

West St. Paul and GreenStep Cities

ESPM 4041W: Problem Solving for Environmental Change



Report Number 9/9

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Executive Summary

The city of West St. Paul has actively been working on making strides in the sustainability realm of city planning and operations. In 2017, the city showed its commitment to the sustainability of its community by enrolling in the GreenStep Cities voluntary program. As a result, they were able to achieve Step 1 public recognition that same year. As of 2021, the City has already reached Step 3 recognition. With support from University of Minnesota senior students specializing in environmental policy and sciences, West St. Paul aims to achieve Step 4 and in time Step 5 recognition in the next few years.

Alongside eight other groups of various environmental projects, we developed an evaluation of West St. Paul's current GreenStep Cities program and ideas for the future of best practices. Through our research methods, we found that the City has eight remaining best practices to achieve their goal of completing as many as possible. Additionally, we found that to advance in the GreenStep program, it is more feasible to create an internal green team versus allocating funds for a grant writer.

Three recommendations identified to be both beneficial and achievable by West St. Paul are as follows:

1. Start by completing the eight remaining best practices on the GreenStep assessment form at either a 1-, 2-, or 3-star level to expand the City's sustainability efforts.
2. Measure and report on the 8 CORE metrics and 5 additional city performance metrics to advance to Step 4 in the GreenStep program.
3. Develop an organizational awareness of GreenStep Cities that includes a GreenStep Team that will influence and encourage future achievements within the program.

Introduction

Overview

Located in the northern extent of Dakota County, West St. Paul, is a first-ring suburb of St. Paul built-in 1858. West St. Paul is recognized for its duality of country-like beauty and an urban center with dominating downtown life (City of West St. Paul, 2014). Also, they are known for their misleading name, which can be attributed to their unique location on the west bank of a predominantly north-south stretch of The Mississippi River. Over the past 50 years, the city has seen a slow growth rate since the rapid expansion in the first half of the 20th century. Moving forward, West St. Paul leaders have made it clear that a continued expansion of Robert Street will take place. This redevelopment will be the vehicle that carries the city towards its vision of West Saint Paul becoming a friendly, progressive, and connected community.

Four Environmental Sciences, Policy, and Management undergraduate seniors at the University of Minnesota worked with the City of West Saint Paul in the fall of 2021. The goal was to identify the next steps for the City of West St. Paul in developing the Minnesota Pollution Control Agency's (MPCA) GreenStep Cities Program. This class is set up as a capstone project, allowing students an opportunity to identify real-world applications of concepts learned at the University of Minnesota. By applying these concepts to the GreenStep framework, we help identify the areas of need for West Saint Paul, contributing to their work towards sustainability goals.

A city focused on sustainable redevelopment; West St. Paul spent the better part of the last decade on environmental planning. The City of West St. Paul works to achieve this alignment by participating in the renowned GreenStep Cities program through the Minnesota Pollution Control Agency (MPCA). The community first gained recognition for its sustainability efforts through the program in mid-2017. In 2021, just four years later, they reached a third step ranking out of five steps.

Established out of a report in the 2009 Legislature, GreenStep Cities became Minnesota's first voluntary challenge and recognition program to help cities achieve sustainability and quality-of-life goals (Minnesota Pollution Control Agency, n.d.). This program is governed by a public-private partnership with the MPCA leading and several partner organizations participating. Based upon 29 optional best practices, each can be implemented, as decided by city elected officials and community members.

Cities achieve step one of the five-step process by first building community interest, inviting GreenStep staff to visit the city, or adopting a city resolution when joining the program. For step two, the city must post information on the GreenStep website about what the city has already done and then be recognized for implementing between four and eight best practices. For a city to move onto step three, it must implement an additional four to eight best practices at its own pace. As well, cities must complete high-impact best practices- dependent upon the city category and capacity. The fourth step entails the city measuring and reporting between seven to fifteen performance metrics. Lastly, for a city to achieve the highest marks of a Step Five City, it must demonstrate improvement in city performance metrics. Currently, 144 cities in Minnesota are participating in the voluntary GreenStep program. As of 2021, 26 cities have completed step three of the GreenStep program. West St. Paul is one of these cities.

Issue Description

According to the Environmental Performance Index, the United States ranks 24th of 180 countries globally, ranking it lower than most developed countries (Yale Center for Environmental Law and Policy, 2020). However, Minnesota has made it a goal to improve this statistic by launching the GreenStep Cities program. As of 2021, Minnesota ranks 7th nationally in its sustainability efforts. In part due to their implementation of the GreenStep Cities program (Hubbard, 2021). This program has inspired environmental improvement efforts by 144 cities across Minnesota (Minnesota Pollution Control Agency, n.d.). In a partnership between Minnesota and its individual communities, the state administration creates a voluntary effort to increase climate actions and other environmental initiatives. With the ongoing climate crisis and the effects on Minnesotan cities, the development of climate conscious cities is imperative.

The benefits of joining the GreenStep program for a city are substantial, often leading to statewide recognition. For cities to mitigate and adapt to the effects of climate change, this program is the perfect continuous improvement pathway. As cities become better equipped to tackle climate change, the city saves time and money by implementing cost-effective practices in different categories. Some category examples include buildings, land use, transportation, environment, and economic/community development (Minnesota Pollution Control Agency, n.d.). The Minnesota GreenStep website provides over 4,000 reports on how other cities act, making it easier to adopt innovative techniques to achieve GreenStep goals (Minnesota Pollution Control Agency, n.d.). Advancing in the program's steps allows cities access to grants and various financial assistance programs. Also, a city will be given recognition at

the League of Minnesota Cities conference and have their achievements published on the GreenStep website. Additionally, the city will receive an annual \$1,000 GreenStep Sustainable City Award (Minnesota Pollution Control Agency, n.d.).

With every benefit comes a limitation, even with the GreenStep Cities Program and Cities prioritizing sustainability. Through research and anecdotal evidence, two main reasons came up to light that cause challenges when committing to GreenStep: finances and time. Even though money and time are areas of concern and can be potential limitations, the community of West St. Paul has shown support for the city's vision and the community's future with their continuous progression in the program. By bringing in more people into the community through the redevelopment of South Robert Street, the city will also increase its resources and further the progress of these visions held at the individual and city level.

City Vision Statement

“The City of West St Paul strives to insure a safe, pleasant and affordable environment for residential, commercial, industrial and public activities and to promote the public health, safety and general welfare of its citizens. West St. Paul will be a friendly, safe, walkable, and well-connected City for its residents and visitors. As we grow, adapt and change, we will preserve green spaces, high quality infrastructure and the community feeling that makes West St. Paul a desirable City.” (City of West St. Paul, 2020).

GreenStep Program Vision Statement

With an emphasis on assistance, GreenStep Cities works to develop Minnesotan communities' sustainability and quality-of-life goals. Recognizing the importance of voluntary efforts, the program allows for complete customization to fit city needs through the management of public-private partnerships.

Report Vision Statement

Through the development of West St. Paul's sustainability and quality-of-life goals, our report will assist in developing a four-star city under the GreenStep Cities program criterion. With a focus on fulfilling the City's vision focusing on growth, adaption, and change, we hope to assist the City with these goals through GreenStep Cities. In 2040 the City of West St. Paul will have reached a step 5 city in the GreenStep program and will continue to report on city performance metrics to further improve the city's interaction with the environment around them.

Goals and Objectives

Through a collaboration with the City of West St. Paul and the University of Minnesota - Twin Cities, we facilitate further use of GreenStep Cities within the community. We intend to support a strong sustainability initiative with a focus on goal-oriented objectives and cost-effective measures.

- Identify all previously completed best practices that have not been noted in the GreenStep program assessment form to get overlap with step four ranking,
- Develop a plan outlining the benchmarks needed to achieve a step four and five ranking to make the transition easier for West St. Paul,
- Assess where the goals of West St. Paul, the groups of ESPM 4041W and her groups, and the GreenStep Cities' best practices overlap to meet step four rankings, and
- Review the effectiveness of grant writers in GreenStep Cities program success to evaluate whether one is needed.

Methods

Site Description

The City of West Saint Paul had a population of 20,615 in the 2020 census. This is comparable to Minneapolis-St. Paul metropolitan area communities such as Golden Valley and Columbia Heights. Located at the northern extent of Dakota County, West Saint Paul is considered a first-ring suburb of Saint Paul (Figure 1) and was first inhabited by settlers in the mid-1800s. This settlement displaced the Native American Dakota villages of Kaposia and Mendota that previously inhabited this area for generations (City of West Saint Paul, 2014). Following the original settlement in the mid-1800s, the population was slow to grow until after World War I. Following the war, the population boomed and continued to grow until the 1970s when most of the available open land was developed. Before the 1970s, there was a mix of farms that other land uses eventually replaced with the expanding housing and businesses. In the following decades, this area saw little development until recently when the City decided it is time to redevelop some areas and draw more families and people into the community.

West Saint Paul is located north of MN State highway 62 and just west of MN State highway 52. South Robert Street connects this community to downtown Saint Paul (Figure 1). Depending on where in West Saint Paul one is located, it is an easy 10 minute or less drive to downtown Saint Paul. Demographically the residents of West Saint Paul are white (74.4%), Hispanic or Latino (22.2%), African American (5.1%), Asian (4.9%), and American Indian (<0.1%) (U.S. Census Bureau, 2020). There are 8,475 households in West Saint Paul, with an average of 2.30 people per household (U.S. Census Bureau, 2020).

City of West St. Paul



Figure 1: Map of the City of West St. Paul (Source: ESPM 4041W Class)

One central transportation corridor identified as an area of improvement and opportunity is Robert Street which runs north to south and splits West Saint Paul in half. This area is currently going through a redevelopment aimed to increase what the City has to offer and bring more people into the community. Through apartment construction and other redevelopment initiatives, the City has seen increased foot

traffic, requiring new initiatives to make the area more accessible to all. With many different shopping options, restaurants for all pallets, and parks and residential areas nearby, this area offers an opportunity to be more pedestrian-friendly than other cities this size.

Research Techniques

An analysis of primary and secondary data was conducted to examine the feasibility of advancing through the GreenStep program and provide the possible avenues to best accomplish that for the City of West St. Paul. Data was collected from local cities in similar situations as West St. Paul to identify successful strategies and potential challenges that could be applied or avoided for this community. The methods used to evaluate these processes and gather that primary and secondary data were interviews with leaders in the community, research into similar communities, and document review of reports and plans put out by the city that cover some of the metrics. These three approaches together provided a good idea of an end goal, what works to get there, and what else needs to be accomplished to advance the process.

Primary Data

Interviews

Interviews were conducted to explore further and comprehend the quantitative and qualitative information we received from online research. The interviews were conducted with GreenStep Cities coordinators, City coordinators, and all other group liaisons. Interviews were conducted in a virtual format, using *Zoom* or *Google Teams* and in-person, with each party masked, given COVID precautions (Table 1).

Interviews with eight student project group liaisons were used to collect information from their projects to examine if the goals and objectives within these projects would fill in gaps in the West St. Paul GreenStep Cities program (see Appendix A). Interviews with GreenStep City coordinators and City coordinators were used to gather information and explanations on the GreenStep program and individual plans Cities have within the program (see Appendix B).

Table 1: Interviewees relevant to the GreenStep Cities program at West St. Paul.

Interviewee	Department	Reason for Selection
Kirstin Mroz-Risee	MPCA GreenStep Cities Coordinator	Receive key information on how cities achieve step 4 and 5 rankings in the GreenStep program.

Dave Schletty

West St. Paul Assistant Parks and
Recreation Director

Closest tie to West St. Paul's
GreenStep City procedures and
goals.

The interviews were limited by the time and availability of both the interviewer and interviewee. Interviewers had constraints on the time available to conduct the project and the number of people possible to interview within that time frame. Constraints for this method include time and potential research bias. Lack of time can lead to misinterpretation of the importance of the City's inclusion of a grant writer. State level insights came from an interview with Green Step Coordinator Kristin Mroz-Risee.

Case Studies

Golden Valley, MN, is a comparable city to West St. Paul regarding population size and relative location to the Twin Cities and GreenStep city category. They have been applauded for their successful implementation of Step 4 & 5 of the Green Step program. As of May 2021, Golden Valley has achieved GreenStep 5 classification; the recognition shows the steps Golden Valley has made to further improve in the Step 4 areas of energy and resource conservation and innovation (City of Golden Valley, 2021).

Maplewood, MN, is a comparable city to West St. Paul regarding their stellar achievements, relative location to the Twin Cities and GreenStep city category. They also have been applauded for their successful implementation of Step 4 & 5 of the Green Step program. In June 2021, Maplewood received an award for being a Step 4 and Step 5 GreenStep City (City of Maplewood, 2006-2021). From reporting year 2019 to 2020, Maplewood improved on 13 sustainability practices. Some of the most notable are an increased number of LED lights in city facilities from 71% to 77% and an increase of 49 trees planted on City projects.

Although Maplewood is about double the size of West St. Paul, they are an extremely advanced and accomplished GreenStep city- providing a good example of action steps to replicate. Also, according to the City of West St. Paul's 2040 Comprehensive Plan, Maplewood is listed as another community that is similar in terms of general demographics and location of West St. Paul; and that may face similar barriers for continued economic growth (City of West St. Paul, 2020).

Due to the city of West St. Paul being a city of redevelopment versus new development, it was important to look at cities that have accomplished steps 4 or 5 due to the city's similarities in goals of achieving

sustainable resilience. Cities such as Fridley, Mendota Heights, New Brighton, North St. Paul, Richfield, and South St. Paul are also listed in the West St. Paul 2040 comprehensive plan. Of those cities, Maplewood, New Brighton, North St. Paul, and South St. Paul have received either step 4 or 5 status. It may be beneficial for the city of West St. Paul to collaborate with the other cities to work towards achieving steps 4 and 5.

Time constraints were the greatest limitation associated with this method. Scheduling conflicts or failure to hear back from various city staff limited sources and time constraints are also a factor in the sample sizes of cities studied.

Secondary Data

Document Review

A review of documents and web pages allowed for creating an up-to-date and cohesive list of “best practices” West St. Paul must complete. The information gathered helped produce interview questions, and supplemental material for the case study analyses conducted. The following documents were used to collect relevant GreenStep Cities information to better decide which best practices West St. Paul should complete and why (see Appendix C, D and E). Document review and analysis can be limited by the analyzer's attention to detail and the document's reliability. Documents analyzed were also lengthy and required supplemental research to understand.

Findings

Through our research, we found that cities with access to a grant writer did not have more success in the completion of the GreenStep program. Cities that had a green team that was composed of city employees in different departments were able to stay more involved with the GreenStep program. Having resources readily available to the green team and other departments across the city is important for keeping the theme of sustainability in mind in the day to day focus of the city employees. Lastly, through our survey sent out to other groups within our class, we found some areas of overlap between their projects and best management practices in the GreenStep program.

Research and Document Review Findings

Despite West St. Paul's achievement of already being classified as a Step 3 city, the City desires to complete as many of the best practices as it can. This goal encouraged research and document review to identify which practices remain within the West St. Paul program. A review of the GreenStep Cities Best Practice list (Minnesota Pollution Control Agency, 2021) and West St. Paul's 2021 GreenStep Cities Assessment (see Appendix D) identified eight remaining practices for Step 3. Those practices can be identified by number and name in the table below. Also refer to the figure that exemplifies the number of actions needed for each specific actions.

Table 2: Step 3 Best Practice Left to Fulfill Inventory.

A complete inventory of the eight best practices and accompanying actions that West St. Paul still has left to fulfill (Minnesota Pollution Control Agency, 2021).

Best Practice	Actions
3. New Green Buildings (Requires a completion of action 1 or 2 and action 3, 4, or 5)	3.1: Require by city policy that new city-owned buildings be built using the SB 2030 energy standard and/or a green building framework. 3.2: Work with the local school district to ensure that future new schools are built using the SB 2030 energy standard and/or a green building framework. 3.3: Adopt a sustainable building policy for private buildings; include the SB 2030 energy standard; adopt language governing new development projects that: <ul style="list-style-type: none"> a. Receive city financial support and/or b. Require city regulatory approval (planned unit development, conditional use permit, rezoning, variance) 3.4: Provide a financial or other incentive to private parties who build new buildings that utilize the SB 2030 energy standard and/or a green building framework. 3.5: Adopt environmentally preferable covenant guidelines for new common interest communities addressing issues such as stormwater, greywater, native vegetation, growing food, clothes lines, electric vehicle charging, and renewable energy.

<p>5. Building Redevelopment (Requires a completion of one action)</p>	<p>5.1: Adopt a historic preservation ordinance/regulation and encourage adaptive reuse.</p> <p>5.2: Implement the Minnesota Main Street model for commercial revitalization.</p> <p>5.3: Plan for reuse of large-format retail buildings, or work with a local school, church, or commercial building to either add-on space or repurpose space into new uses,</p> <p>5.4: Create/modify a green residential remodeling assistance/financing program to assist homeowners in adding space or features such as EV charging, renewables to their existing homes.</p> <p>5.5: Adopt development/design standards and programs that facilitate infill, redevelopment, and adaptive buildings.</p>
<p>7. Resilient City Growth (Requires a completion of one action)</p>	<p>7.1: Limit barriers to higher density housing by including in the city zoning ordinance and zoning map:</p> <ul style="list-style-type: none"> a. Neighborhood single-family density at 7 units/acre or greater. b. Multi-family housing at a gross density of at least 15 units/acre adjacent to a commercial zoning district or transit node. <p>7.2: Achieve higher density housing through at least two of the following strategies:</p> <ul style="list-style-type: none"> a. Incorporate a flexible lot size/frontage requirement for infill development. b. Use density and floor area ratio (FAR) bonuses in selected residential zoning districts. c. Clustered residential development: tie a regulatory standard to comprehensive plan language defining compact city expansion zones that limit low-density development. d. Allowing accessory dwelling units, single-room occupancy housing, senior housing, co-housing or tiny houses / apartments by right in selected zoning districts <p>7.3: Achieve higher intensity commercial/industrial land uses through at least one of the following strategies:</p> <ul style="list-style-type: none"> a. Included in the city zoning ordinance and zoning map a commercial district with reduced lot sizes and zero-lot-line setbacks, or a FAR minimum of 1. b. Set targets for the minimum number of employees/acre in different commercial zones. <p>7.4: Provide incentives for infill projects, or for life-cycle housing at or near job or retail centers, or for achieving an average net residential density of seven units per acre.</p> <p>7.5: Use design to create social trust and interaction among neighbors: modify the city zoning ordinance and zoning map to allow, without variance or rezoning in at least one district, developments that meet the prerequisites for LEED for Neighborhood Development certification.</p>
<p>10. Design for Natural Resource Conservation (Requires a completion of one action)</p>	<p>10.1: Conduct a Natural Resource Inventory or Assessment (NRI or NRA); incorporate protection of priority natural systems or resources such as groundwater through the subdivision or development process.</p> <p>10.2: For cities outside or on the fringe of metropolitan areas, conduct a build-out analysis, fiscal impact study, or adopt an urban growth boundary and a consistent capital improvement plan that provides long-term protection of natural resources and natural systems, and agricultural practices outside the boundary.</p> <p>10.3: For cities within the metropolitan areas, incorporate woodland best management practices addressing protection of wooded areas into zoning or development review.</p>

	<p>10.4: Adopt a conservation design policy; use a conservation design tool for pre-design meetings with developers and for negotiating development agreements in cities with undeveloped natural resource areas.</p> <p>10.5: Preserve environmentally sensitive, community-valued land by placing a conservation easement on city lands, and by encouraging/funding private landowners to place land in conservation easements.</p> <p>10.6: Conserve natural, cultural, historic resources by adopting or amending city codes and ordinances to support sustainable sites, including roadsides, and environmentally protective land use development.</p> <p>10.7: Be recognized under the Bird City Minnesota, Bee City USA, or Community Wildlife Habitat program.</p>
<p>13. Efficient City Fleets (Requires a completion of two actions)</p>	<p>13.1: Efficiently use your existing fleet of city vehicles by encouraging trip bundling, video conferencing, carpooling, vehicle sharing and incentives/technology.</p> <p>13.2: Right size/down-size the city fleet with the most fuel-efficient vehicles that are of an optimal size and capacity for their intended functions.</p> <p>13.3: Phase-in operational changes, equipment changes including electric vehicles, and no-idling practices for city or local transit fleets.</p> <p>13.4: Phase in bike, e-bike, foot, or horseback modes for police, inspectors and other city staff.</p> <p>13.5: Document that the local school bus fleet has optimized routes, start times, boundaries, vehicles efficiency and fuels, driver actions to cut costs including idling reduction, and shifting students from the bus to walking, biking and city transit.</p> <p>13.6: Retrofit city diesel engines or install auxiliary power units and/or electrified parking spaces, utilizing Project GreenFleet or the like.</p>
<p>14. Demand-Side Travel Planning (Requires a completion of two actions)</p>	<p>14.1: Reduce or eliminate parking minimums; add parking maximums; develop district parking; install meters and charge for parking at curb and city-owned lots/ramps.</p> <p>14.2: For cities with regular transit service, require or provide incentives for the siting of retail services at transit/density nodes.</p> <p>14.3: For cities with regular transit service, require or provide incentives for the siting of higher density housing at transit/density nodes.</p> <p>14.4: Require new development or redevelopments to prepare a travel demand management plan or transit-oriented development standards or LEED for Neighborhood Development certification.</p>
<p>26. Renewable Energy (Requires a completion of two actions)</p>	<p>26.1: Adopt wind energy and/or biomass ordinances that allow, enable, or encourage appropriate renewable energy installations.</p> <p>26.2: Promote resident/business purchases and/or generation of clean energy by:</p> <ul style="list-style-type: none"> a. Promoting a local utility’s green power purchasing program that allows residents/business to order/buy new renewable energy. b. Creating and sharing a map of the community’s solar resource and/or linking to the Minnesota Solar Suitability App. c. Connecting resident/business with the Solar Directory for potential installers. d. Hosting a community-wide solar bulk-buy program or campaign (also called “solarize” programs). <p>26.3: Promote financing and incentive programs, such as PACE, for clean energy:</p> <ul style="list-style-type: none"> a. PACE for commercial property owners to install renewable energy systems, energy efficiency measures and EV charging infrastructure for existing or new construction.

	<ul style="list-style-type: none"> b. Local, state and federal financial incentives for property owners to install renewable energy systems. c. Local utility renewable energy production incentives and rebates. <p>26.4: Support a community solar garden or help community members participate in a community solar project by:</p> <ul style="list-style-type: none"> a. Serving as a host site for a community solar garden. b. Facilitating development, by the municipal utility or other entity, of a community solar garden for residents. c. Participating in a community solar garden to ensure accessibility and availability to low-income residents. <p>26.5: Install a public sector/municipally-owned renewable energy technology, such as solar electric (PV), wind, biomass, solar hot water/air, or micro-hydro.</p> <p>26.6: Report installed private-sector owned renewable energy/energy efficient generation capacity with at least one of the following attributes:</p> <ul style="list-style-type: none"> a. Fueled by sun, wind or biogas. b. Fueled in part or whole by manure or woody (EAB) biomass, optimized for minimal air and other environmental impacts and for energy efficiency and water conservation. c. Disturbing heating/cooling services in a district energy system. d. Producing combined heat and power; using a microgrid. e. Energy storage integrated into a renewable energy installation. <p>26.7: Become a solar-ready community, including adopting ordinance/zoning language and an expedited permit process for residents and businesses to install solar energy systems.</p>
<p>28. Business Synergies and EcoDistricts (Requires a completion of one action)</p>	<p>28.1: Document that at least one business/building uses waste heat or water discharge from another business or conducts materials exchange activities with another organization.</p> <p>28.2: Require, build, or facilitate at least four sustainability attributes in a business/industrial park projects:</p> <ul style="list-style-type: none"> a. Shared parking/access, electric vehicles charging for 3% of parking and/or synchronized with solar generation. b. Green product development, manufacturing or sales OR a green job training program. c. Buildings located within walking distance of transit and/or residential zoning. d. Renovated buildings, buildings designed for reuse, shared recreation/childcare facilities. e. Green buildings built to Minnesota’s SB2030 energy standard OR renewable energy generated on-site. f. Combined heat and power (CHP) generation capacity shared geothermal heating/cooling, microgrid OR energy storage. g. Low-impact site development. <p>28.3: Use 21st century ecodistrict tools to structure, guide and link multiple green and sustainable projects together in a mixed-use neighborhood/development, or innovation district, aiming to deliver superior social, environmental and economic outcomes.</p>

Each of the actions listed above for a best practice can be completed at a 1-to-3-star level rating that can be implemented. GreenStep Cities provides specific implementation tools that may assist a city's completion of these practices (see Appendix C.1 and C.2).

Interview Findings

The city of West St. Paul does not need a grant writer to support GreenStep activities. A grant writer is not imperative in advancing in the Green Steps, many cities have advanced to Step 5 without a dedicated staff person (pers. Comm, K. Mroz-Risee). Instead of allocating funds for a grant writer, scholars suggest that local government managers focus on integrating sustainability into planning processes to advance sustainability as a reform in local government (Zeemering, 2018). Mroz-Risee has not seen any correlation between cities being successful and having a grant writer on staff, she suggested that cities put their focus on creating environmental or sustainability-based task forces, “I think what we see that’s important for cities to leverage their work around sustainability is having staff with dedicated time to work on sustainability whether that be part of their job or full-time staff. Also having an internal green team that brings together staff from multiple departments. To share what they’re working on and collaborate on sustainability”. After interviews and additional research, efforts focused on working with city committees and staff. The MN GreenStep Coordinator states, “We see that cities with active green teams tend to be more active themselves in the GreenStep Program”. She emphasizes the importance of resources needing to be available for staff who are tracking a specific metric across the city.

Additionally, it may be more feasible for city staff to be trained on filling out grants versus having a paid grant writer. For example, there are a few grants available through the GreenStep program that cities may apply for, and the GreenStep Cities program runs informational webinars on how to do so. Lastly, for some GreenStep best practices, there are resources and grants available to cover funds for allocating sustainable practices. One best management practice where grants can be filled out for is: BMP #18, *Parks and Trails*. Although the investigation led us in the direction of not needing a grant writer to be successful in the GreenStep program, it is beneficial to train staff in the basics of filling out grants to increase funds for projects.

Case Study Findings

After analyzing both Golden Valley and Maplewood’s GreenStep achievements, there are a few action steps that West St. Paul can take to yield advancement in the program. It was found that each year the Golden Valley Environmental Commission releases an annual report and plan for the following year. Within the plan their GreenStep goals and targets are clearly laid out for what they hope to achieve within the year and areas of focus within the program. The creation of clear goals each year is in part to their outstanding success in the GreenStep program.

Although Maplewood does not publish a report similar to Golden Valley, their website publishes some of the City's greatest achievements. By doing so, it may hold staff accountable to keep striving towards improvement, and it also allows the public to learn about their efforts. Due to Maplewood being a city mentioned in West St. Paul's 2040 Comprehensive Plan, it is crucial to connect and learn from their GreenStep coordinator on tips for advancement.

Survey Results

The development of each groups' individual projects leads to an understanding of the overarching nature of GreenStep Cities within the projects. Considering this, the development of a survey was used to define the parameters of each groups' project and how it would fit into GreenStep. This survey was sent out the class, with a return rate of 6/9 groups. Through these surveys, the overlap between the other groups and GreenStep's goals is low.

The ROW vegetation group has a slight connection to Resilient Community Growth, and Business Synergy and EcoDistrict. Sustainable development is the focus of these two best practices, through this development there will be a necessity for resilient plant life in high traffic areas. The expansion of the ROW vegetation project from Roberts St to assist in these best practices will be useful in completing the metrics required. Another group also expressed that Resilient Community Growth is the Urban Tree Survey group, which would specifically work with understanding the city's natural resources. With the collected research, ordinances would have a basis for development through the incorporation of trees in higher density residential areas. The rest of the groups did not propose or include ideas that incorporated GreenStep but are working towards West St. Paul's goals only add to the further development of sustainable actions.

A limitation of this method is the lack of community knowledge, despite providing information about GreenStep it is a complicated program that requires detailed understanding. It is important to understand that any developments from this project may be beneficial to GreenStep. Following the mantra of the program, incorporating the city's goals is important each of the projects is a separate goal for the city and thus works with Green Steps for a more sustainable West St. Paul.

Recommendations

It is recommended that the City take a few action steps in order to achieve their intended GreenStep goals. Eight best practices have been identified with their respective benefits for the City and the environment. Along with the best practices identified, an example has been provided with steps the City can mirror to find essential data to measure a report on the given metric. Lastly, by the City's creation of a 'green team' to work within different departments to work at achieving Step 4 and eventually Step 5 of the GreenStep program.

Recommendation 1: Complete remaining best practices on the GreenStep Assessment form

With West St. Paul's desire to advance their completion of the GreenStep Cities Program, there are eight best practices that need completion. Each of the eight remaining best practices have associated benefits, however for each practice there is a *major benefit* that the GreenStep Cities program has identified (see Appendix E). A further dive into why each best practice should be completed due to this *major benefit*:

- Best Practice 3: Long-Term Cost Savings
 - Constructing new green buildings within West St. Paul will reduce long-term operating costs that would save the city twenty times the amount regular new construction could. This new construction would also bring higher resale values to the community, which would infiltrate more money into the city economy. Investments in green buildings could be increased by creating incentives for new, clean, and efficient infrastructure.
- Best Practice 5: Community Quality
 - Besides incorporating new green buildings, the renovation of old buildings can contribute to the sustainability vision of West St. Paul. This can be done in various ways like repurposing existing buildings, reusing energy and materials, and maintaining the historic and civic legacy of the city. All of these increase the community quality by taking the old and transforming it to be green and resilient for the future.
- Best Practice 7: Long-Term Cost Savings

- A future development plan where West St. Paul focuses on allocating money to all areas of the city, rather than the most affluent. This will increase the quality of life in areas by investing in parks, open spaces, sidewalks, etc...
- Best Practice 10: Ecosystem Health
 - Conservation initiatives will protect open spaces, the urban to rural transition, community character, and local biodiversity. This not only contributes to the health of the community, but the resilience of the city and its residents. It will also encourage residents to incorporate time in nature if it is readily available to them.
- Best Practice 13: Cost Savings
 - Efficient city fleets can cut costs per taxpayer in the long run compared to average gasoline vehicles. This practice can also reduce carbon emissions and raise community awareness of the benefits of Electric Vehicles (EVs). If a transition to EVs is not within West St. Paul's future, we encourage a decrease in operation of vehicles or increase group use when available.
- Best Practice 14: Long-Term Cost Savings
 - Implementing Travel Demand Management and Transit-Oriented Design will increase the walkability of a city. This could be in-joint with West St. Paul's already initiated the 2011 Pedestrian and Bike Master Plan. A TDM will bring a mix of residential, employment, and shopping to an area with both walking and driving availability. Thus, increasing the vibrance of the city and the draw in of residents.
- Best Practice 26: Community Self-Reliance
 - The removal of barriers and encouragement of renewable energy within West St. Paul will push the city farther along its goals for sustainability, while also decreasing Minnesota's still 73% fossil fuel energy use. By incorporating renewable energy throughout the community, the city can secure extra future funds that can be allocated to other needs in the city. As well as increasing the city's resilience to the energy supply chain. An added benefit for the residents would be a decrease in health care costs because individuals are no longer being exposed to coal air emissions.
- Best Practice 28: Economic Resilience
 - Creating a communication network among business and neighborhoods within West St. Paul will begin the dialogue for an optimization of resources and reduce the economic and environmental costs.

Along with each best practice having benefits, there is a strong relation between these GreenStep tasks and Minnesota State Policy (see Appendix C.3).

Recommendation 2: Measure and report on the 8 CORE metrics plus 5 additional city performance metrics to advance to Step 4 in the GreenStep program

For the city of West St. Paul to progress from GreenStep standing 3 to 4, the City is required to measure and report on the 8 CORE metrics plus 5 additional city performance metrics. A challenge expressed by GreenStep coordinator Dave Schletty, is the city's capacity to report and measure on these standards. However, MPCA GreenStep coordinator Kristin Mroz-Risee demonstrated an easy way to acquire this data. Available on the GreenStep website, there is already existing data about the city and available for city usage on each metric (Minnesota Pollution Control Agency, 2021).

An optional metric for Step 4 Recognition that we recommend the city complete due to the redevelopment of Robert Street is Metric #2: Green Buildings. New buildings- whether public or private, present an opportunity to shape the face of a city by reducing operating costs. By around 2035 roughly $\frac{1}{3}$ of US building stock will be renovated or new. Cities can take actions to ensure that new building stocks are performing at higher rates. Not only are the benefits reaped upon the builder owner, but the building's tenants, community, and society. A higher performing building reduces capital costs, operating costs, increases the occupant's health, and mitigates urban heat islands; a concept of metropolitan areas being warmer than surrounding areas due to human activities.

By viewing the Green Buildings example provided (see Appendix F), the City can replicate given steps to measure and report on additional needed metrics.

Additionally, we recommend that city staff familiarize themselves with the Step 4 & 5 Excel Worksheet-a tool used to track and report on the metrics. Within the Excel Worksheet there are additional guidance documents such as: data sources. This spreadsheet dives further in data collection methods.

Recommendation 3: Develop organizational awareness of GreenStep Cities

As West St. Paul continues to succeed in the GreenStep Cities program, it needs to develop a system that allows for consistent and integrated reporting. The option that would have the greatest success would be creation of a Green Team. One of the biggest challenges facing cities is difficulty with communication among different departments; the structure of a Green Team would address this problem. Through an interconnected network of employees within different departments and positions, West St. Paul can create a team of employees who understand the goals of GreenStep and how they can best serve West St. Paul.

This team would be developed through an initial meeting with voluntary training on GreenStep, West St. Paul values, and what the city needs to do to move forward in the program. After the initial meeting, periodic meetings would take place. In between these meetings, each Green Team member can record ideas, recommendations, and other key information concerning GreenStep Cities. As previously mentioned, this can be developed through a communicative Excel Worksheet and other tools to track or report metrics.

This option would best assist West St. Paul in a continuous forward recording which will help with the other recommendations. Also, it will allow for increased communication between departments which can assist with a myriad of factors, in this case minor changes could be made to comply with GreenStep practices or acknowledge current practices within departments. This could also help with grant writing, using GreenStep's grants to accomplish departmental goals and sharing the grant writing work among different people.

Overall, increased awareness of GreenStep Cities by West St. Paul employees will increase the program's effectiveness within the City. It will allow for better application of the best practices as well as increased communication among departments on environmental issues. The creation of a Green Team can positively impact the implementation of GreenStep Cities within West St. Paul.

Conclusion

The city of West St. Paul has a clear focus on developing an environmentally friendly city, demonstrated through their implementation of GreenStep Cities and commitment to moving to each step at a quick pace. Their progress thus far is due to the commitment of city employees and the citizen support for environmental initiatives. Discussing concerns and goals with city employees demonstrated this strong desire and suggested where the City needs the most help and improvement.

Here we identified an overall theme of organization, with West St. Paul being a smaller city it does not have a dedicated person to organize their GreenStep Cities plan. This causes many challenges, especially in terms of what best practices they have accomplished and creating long-term plans to implement more best practices. In this we have made different recommendations that address the key issues. Completing the eight remaining best practices with respective benefits to West St. Paul has been determined on a short term and long-term scale. To achieve the Step Four rating, West St. Paul must measure and report on eight best practices. To help West St. Paul achieve this recommendation, use the metric or contact information for individuals with the metric information. Despite the lack of a dedicated person for GreenStep activities within the employee structure of West St. Paul, creating a Green Team would allow for greater collaboration and completion of best practices. Overall, the recommendations would allow for West St. Paul to develop a strong organizational structure to build off their current successes for the next steps.

Moving forward, West St. Paul has expressed a desire to achieve step four by 2023. This goal is in line with its previous achievement of step three finished in 2 years. Based on this interest, the recommendations assist staff in simplifying and organizing the process. Leading not only to success in GreenStep Cities but also the city's interaction of environmentally oriented actions.

References

- City of Golden Valley. (2021). City of Golden Valley. Retrieved 10 12, 2021, from <https://www.goldenvalleymn.gov/newsarchive/index.php/2021/05/27/golden-valley-passes-another-green-step-milestone/>
- City of Maplewood. (2006-2021). Maplewood Parks and Recreation. Retrieved 10 12, 2021, from <https://maplewoodmn.gov/1003/GreenStep-Cities>
- City of West St. Paul. (2014). City of West St. Paul. Retrieved 09 30, 2021, from <https://wspmn.gov/159/History>
- City of West St. Paul. (2020). *West St. Paul 2040 Comprehensive Plan* [PDF]. Retrieved 10 12, 2021, from <https://wspmn.gov/DocumentCenter/View/3463/2040-Comp-Plan?bidId=>
- Hubbard, K. (2021, 04 14). *10 Greenest States in the U.S.* U.S. News and World Report. Retrieved 10 14, 2021, from <https://www.usnews.com/news/best-states/articles/2021-04-14/these-are-the-greenest-states-in-the-us>
- Marohn, C. (2017, 1 11). *Poor Neighborhoods Make the Best Investments*. Strong Towns. Retrieved 11 18, 2021, from <https://www.strongtowns.org/journal/2017/1/10/poor-neighborhoods-make-the-best-investment>
- Minnesota Pollution Control Agency. (n.d.). Minnesota GreenStep Cities. Retrieved 09 30, 2021, from <https://greenstep.pca.state.mn.us>
- Minnesota Pollution Control Agency. (2021). *Cost of building green*. Minnesota Pollution Control Agency. Retrieved 11 18, 2021, from <https://www.pca.state.mn.us/quick-links/cost-building-green>
- Minnesota Pollution Control Agency. (2021). *The GreenStep 29 best practices*. Minnesota GreenStep Cities. Retrieved 11 18, 2021, from <https://greenstep.pca.state.mn.us/best-practices>
- National Trust for Historic Preservation. (2021). *The Greenest Building: Quantifying the Environmental Value of Building Reuse*. Preservation Leadership Forum. Retrieved 11 18, 2021, from <https://forum.savingplaces.org/viewdocument/the-greenest-building-quantifying>
- Resilience. (2021). *The Aquaponics Solution*. Resilience . Retrieved 11 18, 2021, from <https://www.resilience.org/stories/2015-07-31/the-aquaponics-solution/>

- United States Census Bureau. (2020). United States Census Bureau. Retrieved 10 14, 2021, from <https://www.census.gov/quickfacts/fact/table/weststpaulcityminnesota/PST045219>
- United State Environmental Protection Agency. (2021). *State Energy Efficiency Benefits and Opportunities*. EPA Energy Resource for State and Local Governments. Retrieved 11 18, 2021, from <https://www.epa.gov/statelocalenergy/state-energy-efficiency-benefits-and-opportunities>
- Yale Center for Environmental Law and Policy. (2020). *2020 Environmental Performance Index*. Yale Center for Environmental Law and Policy. Retrieved 10 14, 2021, from <https://envirocenter.yale.edu/2020-environmental-performance-index>
- Zeemering, E. S. (2018). Sustainability management, strategy and reform in local government. *Public Management Review*, 20(1), 136-153.

Appendices

Appendix A. Survey for Group Liaisons

Survey for Group Liaisons

1. Below is a link to the GreenStep Cities best practices, please review the 29 best practices and write which could apply to your group. (<https://greenstep.pca.state.mn.us/best-practices>)
2. The best practices not yet rated by West St. Paul are as follows: 3, 5, 7, 10, 13, 14, 26, and 28. Through the next eight questions, please read the short description and see if your group objectives support this goal. If they can, please click the link above to read more about it.
3. Number 3: New Green Building, construct new buildings to meet or qualify under a green building framework
4. Number 5: Building redevelopment: create economic and regulatory incentives for redevelopment and repurposing of existing buildings
5. Number 7: Resilient Community Growth Increases financial and environmental sustainability by enabling and encouraging walkable housing and retail land use.
6. Number 10: Design of Natural Resource Conservation Adopt development ordinances or processes that protect natural systems and valued community assets.
7. Number 13: Efficient City Fleet, Implement a city fleet investment, operations, and maintenance plan.
8. Number 14: Demand Side travel Planning, Implement Travel Demand Management and Transit-Oriented Design in service of a more walkable city.
9. Number 26: Renewable Energy Remove barriers to and encourage the installation of renewable energy generation capacity.
10. Number 28: Business Synergies and EcoDistrict Network/cluster businesses and design neighborhoods and developments to achieve better energy, social, economic, and environmental outcomes in service of a more circular and equitable economy.
11. The GreenStep program for West St. Paul is rated on a scale of one to three stars for each sub-action within a best practice. Considering the best practices that relate to your group, whether the ones above or some with action already taken by the city, what sub-actions best apply to your group?
12. Currently, West St. Paul is a step three rated city. The rating of step four is given to cities with monitoring processes as outlined below:

Step 4: Measure and report a minimum number of core and optional metrics for the previous calendar year or the most recent available data (specific metrics are described below).

- a. Category A communities (West St. Paul is this Category): In addition to the CORE metrics, include 5 additional metrics of choice.*
- b. CORE Metrics can be found here! (<https://greenstep.pca.state.mn.us/page/steps-4-and-5>)*

Given the need for measuring and reporting on a variety of issues, could/is your group creating or using any reporting networks?

Appendix B. GreenStep Coordinator Questionnaire

GreenStep Cities coordinators and city coordinators Questionnaire

Interview with GreenStep Coordinator: Kristin Mroz (MPCA) & Emily Hartwell (MPCA)

- What is the mission of GreenStep? (get their mission for our intro section)
 - Why did it start?
 - How has GreenStep worked to complete these goals?

- What are a few cities you have worked with that are great Step 4- or 5-star cities?
Step 4 & 5 metrics reporting
- What types of monitoring do cities often use/what do you recommend?
 - Are there any creative monitoring systems that have stuck out to you?

- Do several successful cities usually have significant funding?

- Do successful cities have a grant writer?

- How would you weigh the importance of West St. Paul obtaining a grant writer in order to become a Step 4 or 5 city?

- Can you explain some of the grants GreenStep offers?

- What are other step 4 or 5 qualified cities implementing that West St. Paul added to their existing GreenStep infrastructure that would bring them up to step 4 or 5?

- Any tips/advice for advancing West St. Paul

Appendix C. GreenStep Web Page Information

Webpages

1. Best Practice 3 Action 1 Details: *Star Level Examples*
<https://greenstep.pca.state.mn.us/bp-action-detail/81757>
2. Best Practice 3 Action 1 Details: *Implementation Tools*
<https://greenstep.pca.state.mn.us/bp-action-detail/81757>
3. Best Practice 3 *Connection to State Policy* <https://greenstep.pca.state.mn.us/bp-detail/81716>

Appendix D. Green Steps Documents

1. West St. Paul 2021 GreenStep Assessment

2021 Category A City: WEST SAINT PAUL
 Currently a **Step 2** GreenStep City as of June 2019
 (joined May 2017)

Which assessment? Preliminary: for city review Final: April 1st recommendation to LMC

Assessor and date: Kristin Mraz, 3/12/21

Total BPs implemented: All required BPs done? BP distribution requirements met?

Recommend June 2021 public recognition at: **Step 3**

Best practices (required in bold) Action rules (req. actions in bold)	BP implemented?	Action summary by # and star level achieved	YES
		BUILDINGS: distribution requirement* is 2 BPs; are 2 BPs done?	YES
1. Public Buildings Actions 1 & 2; & one action from actions 3-7	YES	1.1 @ 1 STAR – Started 2007. Updated 2020, adding historic data and assigned staff to regularly update. 1.2 @ 1 STAR – 2020 converted to LED in Ice Arena, indoor/outdoor pool, Dome; used Xcel rebates 1.7 @ 1 STAR – 2010 maint. facility has closed-loop geothermal system	
2. Private Buildings any two actions	YES	2.1 @ 1 STAR – actively promotes Xcel's Energy Rebate and Energy Assistance Programs 2.5 @ 1 STAR – 2001 mayoral authority to declare a watering ban 2.6 @ 1 STAR – EDA home impr. loans for HVAC, electrical, plumbing, exterior	
3. New Green Buildings action 1 or 2; one from 3-5			
4. Lighting/Signals 2 actions with one from 5-8	YES	4.5 @ 2 STARS – Robert Street corridor 2014-20 4.8 @ 3 STARS – all 15 traffic signals on state/county roads LED	
5. Building Redevelopment any one action			
		LAND USE: 2 BPs required*; are 2 BPs done?	YES
6. Comp Plan Actions 1 & 2	YES	6.1 @ 1 STAR – finalizing update of 2015; includes sections on bike-ped, sustainability 6.2 @ 2 STARS – comp plan referenced in multiple areas of the zoning code (which was updated 2015) including site plans and conditional uses	
7. City Growth any one action			
8. Mixed Uses any two actions	YES	8.1 @ 2 STARS – Robert St Renaissance Plan (of 2001) developed with extensive facilitated citizen engagement 8.2 @ 2 STARS – City Hall, Regional Athletics Center adjacent to a job & residential center, accessible by regular transit. Center has a shared parking agreement with adjacent LA Fitness 8.3 @ 3 STARS – 2 planned mixed use development districts within the City	
9. Highway Development any one action	YES	9.1 @ 1 STAR – Robert Street Improvement plans include bump outs, islands, lower speed limits, ped/cycle tunnel 9.3 @ 2 STARS – Smith Dodd Small Area Plan 2017	
10. Conservation any one action			
		TRANSPORTATION: 2 BPs required*; are 2 BPs done?	YES

11. Complete Green Streets 1; & two additional actions	YES	11.1 @ 1 STAR – ADA Transition Plan and Ped/Bike Plan in place; Complete Streets Policy adopted March 2021. 11.4 @ 2 STARS – Ped/Bike Plan 2011; Robert Street Plan 11.6 @ 2 STARS – 2014 bumpouts and flashing ped. Crossing on Maria Ave.; 2017 roundabout Wentworth/Caskdale, ped. Crossings, median refuge, lower speed.	
12. Mobility Options any two actions	YES	12.1 @ 2 STARS – Ped/Bike Plan 2011, trail gap studies 2017 and 2020, transp. options on website and @ city hall, dedicated park facilities @ MT park & ride, bike rack @ city hall 2018; 75 walk score 12.2 @ 1 STAR – SRTS comp plan 2010 and grant 2015. Filled tall/sidewalk gap identified in 2011 Ped/Bike plan.	
13. Fleets any two actions			
14. TOD / TDM any two actions			
		ENVIRONMENTAL MANAGEMENT: 4 BPs required*; are 4 done?	YES
15. Purchasing 1; and one additional action	YES	15.1 @ 2 STARS – 2018 Council Sustainable Purchasing policy 15.7 @ 1 STAR – electronic agenda packets; only compostable products at meetings and in employee break areas	
16. Trees any two actions	YES	16.1 @ 1 STAR – 2017 Tree City USA 16.6 @ 3 STARS – 2015 EAB Action Plan (removal, injection treatments, reforestation) overseen by MN Certified Tree Inspector	
17. Stormwater any one action	YES	17.3 @ 2 STARS – Stormwater Pollution Prevention Program 2007; stormdrain stenciling, illicit discharge & dumping, ESC, stormwater management ordinances 17.4 @ 2 STARS – stormwater utility, with variable fees, created in 2005	
18. Parks & Trails any three actions	YES	18.1 @ 3 STARS – 2014 \$6.2M reconstruction of Harmon Park included a school shared use agreement, new trails 18.3 @ 3 STARS – 91% of youth in WSP live within a 10-min walk of a park (Parkserve.org); 18 acres/1000 people 18.5 @ 2 STARS – Pollinator Habitat resolution; Bee Safe City – public spaces, refrain from systemic pesticides, educate community 18.8 @ 1 STAR – Adopt-A-Park year round for residents to pick litter and clean up weeds and brush	
19. Surface Water if state public water: 4; and one additional action if no state water: any one action	YES	19.1 @ 1 STAR – Local Surface Water Management Plan (in 2040 Comp Plan) 2018; assessment and monitoring of stormwater basins & Thompson lake w/ city/county. 19.3 @ 1 STAR – 2018 Local Surface Water Management Plan 19.4 @ 1 STAR – Shoreland ordinance 1963	
20. Water / Wastewater 1 & 2; and one additional	NO	20.3 @ 1 STAR – 2008 I&I ordinance includes mandatory inspections	
21. Septics any one action	YES	21.4 @ 1 STAR – Sanitary Sewer Policy (in 2040 Comp Plan); I&I reduction, new dev. & existing to be connected to city sewer, adopted MN Rules and County ord.	
22. Solid Waste 1 or 2; & one from 4-8	YES	22.1 @ 2 STARS – City Hall building participates in organics collection (Food waste and BPI certified compostable paper products) 22.2 @ 1 STAR – website interactive disposal guide 22.4 @ 3 STARS – City partners with Dakota County to host Fix-it Clinics at the local library 22.5 @ 2 STARS – City partners with Co. on an organics drop site located at city park; 487 households participating; yard waste pickup or dropoff. 22.6 @ 1 STAR – 2017-18 Co-led Multi-unit Recycling Pilot Project (2 buildings)	
23. Local Air Quality any two actions	YES	23.2 @ 1 STAR – City regulates residential burning location, duration, time, fuel sources 23.5 @ 1 STAR – County Park located in City currently has EV charging station (2 outlets)	

		ECON & COMM DVLP: 3 BPs required*; are 3 done?	YES
24. Benchmarks & Involvement Actions 1 & 2	YES	24.1 @ 3 STARS – 2008 Council-established Environmental Committee with a Council Member and youth position 24.2 @ 1 STAR – annual neighborhood meetings held by city to gauge resident perception of city performance and discover priority topics; info used to shape the next year's strategic goals for staff and Council	
25. Green Businesses any two actions	YES	25.2 @ 1 STAR – Website shares business assistance and rebate programs; 2020. 25.7 @ 1 STAR – Robert Street 1990's "WSP, We're Close to it all!" campaign; 2015-17 "Shop Robert Street" campaign during road reconstruction; COVID times "Shop WestStPaul" shop local campaign.	
26. Renewable Energy any two actions			
27. Local Food any one action	YES	27.2 @ 2 STARS -- domesticated chickens, pot-bellied pigs and beehives allowed 27.3 @ 2 STARS -- farmers market weekly June-Oct at shopping mall; produce donations/unsold produce collected for food shelf; school district uses City's park land for a school forest; city easement for community garden next to elementary school	
28. Business Synergies any one action			
29. Climate Adaptation action 1 at a 2 or 3-star rating	YES	29.1 @ 2 STARS – included in Dakota County All-Hazard Mitigation Plan. WSP police chief resp. for city preparedness and emergency response. Emergency Alert Notifications for residents of Dakota County. 29.2 @ Not Rated – Pollinator Habitat Resolution 29.7 @ Not Rated – discussed in Comp Plan 2018	

Notables:

- Planned mixed use development districts authorized within the City
- School shared use agreement, new trails part of 2014 \$6.2M reconstruction of Harmon Park
- Fix-it Clinics at the local library hosted by the city and county
- Annual neighborhood meetings held by City to gauge resident perception of city performance and discover priority topics; info used to shape the next year's strategic goals for staff and Council
- Inflow & Infiltration reduction through inspections, corrected sewer lines, and education. The city spend \$5,316,577 for I&I improvements between 2007-2017.

Appendix E. Benefits of Completing Step 3 Best Practices

A table of the remaining eight best practices in West St. Paul’s GreenStep program and the economic, health, and community benefits associated with each (Minnesota Pollution Control Agency, 2021), (National Trust for Historic Preservation, 2021), (United State Environmental Protection Agency, 2021), (Resilience, 2021).

Best Practice	Benefits
3. New Green Buildings	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. Design <ul style="list-style-type: none"> i. Durable, flexible, and healthy a. Green Schools <ul style="list-style-type: none"> i. provide financial benefits over the lifetime of the school that are 20 times as large as additional costs ii. Uses 30-50% less energy and 30% less water <p>Health Benefits:</p> <ul style="list-style-type: none"> a. Improved air quality b. Greater thermal control c. Greater satisfaction with work environment = increased productivity d. Reduction in Greenhouse Gas Emissions <ul style="list-style-type: none"> i. Building operating energy: 30-43% ii. Building materials: 3-5% iii. Building waste, water, and wastewater treatment, soils/site vegetation: 5% <p>Community Benefits:</p> <ul style="list-style-type: none"> a. Reduction of stormwater runoff b. Reduction in watershed pollution c. Less demand on the community infrastructure for potable water, sewage conveyance, and power generation
5. Building Redevelopment	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. Allows new investment to use existing infrastructure b. Use rehabilitation funds to rebuild or upgrade existing infrastructure c. Reuses the energy and material embedded in existing buildings <p>Health Benefits:</p> <ul style="list-style-type: none"> a. Expels less greenhouse gasses in comparison to demolishing and replacing an existing building <ul style="list-style-type: none"> i. “Majority of building types in different climates will take between 20-30 years to compensate for the initial carbon impacts from construction” (https://forum.savingplaces.org/viewdocument/the-greenest-building-quantifying) <p>Community Benefits</p> <ul style="list-style-type: none"> a. Helps retain the historic and cultural character of the community b. “Studies show residential rehabilitation creates 50% more jobs than new construction.” (National Trust for Historic Preservation, 2021)
7. Resilient City Growth	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. Consistent increase of returns from residents <p>Health Benefits:</p> <ul style="list-style-type: none"> a. Improves quality of life of residents <p>Community Benefits:</p> <ul style="list-style-type: none"> a. Evenly distributed funds between affluent and poor areas of a city

	<ul style="list-style-type: none"> b. Wealth shared through an affluent/poor neighborhood mix (Marohn, 2017)
<p>10. Design for Natural Resource Conservation</p>	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. Strong retention of housing values near open space <p>Health Benefits (Human and Ecosystem):</p> <ul style="list-style-type: none"> a. Maintaining or restoring native vegetation b. Limits the release of stored carbon c. Reduces volume of stormwater runoff, surface pollutants and sediments d. Enhanced groundwater recharge e. Reduced erosion f. Improved air quality g. Additional wildlife habitat and recreational space <p>Community Benefits:</p> <ul style="list-style-type: none"> a. Preservation of rural community character and viewsheds b. Increased bicycle and pedestrian travel
<p>13. Efficient City Fleets</p>	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. Will continue to become more affordable for the average consumer and city fleet user. b. Electric buses have a lower cost of ownership over the entire life of the bus <p>Health Benefits:</p> <ul style="list-style-type: none"> a. Electric Vehicles in Minnesota usually provide a greenhouse gas reduction of at least 65% compared to gasoline vehicles.
<p>14. Demand-Side Travel Planning</p>	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. The reduction in traffic and parking generation will decrease the need for a new traffic signal or parking ramp. b. Public infrastructure cost savings: efficient and diverse land use c. Market advantages and cost savings for residential development and commercial development <p>Health Benefits:</p> <ul style="list-style-type: none"> a. Decreased congestion, noise pollution, energy use, greenhouse gas emissions b. Improved air quality and health <p>Community Benefits:</p> <ul style="list-style-type: none"> a. TDM plans in the Minneapolis-St. Paul area were found to reduce traffic generation rates by 27%-37% and parking generation by 11%-21% b. Increase transit ridership c. Reduced reliance on cars and travel beyond walking distance d. Preserved public infrastructure and historic assets. e. Open space preservation
<p>26. Renewable Energy</p>	<p>Economic Benefits:</p> <ul style="list-style-type: none"> a. Less expensive than inventing in new generation and transmission b. Boost local economy and create downward pressure on natural gas prices and volatility <p>Health Benefits:</p> <ul style="list-style-type: none"> a. Lower greenhouse gas emissions and other pollutants b. Decrease water use <p>Community Benefits:</p> <ul style="list-style-type: none"> a. Greater public health

	<ul style="list-style-type: none"> b. Increase community resilience to energy prices and supply shocks (United State Environmental Protection Agency, 2021)
<p>28. Business Synergies and EcoDistricts</p>	<p>Examples include: Aquaponics, combined heat and power systems, etc...</p> <p>Overarching Benefits:</p> <ul style="list-style-type: none"> a. Increased fuel efficiency creates cost savings b. Aquaponics requires less land, water, energy fertilizer, and pesticides than conventional farming a. CO2 emissions decrease (Resilience, 2021)

Appendix F. GreenStep Metric Example

Example of how to access the existing data needed to measure and report on GreenStep Metrics

City staff can easily replicate our recommendation by following the steps provided. By starting on the Minnesota GreenStep Cities webpage, one must first click on the “Steps” tab and select Step 4 and 5. After selecting Step 4 & 5, scroll to the bottom of the webpage to “Guidance Documents” and then select any of the given metrics you are hoping to collect data on. For example, click on step 14, “renewable energy” PDF. The PDF will then open in a new window and provide specific metrics for “Renewable Energy”, metric definitions, data sources, and lastly metrics calculations and public reporting. The data sources provided will include data that the city can freely use to report and monitor their chosen metrics and additionally, a calculation will be provided for anything needing calculation.

Since West St. Paul is a Category A city, they are required to complete, in addition to the CORE metrics, 5 additional metrics of their choice. The Green Buildings metric would count as one of the five additional metrics needed to move on to Step 4.

#2: GREEN BUILDINGS

OPTIONAL METRIC FOR CATEGORY A & B & C CITIES

Bold, green font indicates metrics that must improve to be recognized at Step 5

METRICS

Public Buildings

2.1 Number of city-owned (municipal) green certified buildings

2.2 Identify specific green building frameworks that have been used for city-owned buildings

2.2a How many buildings were rated under this program?

2.2b If second rating program was used, enter its name here

2.2c How many buildings were rated under this program?

2.2d List any other green energy building programs that were used and how many buildings were rated under each

2.3 Municipal green square footage completed last year

2.4 Percent of new municipal square footage that was green building certified in the last year

Private Buildings

2.5 Number of private (non-municipal) green certified public buildings

- 2.6 Identify specific green building frameworks that have been used for private buildings
- 2.2a How many buildings were rated under this program?
- 2.2b If second rating program was used, enter its name here
- 2.2c How many buildings were rated under this program?
- 2.2d List any other green energy building programs that were used and how many buildings were rated under each
- 2.7 Private green square footage completed last year
- 2.8 Percent of new private square footage that was green building certified in the last year

Above are the metrics needed to be complete for Green Buildings. **We recommend the city pay close attention to metric 2.1 and 2.5, as those metrics will need to be reported on for one more year to help West St. Paul achieve Step 5 ranking.**

Data Sources:

- City building permits (Metrics 2.1-2.8)
- County tax record (for square footage) (Metric 2.7)
- Relevant city/state/national program data (Metrics 2.1-2.8)
- Green building framework websites (Metrics 2.2 and 2.6)
 - LEED & ENERGY STAR
- *City staff knowledge of private development projects (Metrics 2.5-2.8)
- We recommend developing a GreenStep awareness across multiple departments to collaborate on where metrics could be completed