	Yes
#T2. In the spirit of accessibility and creating a welcoming/usable neighborhood for all, streets should be designed and maintained with all users in mind. The City Council should approve the adoption and implementation of a Complete Streets Policy in Duluth.	City Council	0 – 1 years	Minnesota Complete Streets	Medium	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
#T3. The SAP Multi-Modal Transportation Recommendations should address lighting and vegetation along sidewalks and trails to enhance safety.	City Engineering; Parks Maintenance	1 – 5 years	Reynolds et al., 2007	Medium/High	Yes
#T4. The SAP should include a recommendation to update the Gary/New Duluth sidewalk survey. Focus should be around Stowe School and other high foot traffic areas.	MIC; City of Duluth Engineering	Immediately	Past surveys have led to repairs and replacements. Using interns, service organizations, etc. to do survey	High (in order to make it into the final SAP document).	Yes
#T5. To quantitatively monitor the impact of these recommendations, the Gary/New Duluth Community Club, Metropolitan Interstate Council (MIC), and City Planning Division could conduct a walking survey of residents, either by counting pedestrians or providing residents with a questionnaire to understand their walking habits, before and after recommendations are implemented.	GND Community Club; MIC; Planning Division	0 – 1 years		Low	Technically feasible; may not be practical or economically efficient
#T6. The proposed road improvement to Boy Scout Landing should be designed with rest areas for pedestrians on the steep hill, for example a couple of benches on the hill.	DNR, City Engineering; Park Maintenance; MnDOT	Concurrent with Commonwealth road improvements, or immediately following		Medium	Yes
#T7. For traffic calming recommendations, City	City Engineering; Planning Division;	Immediately		High	Depends on MnDOT

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
Engineering, Planning and Public Works, Minnesota Department of Transportation (MnDOT) and the Metropolitan Interstate Council (MIC) should focus specifically on 1) the business area and in front of Stowe School on Commonwealth (traffic calming could involve stop signs, center medians or line redesign), and 2) the immediate vicinity of Stowe School and the Gary/New Duluth Recreation Area along 101st Ave West, Carterett St and 102 Ave West to House Street.	Public Works; MnDOT; MIC				
#T8. The SAP should include a statement about working with City of Duluth Public Works, MnDOT, and neighborhood organizations to prioritize routes and coordinate snow removal efforts on sidewalks in the area.	City Public Works; MnDOT; neighborhood groups	Within 1-3 years		High for the highest-priority routes (Commonwealth Ave, Stowe, etc.)	Yes
#T9. The City's Master Trail System Plan should include trail connectivity to schools and recognize the importance of school connectivity to new developments with the provision of sidewalks and trails. This should be a key principle in the Duluth Comprehensive Plan and zoning codes should be revamped accordingly.	City Parks and Recreation; City Planning (zoning and Comp Plan)	2016 Comprehensive Plan update and 2021 (next update of Master Trail System Plan)	The Wisconsin cities of Superior and Janesville have a master trail system plan that includes trail connectivity to their schools.	High	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
#T10. Include a recommendation in the SAP to increase bicycle infrastructure, such as parking near bus stops and commercial and recreational destinations, to encourage bicycle riding and transit ridership.	GND Business Association; MIC; City Engineering; Public Works	1 – 5 years	Sens J. 2010. Relating Bike Racks and Bike Ridership . University of Nebraska-Lincoln. Buehler. 2012. Determinants of bicycle commuting in the Washington, DC region: The role of bicycle parking, cyclist showers, and free car parking at work . Transportation Research Part D 17 (2012) 525–531.	Medium	Yes
#T11. Add a SAP Recommendation for an educational campaign through Duluth Transit Authority on the benefits of riding public transit (cost savings) and develop colorful, high quality materials that show transit connections to major destinations, such as grocery stores.	Duluth Transit Authority	1 – 5 years		Low	Yes
Park Planning HIA Recommendations					
#P1. The City should approve and tangibly support implementation of the Gary/New Duluth Community Center and Recreation Area concept plan.	GND Development Alliance; City Council (approval); City of Duluth (tangible support)	Immediately		High	Yes
#P2. The Gary/New Duluth Development Alliance, MnDOT, and Parks and Recreation should partner to direct bicyclists to the Gary/New Duluth Recreation Area	GND Development Alliance; MnDOT; Parks and Recreation	Following development of Community Center and Recreation Area		Medium	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
off of Commonwealth Ave as a rest spot when biking to or from Fond du Lac. There will be a picnic area and also concession stand in the Community Center.					
#P3. The Gary/New Duluth Development Alliance should consider providing equipment for rental at the Gary/New Duluth Community Center and Recreation Area, possibly by accepting donations of used sporting equipment from community members.	GND Development Alliance	1-5 years	Ex: Hartly Park, Duluth Many organizations provide sporting equipment for rental, including City Parks and Recreation, outdoor clubs, Universities and other institutions, etc. With an honor-system, there is a chance equipment would be stolen, but often when community members know that equipment has been donated for communal use it encourages honesty among users.	Low/Medium	Yes
#P4. The GND Development Alliance could consider partnerships with established organizations working on access to healthy food, including Community Action Duluth's Seeds of Success and the Duluth Community Garden Program .	GND Development Alliance; Organizations working on access to healthy food, including Community Action Duluth's Seeds of Success and the Duluth Community Garden Program	1 – 5 years		Medium	Yes
#P5. A partnership between the Gary/New Duluth Development Alliance, Gary/New Duluth Community Club and Local Business Association should	Approval: City Planning Organization: Partnership between	1-5 years	Lincoln Park for example – they do this through Fair Food Access campaign Mobile markets	Low/Medium	Yes

Recommendation	Agency or organization responsible for implementation?	When should the recommendation be implemented?	Is there evidence that this works? What is the source of the evidence or where has it worked before?	How would you prioritize the recommendation ? (High, Medium or Low)	Politically or Technically Feasible? (Y/N)
consider using the updated Community Center for a farmers' market or mobile produce truck (refer to HIA Commercial Development recommendation #C8).	GND Development Alliance, GND Community Club and Local Business Association		Food Hub: Will Allen		