

Millvale EcoDistrict: Imperatives Commitment

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Introduction

Millvale's Ecodistrict planning process dates back to a 2011 Pennsylvania Department of Environmental Protection Community Education and Planning Grant. After a yearlong education series and various community engagement activities (including community meetings and street festivals), Millvale worked with primary consultant evolveEA, led by Christine Mondor, to publish the first EcoDistrict Pivot Plan, a roadmap towards sustainable economic development. Three years later, with successful programming in place, Millvale once again partnered with evolveEA and entered into a performance evaluation and calibration phase, with significant community input to inform program development.

Within the larger EcoDistrict framework and imperative guidelines, Millvale's Ecodistrict focuses on six quality of life issues: water, food, energy, air quality, mobility, and equity. These focus areas were selected by community members as being most critical to their livelihoods and well-being within the Millvale District, which reflects Borough municipal boundaries (confined to 0.68 square miles). Water was chosen to work towards addressing both acute flash flooding events and chronic basement flooding due in part to wide-scale suburban development in the region that reduces permeable surfaces. Food was chosen in order to reverse food insecurity within Millvale, a USDA identified food desert. Energy was made a priority in order to instill energy independence as well as create disaster resilience through renewable energy production and energy efficiency. Air quality was made a priority area in order to increase community understanding and reduce negative health impacts of poor regional air quality. Mobility was chosen to better facilitate connectivity both within the Millvale community and to opportunities outside of the community for all. Equity, though seen as an umbrella over the entire Pivot Plan, was identified as a stand alone programming area in order to prioritize reducing the impacts of gentrification, increasing access to education, and creating pathways out of poverty for our community.

Community members workshopped to create Vision Statements in each of the focus areas that reflect their own vision of a vibrant Millvale community where everyone has the opportunity to thrive:

- **Water:** *Millvale is part of a just watershed system known for productive and pleasurable landscapes.*
- **Food:** *Millvale is a foodie paradise for everyone and is known for hyperlocal production.*
- **Energy:** *Millvale is a self reliant urban solar village.*
- **Air Quality:** *Millvale is a clean air community where people breathe easy indoors and outdoors.*
- **Mobility:** *Millvale is a place where people of all ages have the freedom to move safely.*
- **Equity:** *Millvale is a place of self-determination, where all Millvalians are able to participate and shape their own futures as well as the future of Millvale.*

With the Pivot Plan in hand, the Millvale Ecodistrict Collaborative team, consisting of the Borough of Millvale as the Backbone Organization, as well as the Millvale Community Development Corporation, New Sun Rising, and Millvale Community Library as founding organizations, attended the 2016 EcoDistrict Incubator in Portland, OR. With a core team informed and educated in the newly published EcoDistrict Protocol, Millvale adopted and drafted their Declaration of Collaboration later in 2016.

Equity Commitment

VISION

Equity Vision: *Millvale is a place of self-determination, where all Millvalians are able to participate and shape their own futures as well as the future of Millvale.*

Millvale's Ecodistrict is a way to create continuous improvements throughout such a quilted community. Although the Millvale "District" is defined geographically by its municipal boundaries, Millvale's people and processes are critical to its definition beyond physical borders. If the community does not participate, there is no "District."

Procedural equity is defined by inclusive and authentic engagement that captures all populations, including groups that are most vulnerable. Under this direction, Millvale is committed to 1) a highly inclusionary process, where community members are not just consulted but are enabled and inspired to take action, and 2) building leadership capacity within the community through formal and informal training, mentorship, and cultivated opportunities in formal and informal organizations. All people are invited to be a part of this enterprise and to engage in a way that suits their capacity. To encourage involvement, we will make an accessible threshold for participation and cultivate authentic leadership and agency. Methods such as the house-to-house Community Needs Assessment, on-site installations, and nontraditional engagements meet people where they are and seek the voices that we do not typically hear. Likewise, we will pursue avenues for community leadership in formal organizations, such as elected office or nonprofit advocacy, and in less formal networks, such as block watches, social media, family and friend networks, etc.

Structural equity is transparent decision-making that considers historic inequities. Millvale is committed to an ongoing process that defines vulnerable populations, as historic inequities in the community are always visible nor may they adequately describe community power dynamics. The vulnerable groups in Millvale are aligned more by age, education, and economic status than by race. In addition, the pivot from weak market to strong market redefines the power structures of a community, and cultural and economic displacement has the potential to create new vulnerabilities. We can best include these groups by bringing the process to existing networks, identifying challenges to participation, and by building capacity to contribute and lead.

Lastly, **distributional and cross-generational equity** is defined by the fair distribution of district projects and programs across all populations for both current and future generations. The very nature of Ecodistrict planning takes a long term perspective and requires the community to address costs and benefits into the future and across populations and perspectives. Millvale is committed to a process that analyzes and presents implications for all sectors of the community and into the future.

Each of Millvale's designated quality of life issues within the comprehensive Pivot Plan -- water, energy, food, mobility, air, equity -- embody EcoDistricts' principles of equity, as shown in the crafted Vision Statements (refer to Introduction).

CONTEXT

The Pittsburgh region is growing and the issues faced by Millvale and other nearby communities are growing more complex as the dynamics of the regional economy create new vulnerabilities. As with many industrial towns, Millvale has seen the great economic shifts that have accelerated the decline of the blue collar workforce. As development throughout the Pittsburgh region builds and supports asset growth, new residents and stakeholders begin to enter the community bringing fresh ideas and resources. In some parts of our region, after a certain threshold is reached, the original residents and stakeholders that are the community's backbone become priced out and the market shifts the population and community character. People move to a more affordable neighborhood that is often coupled with a lower quality of life. Equity in this context needs to address the evolution of opportunity for existing residents while anticipating the concerns of a new population.

With strong neighboring development markets and Millvale’s continued asset development, the Borough has entered into a cycle of growth where Millvale’s guiding equity values of diversity, empowerment, education, and healthcare become essential project considerations. A critical question going as we move forward with sustainable planning and development is: how can we harness the power of the market to encourage investment, strengthen and grow community assets, and intentionally support mechanisms to ensure that Millvale’s quality of life increases for everyone?

Table 1: Vulnerable groups in the Millvale District

Vulnerable Group	Distribution in Millvale District
Low-income (below poverty line)*	23.7%
Youth (under age 19)	23.2%
Elderly (over age 65)	14.1%
People with disabilities **	18.98%
Unhoused	n/a
Single female-led households	39.6%
Out of workforce or unemployed***	20.9%
Addiction Sufferers	n/a
Floodplain Residents & Businesses	(383 structures)
Racial Minority Groups	4.9%
Recent Immigrants	n/a
LGBTQIA+	n/a

*Low-income describes individuals living below the poverty line, as determined by the Millvale Borough SPC.

**Disabilities are categorized by the Millvale Borough SPC as hearing, vision, cognitive, ambulatory, self-care, and independent living.

***People out of workforce, including those classified as unemployed, are represented within the age range of 16 to 64 years of age, as determined by the Millvale Borough SPC.

Millvale’s vulnerable groups are listed in Table 1. Youth and elderly residents as well as people with disabilities often align with low income status and define a large portion of Millvale’s residents. When you add the residents who can be defined as “working poor,” there are many people who live paycheck-to-paycheck. There are few immigrants and no known street-bound homeless, though housing instability is a reality for some working poor or those out of the workforce. According to the Millvale Borough SPC, from 2012-2016 there were 1,917 total recorded households in the Millvale district. 805 of these households, or 41.9%, are designated as “family” households, which includes married couples, single male-led households, and single female-led households. Of the 805 total “families” in Millvale, 39.6% of are single female-led, of which 32.6% are below the poverty line.

Data on unhoused, addiction sufferers, recent immigrants, and LGBTQIA+ populations in Millvale is not available, nor is it consistently possible to be collected by the Borough. This further emphasizes the need to make equitable strides in Millvale and throughout Allegheny County that recognize such groups and address quality of life issues particularly impacting these individuals. The Millvale team decided to keep a list of vulnerable groups, even if there is not current data available in order to encourage future regional efforts to build our more hyperlocal datasets.

Community pride runs deep in Millvale, with current and former residents feeling a sense of connection and commitment to the town. This is seen through tireless volunteerism taking place throughout Millvale, as well as the commitment of our family-owned small-business community. Actualizing the recommendations put forth in Pivot 2.0 will depend on listening and understanding established residents and entrepreneurs, while providing pathways to participation for new and previously disconnected entrepreneurs and residents.

Table 2: Programs and policies applicable to the Millvale District Equity Imperative

Policy / Program	Level
Millvale, Sharpsburg, & Etna Joint Comprehensive Plan	Municipal (Tri-Borough)
Sustainable Pittsburgh Regional Indicators	Regional (City of Pittsburgh)
Allegheny County Health Department Environmental Justice Report	County

Millvale is not required to incorporate equity into its planning by the county or state, and the closest adopted municipal plans are the Pivot 1.0 and Pivot 2.0 Ecodistrict documents. In addition to the Pivot reports, the following documents inform Millvale’s strategy:

- **Millvale, Sharpsburg, & Etna Joint Comprehensive Plan** - The comprehensive plan addresses issues of governance and long term planning related to municipal operations, land use, transportation, etc. It does not directly define or address equity, but many of the recommendations reinforce Ecodistrict planning recommendations.
(www.millvalepa.com/system/resources/.../Millvale%20joint%20comp%20plan.pdf)
- **Sustainable Pittsburgh Regional Indicators** - The regional nonprofit, Sustainable Pittsburgh, has developed a set of regional indicators (LINK) that can be both a dataset and a benchmark for the municipality. The indicators are organized by People, Planet, Place, and Performance (P4) and many of the recommendations and data address equity issues.
(http://sustainablepittsburgh.org/wp-content/uploads/2016/10/SustainablePittsburgh-Southwestern-Pennsylvania-Sustainability-Goals-And_Indicators-Report-2016.pdf)
- **Allegheny County Health Department Environmental Justice Report** - ACHD compared federal and state environmental justice criteria with a locally weighted index that identified communities like Millvale as “Environmental Justice” communities.

Other programs and efforts that address equity issues are woven into the Pivot plan and include: a community based Revolving Loan Fund, a Community Land Trust, the Tri-COG Land Bank, and a recent Community Needs Assessment.

WORK PLAN

Equity in the *Formation Phase*:

- Procedural
 - Establishment of the Millvale EcoDistrict Collaborative (MEDC) that represents the Millvale Borough, the Millvale Community Library, the Millvale Community Development Corporation, and New Sun Rising in the decision-making process
 - Create a Millvale EcoDistrict Leadership Team (MELT) of community residents who are empowered to be a driving force in Ecodistrict planning and implementation

Millvale’s Ecodistrict work plan has been constructed to fit the mold of EcoDistrict’s overarching Imperatives and Priorities in addition to Millvale’s six chosen quality of life issues. Within the equity imperative, Millvale’s Ecodistrict will focus on alleviating four main problems over the next two years: 1) reducing the proportion of

cost-burdened households in Millvale, 2) reducing underemployment and unemployment, 3) increasing community engagement in civic activity, and 4) reducing market leakage (Appendix B).

Equity in the *Roadmap Phase*:

1. **Reduce the proportion of cost-burdened households in Millvale.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing housing units affordable to those at or below the poverty rate. Specific tasks include:
 - Developing a Millvale ROI brochure to market the affordability of living in an innovative energy community (structural equity)
 - Looking for funding sources to build a revolving loan fund for improvements or incentives for renewable energy (structural equity)
 - Increase the number of off the grid properties and businesses (distributional equity)
 - Require a large percent of newly constructed housing units to be affordable for both new and incoming residents (distributional equity).
 - Increasing BTU home energy savings. Specific tasks include:
 - Identifying the most cost-sensitive sectors and develop a critical path to address them (procedural)
 - Investigate smart meters and other potential data sources to replace the national CBECS data used to calculate the Pivot 1.0 baseline. Investigate ways to make this low or no cost for low income residents (structural)
 - Investigate the potential for micro-grids (distributional)
 - Continue installing solar panels on residential and commercial properties (distributional)
2. **Reduce underemployment and unemployment.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing educational attainment (% with GED, college, or vocational training). Specific tasks include:
 - Create a comprehensive community needs assessment (structural)
 - Prioritize efforts that build community wealth through job training or hiring, such as a youth energy conservation team or learn and earn county program (distributional)
 - Create sustainable employment and business opportunities (distributional)
 - Increasing labor force participation rate. Specific tasks include:
 - Gather qualitative as well as quantitative data to analyze (structural)
 - Create sustainable employment and business opportunities (distributional)
 - Decreasing the proportion of households with youth in poverty. Specific tasks include:
 - Establish funding models and low interest loans to support residents who are starting a business or looking to purchase a home (structural)
 - Gather qualitative as well as quantitative data to analyze (structural)
 - Create a comprehensive community needs assessment (structural)
 - Create sustainable employment and business opportunities (distributional)
3. **Increase community engagement in civic activity.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing the number of residents with library cards. Specific tasks include:
 - Partner with community-based organizations to engage existing stakeholders and welcome new community members (procedural)
 - Gather qualitative as well as quantitative data to analyze (structural)
 - Create a comprehensive community needs assessment (structural)
4. **Reduce market leakage.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing the number of essential services in Millvale (ex: grocery store, health care facility, pharmacy, etc.). Specific tasks include:
 - Conduct a transportation survey of those who live, work, and play in Millvale (procedural)

- Create a transportation network map using the findings from the transportation survey (procedural)
 - Evaluate property ownership and acquisition status for identified properties to create the community garden network (distributional)
 - Continue to fill gaps such as recruiting a bulk foods market and mobile food market (distributional)
- Increase the number of locally owned businesses. Specific tasks include:
 - Perform a detailed study on the location and use of properties to create an identifiable and connected series of public food production places that attract residents and visitors (structural)
- Increase the number of days with fresh vegetables available. Specific tasks include:
 - Investigate ways to fund and preserve the tenure, such as a community land trust (structural)
 - Secure long-term tenure on the gardens, food forest, and food foraging trail (distributional)
 - Encourage residents to join existing CSA by offering starter kits and cooking classes (distributional)
 - Continue efforts to increase individual growing opportunities and access to affordable, local, and healthy food in Millvale (distributional)
- Increase the number of restaurants. Specific tasks include:
 - Recruit additional restaurants to create a restaurant cluster (distributional)
 - Clear the roadblocks to allow entrepreneurs to use existing commercial kitchens, including easy access to food safety training and an online kitchen reservation system (distributional)
- Increase the number of restaurants in Sustainable Pittsburgh Restaurants. Specific tasks include:
 - Encourage new business locations as well as upgrading of menus at existing establishments, especially breweries (distributional)
 - Develop a connected local food system (distributional)

Equity in the *Performance Phase*:

- Procedural
 - Institute a cyclical process to measure and document growth and completion towards each identified metric within the Millvale Ecodistrict Roadmap, which will be an ongoing, collaborative effort between New Sun Rising, the Millvale Community Library, the Millvale Community Development Corporation, and the Millvale Borough

For a detailed spreadsheet of Millvale’s work plan, please refer to Appendices A and B.

RESPONSIBILITIES AND SCHEDULE

Table 3: Responsibilities and timeline for Equity Goal 1: Reducing the proportion of cost-burdened households in Millvale.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase housing units to those at or below the poverty rate	Develop an ROI brochure to market the affordability of living in an energy innovative community.	Lead: MCDC Support: NSR, Borough, MCL	(S-M)
	Look for funding sources to build a revolving loan fund for improvements or incentives for renewable energy.	Lead: Borough Support: NSR, MCDC, MCL	(M-L)
	Increase the number of off-grid properties	Lead: Borough	(L)

	and businesses	Support: NSR, MCDC, MCL	
	Require a large percent of newly constructed houses to be affordable for both new and incoming residents.	Lead: Borough Support: NSR, MCDC, MCL	(M)
Increase BTU home energy savings	Identify the most cost-sensitive sectors and develop a critical path to address them.	Lead: Borough Support: NSR, MCDC, MCL	(S)
	Investigate smart meters and other potential data sources to replace the national CBECS data used to calculate the Pivot 1.0 baseline. Investigate ways to make this low or no cost for low income residents	Lead: Borough Support: NSR, MCDC, MCL	(S)
	Investigate the potential for micro-grids	Lead: NSR Support: Borough, MCDC, MCL, GRID Institute	(S)
	Continue installing solar panels on residential and commercial properties	Lead: Borough Support: NSR, MCDC, MCL	(L)

Table 4: Responsibilities and timeline for Equity Goal 2: Reduce underemployment and unemployment.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase educational attainment (% with GED, college, or vocational training)	Prioritize efforts that build community wealth through job training or hiring, such as a youth energy conservation team or learn and earn county program	Lead: MCL Support: NSR, Borough, MCDC	(S-M)
	Create a comprehensive community needs assessment	Lead: MCL Support: NSR, Borough, MCDC	(S)
	Create sustainable employment and business opportunities	Lead: NSR Support: MCL, MCDC, Borough	(S-L)
Increase labor force participation rate	Gather qualitative as well as quantitative data to analyze	Lead: MCL Support: Borough, NSR, MCDC	(S-M)
	Create sustainable employment and business opportunities	Lead: NSR Support: MCL, MCDC, Borough	(S-L)
Decrease the proportion of households with youth in poverty	Establish funding models and low interest loans to support residents who are starting a business or looking to purchase a home	Lead: Borough Support: MCL, NSR, MCDC	(S-M)
	Create a comprehensive community needs assessment	Lead: MCL Support: NSR, Borough, MCDC	(S)
	Gather qualitative as well as quantitative data to analyze	Lead: MCL Support: Borough, NSR, MCDC	(S-M)
	Create sustainable employment and business opportunities	Lead: NSR Support: MCL, MCDC, Borough	(S-L)

Table 5: Responsibilities and timeline for Equity Goal 3: Increase community engagement in civic activity.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the number of residents with library cards	Partner with community-based organizations to engage existing stakeholders and welcome new community members	Lead: Borough Support: NSR, MCL, MCDC	(S-L)
	Create a comprehensive community needs assessment	Lead: MCL Support: NSR, Borough, MCDC	(S)
	Gather qualitative as well as quantitative data to analyze	Lead: MCL Support: Borough, NSR, MCDC	(S-M)

Table 6: Responsibilities and timeline for Equity Goal 4: Reduce market leakage.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increasing the number of essential services in Millvale	Conduct a transportation survey of those who live, work, and play in Millvale	Lead: MCDC Support: NSR, MCL, Borough, Green Building Alliance (GBA), Sustainable Pittsburgh (SP)	(S-M)
	Create a transportation network map using the findings from the transportation survey	Lead: MCDC Support: NSR, MCL, Borough	(S-M)
	Evaluate property ownership and acquisition status for identified properties to create the community garden network	Lead: MCDC Support: NSR, MCL, Borough	(M)
	Continue to fill gaps such as recruiting a bulk foods market and mobile food market	Lead: MCDC Support: NSR, MCL, Borough	(L)
Increase the number of locally owned businesses	Perform a detailed study on the location and use of properties to create an identifiable and connected series of public food production places that attract residents and visitors	Lead: MCDC Support: NSR, MCL, Borough	(S)
Increase the number of days with fresh vegetables available	Investigate ways to fund and preserve the tenure, such as a community land trust	Lead: NSR Support: MCDC, Borough, MCL	(S-M)
	Secure long-term tenure on the gardens, food forest, and food foraging trail	Lead: MCDC Support: NSR, MCL, Borough	(S-M)
	Encourage residents to join existing CSA by offering starter kits and cooking classes	Lead: MCL Support: NSR, Borough, MCDC, Emergence	(S)
	Continue efforts to increase individual growing opportunities and access to affordable, local, and healthy food in Millvale	Lead: MCDC Support: NSR, MCL, Borough	(L)
Increase the number of restaurants	Recruit additional restaurants to create a restaurant cluster	Lead: MCDC Support: NSR, MCL, Borough	(L)
	Clear the roadblocks to allow entrepreneurs to use existing commercial kitchens, including easy access to food safety training and an online kitchen	Lead: MCDC Support: NSR, MCL, Borough	(S)

	reservation system		
Increase the number of Sustainable Pittsburgh restaurants	Encourage new business locations as well as upgrading of menus at existing establishments, especially breweries	Lead: MCDC Support: MCL, NSR	(L)
	Develop a connected local food system	Lead: MCDC Support: MCL, NSR, Borough	(L)

In Tables 3-6, (S) refers to a short-term timeline to be completed by 2021, (M) refers to a medium-term timeline to be completed by 2029, and (L) refers to a long-term timeline to be completed after 2030. For a more comprehensive spreadsheet of Millvale’s work plan, please refer to Appendices A and B.

INDICATOR

We have developed Trend Indices for each imperative (Equity Index, Resiliency Index, and Climate Protection Index) that describe the desirable or undesirable activities or phenomena that create the community vision. Data for the Trend Indices will be drawn from a number of different sources of available data and will focus on desired long term outcomes. We have also developed Action Indices that describe Action Items on the Roadmap, and these may inform the Trend Indices. Information is gathered from locally available programs and projects, as well as the Community Needs Assessment, and may include progress toward completion as well as long term outcomes.

One example of an equity indicator that we plan to monitor is the percentage of households with youth in poverty in Millvale. This indicator will help shed light on unemployment, underemployment, and households with people not in the workforce, as well as progress (positive or negative) towards increasing labor force participation rate in Millvale. Additional indicators that we plan to monitor are included in Appendix B.

EVALUATION AND ADJUSTMENT

The Trend Indices and the Action Indices will be updated every two years, with some items updated annually. These metrics will be supplemented with anecdotal observations, interviews, and qualitative analysis. This interim progress will be reported publicly to the community during Millvale’s annual “State of the Millvale EcoDistrict” event, and will be assessed by the Millvale EcoDistrict Collaborative. Based on the results, the EcoDistrict Collaborative may react with enhanced initiatives to address unmet needs, may add metrics to track and/or include in future Community Needs Assessments, and/or may lead to new partnerships or projects.

[EQUITY LETTER OF SUPPORT LINK](#)

Resilience Commitment

VISION

Resilience Vision: Millvale is a self-reliant Ecodistrict where all people can prepare for, survive, adapt, and thrive, when confronted with economic, environmental, and social shocks and stressors.

Millvale is committed to developing knowledge and expertise, building organizations and networks, empowering individuals, and creating thoughtful places designed to minimize Millvale’s contribution to, to prepare for, and to thrive following predictable and unpredictable shocks and stressors.

- **KNOWLEDGE & EXPERTISE:** Millvale’s leadership is committed to learning from each other and regional experts regarding potential shocks and stressors to best prepare Millvalians and the Borough in the event of crises. This includes organizations like Conservation Consultants Incorporated, which as worked with the community to deliver building performance resources and programming for residential and commercial structures as a way to increase energy efficiency as well as the prevention of moisture intrusion during flood and rain events. Millvale has also closely partnered with the University of Pittsburgh’s GRID Institute in order to develop the community’s first renewable energy microgrid building in order to create safe spaces during natural disasters.
- **ORGANIZATIONS & NETWORKS:** Millvale is continually building a network of formal and informal organizations and strategic partnerships to identify, predict, and respond to shocks and stressors. Information sharing through this network will reduce the Borough’s vulnerability to these crises and will help Millvalians thrive following these crises. Millvale will work with the Regional Ecodistrict Collaborative, comprised of the City of Pittsburgh, Green Building Alliance, Sustainable Pittsburgh, and New Sun Rising in order to tap into sustainability and resilience networks. In addition, the community will work closely with the regional fire departments and emergency response systems in order to improve resilience during natural disasters, as successfully proven by the July 2018 Floods.
- **PEOPLE:** Millvale’s community engagement is essential to the EcoDistrict and focuses not only on engaging residents, but also on building their knowledge and expertise about potential shocks and stressors, and connecting them to resources and organizations who can help them prepare for and thrive in the wake of these events.
- **PLACES:** Millvale is committed to creating places that are thoughtfully designed to minimize vulnerability to shocks and stressors. This includes programs to improve existing places and creating new places, such as community hubs, that are intended to provide shelter, resources, and support during economic, environmental, and social crises.

CONTEXT

Table 7: Stressors present in the Millvale District

Stressor	Type	Character	Relative Magnitude	At-Risk Populations
Flooding	Environmental	A persistent issue in Millvale (situated in floodplain) with even a small rain event	High	Floodplain residents & businesses
Landslides	Environmental	Occur more often after heavy rain events, not as frequent but large in their impact	High	Hillside residents and those living at base of hillside
Degrading Infrastructure	Environmental	Old houses and structures, plus lack of resources for repair	Medium	Homeowners (especially lower-income)

Poor Air Quality	Environmental	Chronic poor air quality in the region impacts Millvale daily	Low	Everyone, particularly those with health issues, youth, & elderly
Energy Burden	Social / Economic / Environmental	Poor infrastructure and high energy costs affect residents on a daily basis	Medium	Low-income residents
Rising Housing Costs	Social / Economic	Economic acceleration in neighboring areas threatens to raise housing costs and displace those most economically vulnerable	Medium	Low-income residents & youth
Education Access / Uptake	Social / Economic	Poor access to educational resources for youth outside of Shaler School District, as well as little to no resources for adults to receive education and/or workforce development training	High	Youth, underemployed, & unemployed
Food Access	Economic	Millvale is a food desert	High	Low-income individuals & youth
Substance Abuse	Social / Economic	Particularly opioids, the epidemic is extremely prevalent in Millvale	High	Addiction sufferers

Millvale’s chronic stressors are experienced along socio-economic lines and are exacerbated by physical and environmental factors. However, all Millvale’s residents are vulnerable to these issues, as the stressors are pervasive and the exposure is shared.

For example, some of Millvale’s chronic stressors are related to the socio-economic status of many of the Borough’s residents, including economic vulnerability and displacement, education access and uptake, food insecurity, and substance abuse. These issues are often interrelated and need to be addressed systematically and adversely affect even those who are not directly experiencing them through higher crime, underperforming schools, etc. These stressors prevent household stability and thwart efforts to build wealth. The create a litany of associated side effects that affect individual health and family welfare and need to be addressed at both the symptom level and the underlying cause.

Other chronic stressors are related to the physical environment of Millvale and include issues like air quality, flooding, infrastructure degradation, and landslides. While these stressors can also rise to an acute level and become a shock, such as a flood event, the closure of a failing hillside stairs, or an air quality action day, they exist in small ways that on a daily basis affect the quality of life of Millvale residents and businesses and exact an ongoing cost.

Our shocks are both predictable and unexpected. We can predict with some certainty that floods and landslides will continue to challenge both hillside and valley residents and infrastructure, but we do not know where and when the next event will occur. Other lesser understood shocks might included trail derailments or chemical spills, as well as loss of potable water from an aging water distribution system. The shocks need to be dealt with through contingency plans that take proactive action.

Table 8: Programs and policies applicable to the Millvale District Resilience Imperative

Program / Policy	Level
Millvale Floodplain Regulations	Municipal (Millvale)
Millvale, Sharpsburg, & Etna Joint Comprehensive Plan	Municipal (Tri-Borough)
City of Pittsburgh’s Resilience Plan	Regional (City of Pittsburgh)
Sustainable Pittsburgh Regional Indicators	Regional (City of Pittsburgh)

Millvale is not required to do resilience planning by the county or state and the closest adopted municipal plan is the Pivot 1.0 and Pivot 2.0 Ecodistrict documents. In addition to the Pivot reports, the following documents inform Millvale’s strategy:

- **Municipal Floodplain Regulations:** Recently updated floodplain ordinance complies with FEMA requirements and affects a large swath of the community.
- **Millvale, Sharpsburg, & Etna Joint Comprehensive Plan:** The comprehensive plan indirectly addresses resilience related to municipal operations, land use, transportation, etc. It does not directly define or address resilience, but many of the recommendations reinforce the ecodistrict recommendations. (www.millvalepa.com/system/resources/.../Millvale%20joint%20comp%20plan.pdf)
- **City of Pittsburgh’s Resilience Plan:** Adopted in 2017, Pittsburgh’s OnePGH (LINK) resilience plan was launched after two years in the Rockefeller Resilient Cities program. The plan addresses many of the same issues as Millvale and, although there is no shared jurisdiction, the future of the Millvale is affected by the successes and failures across the rivers. The issues are addressed by people, planet, place, and performance. (http://pittsburghpa.gov/onepgh/documents/pgh_resilience_strategy.pdf)
- **Sustainable Pittsburgh Regional Indicators:** The regional nonprofit, Sustainable Pittsburgh, has developed a set of regional indicators (LINK) that can be both a data set and a benchmark for the municipality. Similar to OnePGH, the indicators are organized by People, Planet, Place, and Performance. (http://sustainablepittsburgh.org/wp-content/uploads/2016/10/SustainablePittsburgh-Southwestern-Pennsylvania-Sustainability-Goals-And_Indicators-Report-2016.pdf)

WORK PLAN

Resilience in the *Formation Phase*:

- Organizations & Networks
 - Engage Allegheny County Health Department health data through collaboration with Shaler Area School District
 - Increase collaboration with Girty’s Run Joint Sewer Authority
- People
 - Host community meetings where community residents and stakeholders are able to share their experiences, identify needs most critical to them, and engage in the decision-making process

Millvale’s Ecodistrict work plan has been constructed to fit the mold of EcoDistrict’s overarching imperatives and priorities in addition to Millvale’s six chosen quality of life issues. Within the resilience imperative, Millvale’s district will focus on alleviating six main problems over the next two years: 1) the opioid epidemic, 2) alleviating flooding issues, 3) protecting against landslide issues, 4) increasing the number of days with good air, 5) improving multi-modal accessibility, and 6) expanding healthcare access. (Appendix B).

Resilience in the *Roadmap Phase*:

1. **Addressing the opioid epidemic.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing the number of institutions collaborating on the opioid epidemic & reducing the number of drug overdoses. Specific tasks include:
 - Determine targeted metrics to drive decisions around promoting diversity, education, healthcare, and empowerment (knowledge & expertise)
 - Create a comprehensive community needs assessment (knowledge & expertise)
 - Engage Allegheny County Health Department health data through collaboration with Shaler Area School District (organizations & networks)
2. **Protecting against flooding issues.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing the percentage of homes covered by flood and/or landslide insurance. Specific tasks include:
 - Create an illustrated online guide to assist property owners with compliance, including an interactive map, illustrated best practices and a process guide for the approval process (people)
 - Develop strategies to safeguard or prepare residents and businesses who are vulnerable to the rising costs of floodplain compliance (people)
 - Reducing the number of vulnerable structures in the floodplain. Specific tasks include:
 - Research and implement quantifiable hillside conversion opportunities (knowledge & expertise)
 - Connect property owners with nonprofits who can help them implement projects (organizations & networks)
 - Seek or develop local, state, or national funding to implement projects. Make water explicit in the Millvale narrative to give emphasis when asking for funding (organizations & networks)
 - Develop a green stormwater infrastructure kit-of-parts and implementation incentives for residents and business owners to use on their properties (people)
 - Integrate micro-shed projects into a comprehensive public realm strategy (places)
 - Increasing the number of projects and dollars invested in green infrastructure. Specific tasks include:
 - Increase collaboration with Girty's Run Joint Sewer Authority (organizations & networks)
 - Develop a long term water-integrated urban design vision and use it as a negotiating position during watershed improvement discussions (places)
 - Examine all five micro-shed areas and evaluate what would be the most effective green stormwater infrastructure qualitative and quantitative criteria (places)
 - Increasing the carrying capacity of green stormwater infrastructure. Specific tasks include:
 - Quantify contributions from private property and public right of way areas to understand the cost-benefit model (places)
 - Reducing the number of CSOs. Specific tasks include:
 - Examine all five micro-shed areas and evaluate what would be the most effective green stormwater infrastructure qualitative and quantitative criteria (places)
 - Quantify contributions from private property and public right of way areas to understand the cost-benefit model (places)
3. **Protecting against landslide issues.** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing the percentage of homes covered by flood and/or landslide insurance. Specific tasks include:
 - Create a comprehensive community needs assessment (knowledge & expertise)
 - Develop strategies to safeguard or prepare residents and businesses who are vulnerable to the rising costs of floodplain compliance (people)
4. **Increase the number of days with good air (AQI attainment).** We plan to approach this goal in Millvale's 2-year work plan by:
 - Increasing the percentage of shade tree canopy within the district. Specific tasks include:
 - Integrate air quality goals into a complete streets vision and create dense and walkable development to decrease the reliance on air polluting vehicles (place)

- Consider air quality parks that decrease particulate matter transfers through biofiltration (place)
- 5. **Improve multi-modal accessibility.** We plan to approach this goal in Millvale’s 2-year work plan by:
 - Increasing the number of bike sharrows and bike racks. Specific tasks include:
 - Use complete streets principles to guide road design and repairs (place)
 - Collaborate efforts with the Millvale Bike & Pedestrian Committee (people)
 - Increasing the number of bus shelters. Specific tasks include:
 - Build bus shelters for Millvale's most heavily used bus stops, featuring live bus tracking information (place)
 - Use Complete Streets principles to guide road design and repairs (place)
 - Increasing the number of marked crosswalks and ADA compliant ramps in public realm. Specific tasks include:
 - Conduct a neighborhood walkability audit on an annual basis to identify areas that need improvement (place)
 - Decreasing the number of reported transportation crashes. Specific tasks include:
 - Implement slow road, safe road, and accessibility initiatives (place)
- 6. **Expand healthcare access.** We plan to approach this goal in Milvale’s 2-year work plan by:
 - Increasing the percentage of residents with health insurance, including medicare and medicaid. Specific tasks include:
 - Determine targeted metrics to drive decisions around promoting diversity, education, healthcare, and empowerment (knowledge & expertise)
 - Create a comprehensive community needs assessment (knowledge & expertise)

Resilience in the *Performance Phase*:

- Procedural
 - Institute a cyclical process to measure and document growth and completion towards each identified metric within the Millvale Ecodistrict Roadmap, which will be an ongoing, collaborative effort between New Sun Rising, the Millvale Community Library, the Millvale Community Development Corporation, and the Millvale Borough

RESPONSIBILITIES AND SCHEDULE

Table 9: Responsibilities and timeline for Resilience Goal 1: Address the opioid epidemic.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the number of institutions collaborating on the opioid epidemic & Reduce the number of drug overdoses	Determine targeted metrics to drive decisions around promoting diversity, education, healthcare, and empowerment	Lead: MCL Support: NSR, Borough, MCDC	(S-M)
	Engage Allegheny County Health Department health data through collaboration with Shaler Area School District	Lead: Borough Support: NSR, MCL, MCDC	(S-M)
	Create a comprehensive community needs assessment	Lead: MCL Support: Borough, NSR, MCDC	(S)

Table 10: Responsibilities and timeline for Resilience Goal 2: Protect against flooding issues.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the percentage of homes covered by flood and/or landslide insurance	Create an illustrated online guide to assist property owners with compliance, including an interactive map, illustrated best practices and a process guide for the	Lead: Borough Support: AWA, NSR, MCL, MCDC	(M)

	approval process		
	Develop strategies to safeguard or prepare residents and businesses who are vulnerable to the rising costs of floodplain compliance	Lead: Borough Support: NSR, MCL, MCDC	(S-M)
Reduce the number of vulnerable structures in the floodplain	Research and implement quantifiable hillside conversion opportunities	Lead: Borough Support: AWA, NSR, MCL, MCDC	(S-M)
	Connect property owners with nonprofits who can help them implement projects	Lead: Borough Support: MCDC, MCL, NSR	(S-L)
	Seek or develop local, state, or national funding to implement projects. Make water explicit in the Millvale narrative to give emphasis when asking for funding	Lead: Borough Support: NSR, MCL, MCDC, Girty's Run Joint Sewer Authority (GRJSA)	(S-L)
	Develop a green stormwater infrastructure kit-of-parts and implementation incentives for residents and business owners to use on their properties	Lead: NSR Support: MCDC, MCL, Borough, GRJSA	(S)
	Integrate micro-shed projects into a comprehensive public realm strategy (eg. physically linked or signature-designed Millvale stormwater parklets that become new amenities within the community)	Lead: Borough Support: NSR, MCL, MCDC, GRJSA	(M-L)
Increase the number of projects and dollars invested in green infrastructure	Increase collaboration with Girty's Run Joint Sewer Authority	Lead: Borough Support: MCDC, MCL, NSR	(S-L)
	Develop a long term water-integrated urban design vision and use it as a negotiating position during watershed improvement discussions	Lead: Borough Support: MCDC, NSR, MCL	(S)
	Examine all five micro-shed areas and evaluate what would be the most effective green stormwater infrastructure qualitative and quantitative criteria	Lead: Borough Support: MCDC, NSR, MCL	(S)
Increase the carrying capacity of green stormwater infrastructure	Quantify contributions from private property and public right of way areas to understand the cost-benefit model	Lead: Borough Support: MCDC, MCL, NSR, GRJSA	(S-L)
Reduce the number of CSOs	Examine all five micro-shed areas and evaluate what would be the most effective green stormwater infrastructure qualitative and quantitative criteria	Lead: Borough Support: MCDC, NSR, MCL	(S)
	Quantify contributions from private property and public right of way areas to understand the cost-benefit model	Lead: Borough Support: MCDC, MCL, NSR, GRJSA	(S-L)

Table 11: Responsibilities and timeline for Resilience Goal 3: Protect against landslide issues.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the percentage of	Develop strategies to safeguard or prepare	Lead: Borough	(S-M)

homes covered by flood and/or landslide insurance	residents and businesses who are vulnerable to the rising costs of floodplain compliance	Support: MCL, NSR, MCDC	
	Create a comprehensive community needs assessment	Lead: MCL Support: Borough, NSR, MCDC	(S)

Table 12: Responsibilities and timeline for Resilience Goal 4: Increase the number of days with good air (AQI attainment).

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the percentage of shade tree canopy within the district.	Integrate air quality goals into a complete streets vision and create dense and walkable development to decrease the reliance on air polluting vehicles	Lead: Borough Support: NSR, MCL, MCDC, Breathe Project, CMU, Pitt, evolveEA	(S)
	Consider air quality parks that decrease particulate matter transfers through biofiltration	Lead: Borough Support: NSR, MCL, MCDC, Breathe Project, CMU, Pitt, evolveEA	(S-M)

Table 13: Responsibilities and timeline for Resilience Goal 5: Improve multi-modal accessibility.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the number of bike sharrows and bike racks.	Use complete streets principles to guide road design and repairs	Lead: Borough Support: NSR, MCL, MCDC	(S)
	Collaborate efforts with the Millvale Bike & Pedestrian Committee.	Lead: Borough Support: NSR, MCL, MCDC	(S-L)
Increase the number of bus shelters.	Build bus shelters for Millvale's most heavily used bus stops, featuring live bus tracking information	Lead: Borough Support: NSR, MCL, MCDC	(M)
	Use complete streets principles to guide road design and repairs	Lead: Borough Support: NSR, MCL, MCDC	(S)
Increase the number of marked crosswalks and ADA compliant ramps in the public realm.	Conduct a neighborhood walkability audit on an annual basis to identify areas that need improvement	Lead: MCL Support: MCDC, NSR, Borough	(S-M)
Decrease the number of reported transportation crashes.	Implement slow road, safe road, and accessibility initiatives	Lead: Borough Support: MCDC, MCL, NSR	(S)

Table 14: Responsibilities and timeline for Resilience Goal 6: Expand healthcare access.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the percentage of residents with health insurance, including medicare and medicaid.	Determine targeted metrics to drive decisions around promoting diversity, education, healthcare, and empowerment	Lead: MCL Support: Borough, NSR, MCDC	(S-M)
	Create a comprehensive community needs assessment	Lead: MCL Support: Borough, NSR, MCDC	(S)

In Tables 9-14, (S) refers to a short-term timeline to be completed by 2021, (M) refers to a medium-term timeline to be completed by 2029, and (L) refers to a long-term timeline to be completed after 2030. For a more comprehensive spreadsheet of Millvale’s work plan, please refer to Appendices A and B.

INDICATOR

The Millvale Resilience Index houses this Imperative’s indicators. The Index will be updated bi-annually and will include information regarding Millvale’s ability to prepare for and thrive in the wake of shocks and stressors. We have developed Trend Indices for each imperative (Equity Index, Resiliency Index, and Climate Protection Index) that describe the desirable or undesirable activities or phenomena that create the community vision. Data for the Trend Indices will be drawn from a number of different sources of available data and will focus on desired long term outcomes. We have also developed Action Indices that describe Action Items on the Roadmap items and these may inform the Trend Indices. Information is gathered from locally available programs and projects, as well as the Community Needs Assessment, and may include progress toward completion as well as long term outcomes.

One example of a resilience indicator that we plan to monitor is the carrying capacity in green stormwater infrastructure in gallons per year. Because Millvale is a place where current stormwater infrastructure is easily and often overloaded, this indicator will highlight progress made towards projects and initiatives that interact with stormwater sustainably and resiliently. Additional indicators that we plan to monitor are included in Appendix B.

EVALUATION AND ADJUSTMENT

The Trend Indices and the Action Indices will be updated every two years, with some items updated annually. These metrics will be supplemented with anecdotal observations, interviews, and qualitative analysis. This interim progress will be reported publicly to the community during Millvale’s annual “State of the Millvale EcoDistrict” event, and will be assessed by the Millvale EcoDistrict Collaborative. Based on the results, the EcoDistrict Collaborative may react with enhanced initiatives to address unmet needs, may add metrics to track and/or include in future Community Needs Assessments, and/or may lead to new partnerships or projects.

[RESILIENCE LETTER OF SUPPORT](#)

Climate Protection Commitment

VISION

Climate Protection Vision: *Millvale is a conscious community where resource flows are optimized and waste is reduced to create triple bottom line benefits for the district.*

Millvale is committed to lessening its carbon contributions to climate change and moving towards a carbon neutral economy. Each of Millvale's Ecodistrict Vision Statements address solutions to climate protection, as well as overall environmental stewardship, either directly or indirectly. For example, the Energy Vision encompasses building energy performance, energy production, energy distribution, and infrastructure. By encouraging and implementing energy efficiency measures and alternative energy infrastructure, Millvale is dedicated to lessening carbon emissions created from energy usage. The Mobility and Air Quality Visions both address emissions from transportation, industry, and other sources that are harmful to Earth's atmosphere (and people). Furthermore, by reinforcing the integrity of our surrounding ecosystems, we can indirectly address climate protection. For example, the Water Vision addresses wastewater, water quality, and protection of urban ecosystems, such as Girty's Run. Improving the health of Millvale's water sources, water discharge, and surrounding ecosystems will have trickling effects throughout the overall connected water-forest-urban-atmosphere system.

CONTEXT

Millvale, though small, is part of both regional and national systems that contribute to climate change problems, as well as solutions. Similar to regional and national statistics, Millvale's energy consumption has been trending downward with Pennsylvania's and that of the U.S., according to the U.S. Department of Energy. As part of a larger system, Millvale can take direct action to reduce emissions in the local area and can advocate for regional efforts to do so. In line with the Pittsburgh region's carbon neutrality goal, the Millvale district aims to be 100% renewable by 2035.

According to the US Department of Energy, Millvale's derived Annual Energy GHG Emissions is 38.2K metric tons, or 10 metric tons/person. The largest category of emissions is from vehicles (~16.9K metric tons) with electricity a close second (~16K metric tons). Natural gas, used primarily for heating and cooling buildings, is a distant third at <5K metric tons. These statistics suggest that energy efficient buildings and renewable generation could improve the Borough's emissions footprint. The derived transportation emissions are due primarily to the use of vehicles for personal transportation. Public transit, vehicle choice, and land use planning are key tools for improvement.

With regards to materials flows and waste, Millvale's major waste streams are municipal related and there is a newly improved recycling program in place. Non-municipal (process) waste and compostables are also captured for community gardens and some businesses, but are not part of residential waste management. Sanitary waste flows via gravity to a regional processing plant, where major improvement would include reducing clean rain water that enters the system and takes the same energy to process as black water.

Lastly, the region has a long history of air quality improvements, yet large regional and extra-regional emitters keep the air quality indicators dangerously high. None of the ten largest emitters are in the boundaries of Millvale, yet the Borough is frequently exposed to pollution during atmospheric inversions and low mixing height events. Ongoing exposure to poor quality air adversely affects health over many years, and Carnegie Mellon University researchers estimate the 200+ people across Allegheny County die each year from pollution-related illnesses. Solving for health issues will also protect the climate by decreasing emissions.

Table 15: Programs and policies applicable to the Millvale District Climate Protection Imperative

Program / Policy	Level
Millvale Floodplain Regulations	Municipal (Millvale)
Millvale, Sharpsburg, & Etna Joint Comprehensive Plan	Municipal (Triboro)
City of Pittsburgh’s Resilience Plan	Regional (City of Pittsburgh)
City of Pittsburgh Climate Action Plan	Regional (City of Pittsburgh)
City of Pittsburgh Roadmap to Zero Waste Study	Regional (City of Pittsburgh)
Sustainable Pittsburgh Regional Indicators	Regional (City of Pittsburgh)

Millvale is not required to do climate protection planning by the county or state and the closest adopted municipal plan is the Pivot 1.0 and Pivot 2.0 Ecodistrict documents. In addition to the Pivot reports, the following documents inform Millvale’s strategy:

- **Millvale, Sharpsburg, & Etna Joint Comprehensive Plan:** The comprehensive plan indirectly addresses climate protection related to municipal operations, land use, transportation, etc. Many of the recommendations reinforce the ecodistrict recommendations. (www.millvalepa.com/system/resources/.../Millvale%20joint%20comp%20plan.pdf)
- **City of Pittsburgh’s Resilience Plan:** Adopted in 2017, Pittsburgh’s OnePGH (LINK) resilience plan was launched after two years in the Rockefeller Resilient Cities program. The plan addresses many of the same issues as Millvale and, although there is no shared jurisdiction, the future of the Millvale is affected by the successes and failures across the rivers. The issues are addressed by people, planet, place, and performance. (http://pittsburghpa.gov/onepgh/documents/pgh_resilience_strategy.pdf)
- **City of Pittsburgh Climate Action Plan:** The City of Pittsburgh recently adopted the PCAP 3.0, which includes a carbon inventory and strategies for improvement. The study can be referenced by Millvale but has no jurisdictional authority. (DRAFT http://apps.pittsburghpa.gov/redtail/images/606_PCAP_3_0_Draft-9-26-17.pdf)
- **City of Pittsburgh Roadmap to Zero Waste Study:** The City of Pittsburgh completed the 2017 study to understand how to improve its municipal services. The study can be referenced by Millvale but has no jurisdictional authority. (http://apps.pittsburghpa.gov/redtail/images/543_Pittsburgh-Road-Map-to-Zero-Waste-Final.pdf)
- **Sustainable Pittsburgh Regional Indicators:** The regional nonprofit, Sustainable Pittsburgh, has developed a set of regional indicators (LINK) that can be both a data set and a benchmark for the municipality. Similar to OnePGH, the indicators are organized by People, Planet, Place, and Performance. (http://sustainablepittsburgh.org/wp-content/uploads/2016/10/SustainablePittsburgh-Southwestern-Pennsylvania-Sustainability-Goals-And_Indicators-Report-2016.pdf)

WORK PLAN

Climate Protection in the *Roadmap Phase*:

Millvale’s Ecodistrict work plan has been constructed to fit the mold of EcoDistrict’s overarching imperatives and priorities as well as Millvale’s six chosen quality of life issues. Within the climate protection imperative, Millvale’s district will focus on alleviating two main problems over the next two years: 1) reducing carbon emissions per capita, and 2) reducing building energy use per capita (Appendix B).

1. **Reducing carbon emissions per capita.** We plan to approach this goal in Millvale’s 2-year work plan by:

- Increasing the amount of kWh of energy generated by renewable energy sources. Specific tasks include:
 - Look for funding sources to build a revolving loan fund for improvements or incentives for renewable energy
 - Plan and implement a solar farm
 - Develop a renewable energy test site in partnership with local University
 - Increase the percentage of Borough energy demand met by renewables. Specific tasks include:
 - Commit to buying all or a percentage of renewable energy
 - Investigate the potential for micro-grids
 - Increase the number of renewable energy projects and amount of kWh of renewable energy installed. Specific tasks include:
 - Update a GIS database monthly to track retrofits, upgrades and new construction or installations that affect the community's energy baseline
 - Explore alternative energy non-traditional finance mechanisms such as co-ops, community volunteer banks, barter boards, creative labor exchanges, social capital funds, etc.
 - Install solar-powered electric vehicle charging stations
 - Decrease traffic count on state roads. Specific tasks include:
 - Provide Millvale residents with municipal incentives to encourage alternative transportation use
 - Partner with Millvale Borough Bike & Pedestrian Committee and Pittsburghers for Public Transit (PPT) to establish bus lines
 - Expand Highmark's bike sharing program to Millvale
 - Establish car share and carpool programs
2. **Reducing building energy use per capita.** We plan to approach this goal in Millvale's 2-year work plan by:
- Increase BTU savings. Specific tasks include:
 - Identify the most cost sensitive sectors and develop a critical path to address them
 - Gather municipal data to augment the residential and commercial data
 - Conduct periodic audits and transparency reports to reduce municipal energy consumption
 - Increase the number of weatherization projects. Specific tasks include:
 - Look for funding sources to build a revolving loan fund for improvements or incentives for renewable energy

Climate Protection in the *Performance Phase*:

- Procedural
 - Institute a cyclical process to measure and document growth and completion towards each identified metric within the Millvale Ecodistrict Roadmap, which will be an ongoing, collaborative effort between New Sun Rising, the Millvale Community Library, the Millvale Community Development Corporation, and the Millvale Borough

RESPONSIBILITIES AND SCHEDULE

Table 16: Responsibilities and timeline for Climate Protection Goal 1: Reduce carbon emissions per capita.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase the amount of kWh energy generated by renewable energy sources.	Look for funding sources to build a revolving loan fund for improvements or incentives for renewable energy	Lead: Borough Support: MCL, MCDC, NSR	(M-L)
	Plan and implement a solar farm	Lead: Borough	(L)

		Support: MCL, MCDC, NSR	
	Develop a renewable energy test site in partnership with local University	Lead: NSR Support: Borough, MCL, MCDC, GRID Institute	(L)
Increase the percentage of Borough energy demand met by renewables.	Commit to buying all or a percentage of renewable energy	Lead: Borough Support: MCL, MCDC, NSR	(S)
	Investigate the potential for micro-grids	Lead: NSR Support: Borough, MCL, MCDC, GRID Institute	(S)
Increase the number of renewable energy projects and amount of kWh renewable energy installed.	Update a GIS database monthly to track retrofits, upgrades and new construction or installations that affect the community's energy baseline	Lead: Borough Support: NSR, MCL, MCDC	(S)
	Explore alternative energy non-traditional finance mechanisms such as co-ops, community volunteer banks, barter boards, creative labor exchanges, social capital funds, etc.	Lead: NSR Support: Borough, MCL, MCDC	(M)
	Install solar-powered electric vehicle charging stations	Lead: NSR Support: MCL, MCDC, Borough, GRID Institute	(S-M)
Decrease traffic count on state roads.	Provide Millvale residents with municipal incentives to encourage alternative transportation use	Lead: Borough Support: MCL, MCDC, NSR	(M-L)
	Partner with Millvale Borough Bike & Pedestrian Committee and Pittsburghers for Public Transit to establish bus lines	Lead: Borough Support: NSR, MCL, MCDC, Pittsburghers for Public Transit (PPT)	(S-M)
	Expand Highmark's bike sharing program to Millvale	Lead: MCDC Support: NSR, MCL, Borough	(S-M)
	Establish car share and carpool programs	Lead: MCDC Support: NSR, MCL, Borough	(M-L)

Table 17: Responsibilities and timeline for Climate Protection Goal 2: Reduce building energy use per capita.

Task	Sub-Tasks	Responsible Party(ies)	General Timeline
Increase BTU savings.	Identify the most cost sensitive sectors and develop a critical path to address them	Lead: Borough Support: NSR, MCL, MCDC	(S)
	Gather municipal data to augment the residential and commercial data	Lead: NSR Support: MCDC, MCL, Borough	(S)
	Conduct periodic audits and transparency reports to reduce municipal energy consumption	Lead: Borough Support: NSR, MCL, MCDC	(L)
Increase the number of weatherization projects.	Look for funding sources to build a revolving loan fund for improvements or incentives for renewable energy	Lead: Borough Support: MCL, MCDC, NSR	(M-L)

In Tables 16 and 17, (S) refers to a short-term timeline to be completed by 2021, (M) refers to a medium-term timeline to be completed by 2029, and (L) refers to a long-term timeline to be completed after 2030. For a more comprehensive spreadsheet of Millvale’s work plan, please refer to Appendices A and B.

INDICATOR

The Millvale Climate Protection Index houses this Imperative’s indicators. The Index will be updated bi-annually and will include information regarding Millvale’s progress towards carbon neutrality. We have developed Trend Indices for each imperative (Equity Index, Resiliency Index, and Climate Protection Index) that describe the desirable or undesirable activities or phenomena that create the community vision. Data for the Trend Indices will be drawn from a number of different sources of available data and will focus on desired long term outcomes. We have also developed Action Indices that describe Action Items on the Roadmap items and these may inform the Trend Indices. Information is gathered from locally available programs and projects, as well as the Community Needs Assessment, and may include progress toward completion as well as long term outcomes.

See chart for relationship to work plan

One example of a climate protection indicator that we plan to monitor is the amount of energy generated from renewable energy sources in kWh. By measuring and monitoring this indicator, we will be able to see the contributions of renewable energy to Millvale’s power generation (residential, commercial, and industrial) and thus a reduction in Millvale’s overall carbon emissions. Additional indicators that we plan to monitor are included in Appendix B.

EVALUATION AND ADJUSTMENT

The Trend Indices and the Action Indices will be updated every two years, with some items updated annually. These metrics will be supplemented with anecdotal observations, interviews, and qualitative analysis. This interim progress will be reported publicly to the community during Millvale’s annual “State of the Millvale EcoDistrict” event, and will be assessed by the Millvale EcoDistrict Collaborative. Based on the results, the EcoDistrict Collaborative may react with enhanced initiatives to address unmet needs, may add metrics to track and/or include in future Community Needs Assessments, and/or may lead to new partnerships or projects.

[CLIMATE PROTECTION LETTER OF SUPPORT LINK](#)

[APPENDIX A: MasterDoc_Imperatives Appendix_MasterDoc](#)

[APPENDIX B: Millvale EcoDistrict Indicators](#)