ETNA ECODISTRICT ROADMAP

Roadmap Adoption Date
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INTRODUCTION

The Etna EcoDistrict Roadmap describes the Etna Community Organization's plan to improve quality of life for all who live, work, and play in Etna. To achieve this goal, the Roadmap outlines an Action Plan towards fulfilling Community Vision Statements for each Etna EcoDistrict Quality of Life Issue (Table 1) and advancing the Etna EcoDistrict's overarching Imperatives of Social Equity, Community Resilience, and Environmental Stewardship.

Table 1: *Community-crafted Vision Statements for each Quality of Life Issue representing the Etna EcoDistrict.*

Quality of Life Issue	Vision Statement
Water	Etna is a resilient community that protects its people and waterways through creative water interventions.
Mobility	Etna is a connected community where people of all ages have safe, reliable, and affordable mobility options.
Air Quality	Etna is a healthy community with empowered advocates that take a balanced approach to air quality.
Energy	Etna is an innovative community that takes collective action to provide smart energy solutions.
Food	Etna is a food-secure community with opportunities to grow, buy, share, and eat food locally.
Social Equity	Etna is an inclusive community that embraces diversity and activates everyone to shape our future together.

The Etna EcoDistrict Roadmap preparation process has included a number of different engagements to build community consensus, align strategies with community values and goals, and activate community members and partners to assist in Roadmap implementation.

Beginning in June 2018, the Etna Community Organization (ECO) and independent consultant evolveEA hosted and facilitated a six-month Etna EcoDistrict Education Series. With two meetings per month, this Series engaged Etna community members around the six Quality of Life Issues to develop a shared understanding of each topic, provide information about existing issue-specific initiatives in Etna, and collect community input and feedback on priorities within each issue. These meetings were open to everyone and included attendance from Etna residents, organizational partners, municipal leaders, business owners, religious institutions, and other friends of Etna. Each week following the large-scale Education Series Meetings, evolveEA and ECO hosted a Champions Meeting for individuals to engage in deeper conversation around each Quality of Life Issue. Champions used feedback from the larger community meetings to craft Vision Statements that reflects the community's aspirations for Etna's future (Table 1). At the conclusion of the Education

Series, six booklets, each capturing a unique Quality of Life Issue and the engagement process, were released for community distribution (**Exhibit A**).

Beginning in 2019, ECO and evolveEA hosted a series of community planning meetings and workshops to develop a plan of action building on the ideas conceived throughout the 2018 Education Series. Community members were engaged to develop and prioritize community goals, strategies, indicators, and 2030 targets. Attendees had the opportunity to provide feedback and ideas for refinement on several occasions during these meetings. All together, each engagement involved collecting and synthesizing feedback from the community regarding their priorities and how to best achieve Etna's six Quality of Life Community Vision Statements. Final community feedback was collected and integrated into the Roadmap in September 2019. This was followed by an extensive review and editing process by the Etna Community Organization in October 2019. Overall, each Education Series Meeting, Champions Meeting, Community Workshop, Community Planning Meeting, and additional community engagement has contributed to the development of the Etna EcoDistrict Roadmap (see **Exhibit C** for further detail of this process).

The Etna Ecodistrict Roadmap shall be adopted by the Etna Community Organization through a consensus-based process in which each Board Member has reviewed the document and verified its alignment with Etna's community goals and visions. Once endorsed, the Etna EcoDistrict Roadmap will formally become a part of the Etna EcoDistrict Plan (**Exhibit E**), which includes design proposals for key places in Etna, as well as additional information and context. The Etna EcoDistrict Plan is currently in draft and revision stages with December 2019 as the anticipated date of completion for formal adoption. Please note that finalization of the Etna EcoDistrict Plan will not change the contents of the Roadmap. The Etna EcoDistrict Plan shall be stewarded primarily by the Etna Community Organization in strong collaboration with the Borough of Etna, partner organizations, and residents.

The names and affiliations of the adopters of the Etna EcoDistrict Roadmap and the Etna EcoDistrict Plan include:

- Alexis Boytim, ECO Director
- Kendra Clarke, ECO Board Member
- Jessica Kirin, ECO Board Member
- Lydia Morin, ECO Board Member
- Mary Ellen Ramage, ECO Board Member
- Megan Tuñón, ECO Board Member
- Robert Tuñón, ECO Board Member

The Etna EcoDistrict Plan will also be adopted as an addendum to the Borough of Etna's Comprehensive Plan (River Bend) by Etna's Borough Council at a future date. Please note that Borough adoption will not change the contents of the Roadmap. The names and affiliations of the adopters of Etna's Borough Council include:

- Pete Ramage, Ward 2, Chairman
- David Becki, Ward 3, Vice Chairman
- Bill O'Dell, Ward 3
- Greg Porter, Ward 1
- Ron Trader, Ward 2
- Rudy Milcic, Jr., Ward 1
- Megan Tuñón, Ward 1
- Edward V. Burke, III, Ward 2
- Dave Farmerie, Ward 3

The Etna EcoDistrict Roadmap was prepared from the outset in conformance with the Protocol, using a format different than the template provided in the EcoDistricts Certified Handbook. This document acts as a crosswalk to describe the location of plan content as it corresponds to the sections identified in the template.

DISTRICT BOUNDARY

The Etna EcoDistrict Boundary aligns with the legal municipal boundary of the Borough of Etna (see Figure 1), an area of approximately 0.8 square miles.
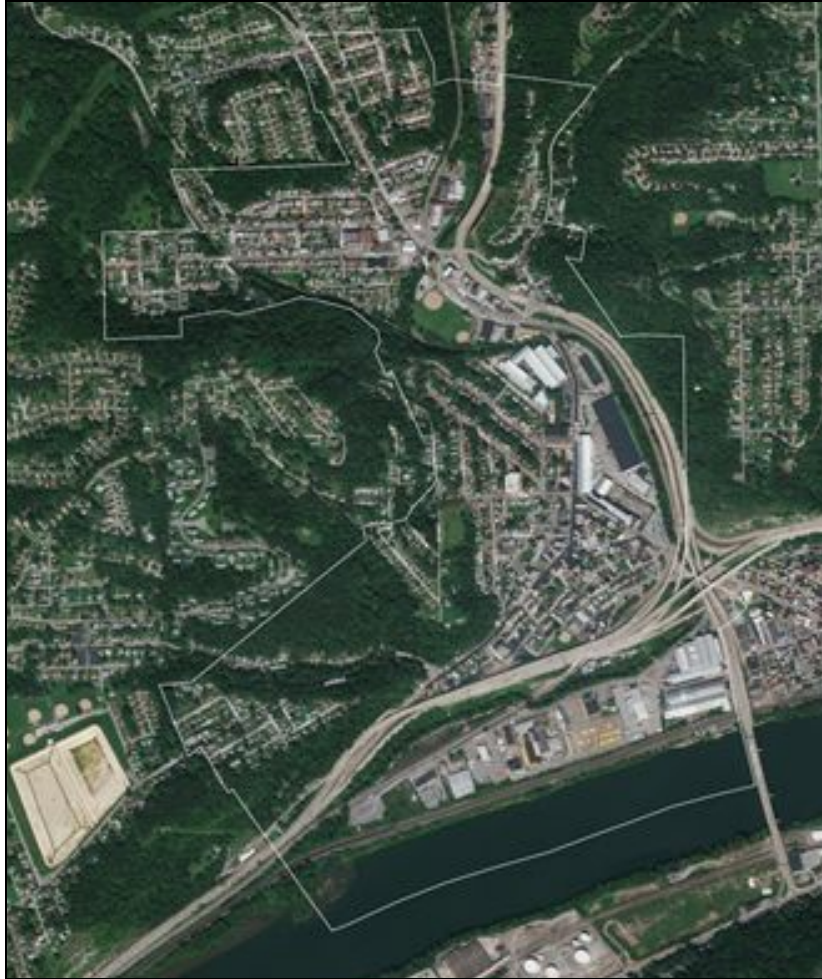

Figure 1: Map of Etna highlighting the district boundary in a light gray outline.

PRIORITY-BASED ASSET MAP

The following table (Table 2) describes Etna's existing assets organized by EcoDistrict Priority. As illustrated in the table, Etna currently contains many assets in each of the six EcoDistrict Priority Areas.

Etna is rich with Place-related assets, including organizations, cultural assets, and events. The majority of Etna's Prosperity-related assets are existing businesses and the organizations that support them. Health and Wellbeing assets are primarily places and activities related to recreation and food. Etna's connectivity-related assets are related to improving physical connections with street and sidewalk improvements. Living Infrastructure and Resource Restoration assets consist of green infrastructure and

stormwater management initiatives, and connecting to the Allegheny River and Pine Creek. Additionally, Etna contains several gardens contributing to improved air quality. The Connectivity and Resource Regeneration Priorities contain the highest number of assets located within Etna that are controlled outside of Etna.

The Etna EcoDistrict Roadmap builds on Etna's existing assets, works to fill gaps, and focuses on improvements that are within ECO's and Etna Borough's control. Increased opportunities for Prosperity are needed, including start-up business support, innovative economic development opportunities, and more jobs and job training. While the community has several Health and Wellness assets, the Roadmap works to fill gaps related to food by providing additional opportunities to produce, process, and distribute food equitably. Existing Connectivity assets are strengthened by recommendations for complete street improvements, additional trails, and other projects that compliment or further these existing assets. Etna is lacking in digital network assets, which is addressed through the implementation of public wifi access points. Similarly, recommendations related to green infrastructure strengthen and compliment existing Living Infrastructure assets. Additional opportunities for ecosystem health and connecting the community to nature (especially Pine Creek) are identified. Lastly, the Etna EcoDistrict Roadmap advances opportunities to improve air quality, water quality, and waste diversion, with a variety of Resource Regeneration recommendations.

Additional Priority-Based Asset Map content, including detailed descriptions of Etna's existing assets, can be found in the Community Asset Map of Etna (**Exhibit D**) and each of the six Etna EcoDistrict Education Booklets (**Exhibit A, 1-6**).

Table 2: *Existing Etna assets, organized by EcoDistrict Priority. Primary assets include those located controlled within Etna, secondary assets include those located within Etna but controlled outside of Etna, and tertiary assets include those located and controlled outside of Etna.*

EcoDistrict Priority	Primary Asset Located and controlled within Etna	Secondary Asset Located in Etna, controlled outside of Etna	Tertiary Asset Located and controlled outside of Etna
Place	Etna Borough Municipal Building; Council Chamber; Fugh Hall; American Flag and Poll; Borough Council; Public Meetings; Mayor; Borough Manager; Zoning and Code Enforcement; Etna Newsletter; Etna Borough website; Mural & War Memorial Gardens; Joint Comprehensive Plan (River Bend); Sustainable PA Community; Jockey Club Hall; Etna-Shaler Post 9197 V.F.W.; War Memorial; Mural at DOugherty Veterans Field' Jester's Court and Winschel St. Mural; 448 Studios; Etna Studios; I.D. Labs (recording studio); Etna Senior Center; Etna Commons; Union Hotel; Spang Mansion' Spang Chalfant/Tippins Machinery; Etna Neighborhood Assoc.; Pride of Etna; Etna	City of Bridges Community Land Trust permanently affordable housing	

	Teen Advisory Board; American Legion; Etna Community Day; Light the Night Celebration; Memorial Day Parade; EEDC's Summer Carnival; All Saints Summer Festival; Night at the Races; Summer Concerts at the Park; Etna Art Tour; Emmanuel L.'s Senior Friendship; Boy and Girl Scouts; ECO		
Prosperity	The ScareHouse; Butler St. Business District; Freeport Street Businesses; Bridge Street Businesses; Grant Street Business District; Etna Industrial Park; Forms & Surfaces headquarters; Etna Towne Center; Former Crescent Street Businesses; Route 8 Businesses; Etna Economic Development Corporation; EtnaLive.org	Facade Grant Program; Allegheny Together Program	Shaler Area School District; Shaler North Hills Library; North Hills Community Outreach Center
Health & Wellbeing	Etna Police Dept and Force; Etna Fire Dept and Volunteers; Etna Borough Public Works Bldg and Dept.; Garden of Etna and members; Live Well Allegheny Community; Etna Farmers Market; Dougherty Veterans Field; Sullivan Field; Batting cages; Hafner Field; Tony Damiano Memorial Deck; Etna Borough Pool; Etna Borough Playground; Etna Borough Basketball Court; Aikido of Pittsburgh; Ideal Dance; Art & Style Dance Studio, Snap Fitness; OMP Wrestling; En Garde Fencing Studio; Dirty Dozen Race on High St.; Etna Borough Athletic Club; Etna Deck Hockey Assoc.; Mayor's Cup; Cops vs. Kids Game; Teen Day Open Streets; Water Aerobics; Dart Ball League; Urban Walking Trails; Etna Farmers Market; Bread of Life Food Pantry; Etna Food Businesses	Shaler EMS	
Connectivity	Pine St. Pedestrian Bridge; Pedestrian Friendly Sidewalks; Pine Creek Connector Trail; Etna Complete Streets Resolution; Etna Pedestrian Alliance; Little Pine Creek Connector Trail; ADA Pedestrian Ramps	PA Routes 8; Route 28; Pennsylvania Railroad; B&O Railroad; PAAC bus routes 1, 2, and 91; US Post Office; Vehicular Bridges over Pine Creek; North Hills Bike/Pedestrian Summit	Sen. Robert D. Fleming Bridge
Living Infrastructure	Allegheny River, Pine Creek; Green Streetscape (phases 1+2); School Street Biofiltration System; Memorial Park's Rain Garden; Green Infrastructure Masterplan; Pine Creek; Dougherty Nature Trail; Watershed Plan; Rain Barrel Program; Fishing at Pine Creek; Etna Riverfront Park; Air Quality Walking Trails	ALCOSAN	
Resource Regeneration	Class 8 Community Rating System; Route 28 Portal Garden; Route 8 Gardens; Spirit Garden; Bell Garden; Clock Garden; Fireman's garden; Garden at Fugh Hall; Susan B. Koman Rose Garden; Always in Bloom Garden; Etna Street Trees; ACHD Pollution Prevention Grant; Etna Borough Flood Improvement Initiatives; Garden of Etna Solar Canopy; Etna Solar Ordinance; LED Streetlight Conversion	Hampton Shaler Water Authority; Waste Management; Peoples Gas; Duquesne Light; Solarize Allegheny Program; ROCIS Program; Air Quality Leadership Meetings; Solar United Neighbors Solar Co-op; Duquesne Watt Choices Program	

CENSUS OF LOCAL PLANS

The following table and narrative describes existing policies, programs, and plans on the municipal, regional, and county scales that are applicable to the Etna EcoDistrict.

Table 3: Existing policies, programs, and plans on the municipal, regional, and county scale that are applicable to the Etna EcoDistrict.

Existing Policies, Programs, and Plans	Geography
Borough of Etna Diversity Policy	Municipal (Borough of Etna)
Borough of Etna Complete Streets Resolution	Municipal (Borough of Etna)
Etna Stormwater Management Ordinance (No. 1378)	Municipal (Borough of Etna)
Etna Floodplain Management Ordinance (No. 1353)	Municipal (Borough of Etna)
Community Rating System	Municipal (Borough of Etna)
Etna Green Infrastructure Master Plan	Municipal (Borough of Etna)
River Bend Joint Comprehensive Plan	Municipal (Triboro)
Pittsburgh Climate Action Plan (PCAP) 3.0	Regional (City of Pittsburgh)
Allegheny County Health Department (ACHD) Health Equity Briefs	County (Allegheny County)
PA State Incentives for Renewables and Efficiency	State (Pennsylvania)

Borough of Etna Diversity Policy

At the municipal level, the Borough of Etna adopted a **Diversity Policy** in 2019 to support the "maximum practical utilization of certified Minority/Women/Disadvantaged Business Enterprises" through normal business practices and participation of subcontractors and suppliers. The Borough identifies its participation in the Etna EcoDistrict Education Education Series and EcoDistrict partnership with evolveEA as demonstrations of its commitment to serve underrepresented groups under this policy. Future partnerships and sub-contracts needed for implementation of the Etna EcoDistrict Plan will be analyzed to adhere to this policy.

> *Applicable Priorities: This policy is related to Prosperity (and social equity) because it seeks to expand access to opportunity for certified minority/women/disadvantaged business enterprises.*

Complete Streets Resolution

At the municipal level, in August 2018 the Borough of Etna adopted a **Complete Streets Resolution** (No. 1377 D) in an effort to create a pathway for future mobility improvements in the Borough. Through this Resolution, the Borough of Etna seeks to support "community transportation projects to improve access, mobility, public health, and the quality of life for all of [Etna's] residents and visitors to the community." Various action items are outlined in the Resolution, including: a resolve to work with PennDOT (Pennsylvania Depart. of

Transportation) on implementing bike/pedestrian improvements as part of larger roadway improvements; a resolve to incorporate Complete Streets design considerations as a routine part of infrastructure planning, rehabilitation, and implementation to the extent financially and physically feasible; for Council Members to participate in the Mobility portion of Etna's EcoDistrict Planning and Education Series, both during community-wide and as part of the Champions group; participation in improvements aimed at handicap installations and considerations for mobility-limited individuals; and to inventory publicly owned sidewalks to establish a baseline for improvement. Design proposals and action items within the Etna EcoDistrict Plan consider mobility improvements around Complete Streets principals given the adoption of this Resolution.

> **Applicable Priorities**: *This Resolution primarily addresses Connectivity, as well as Health & Wellbeing within the Active Living Objective.*

Borough Flood Management Policies & Programs

At the municipal level, the Borough of Etna has adopted two ordinances to address stormwater runoff and flooding concerns: **Etna Stormwater Management Ordinance (No. 1378)** (revised in 2018) **Etna Floodplain Management Ordinance (No. 1353)**. (enacted in 2014) outlines requirements for the safe management of stormwater runoff in the Borough to protect the health, safety, and general welfare of Etna's residents. Ordinance No. 1353 was adopted in 2014 to outline minimum requirements for new construction and development within areas of the Borough that are subject to flooding. The Borough of Etna also has a **Green Infrastructure Master Plan** (completed in 2014) and participates in the **FEMA Community Rating System** (ongoing participation since 1996), both of which address stormwater mitigation. Etna's Green Infrastructure Master Plan assesses the feasibility of green infrastructure projects as a way to reduce flooding and reduce or eliminate the need for new gray infrastructure projects. The plan outlines five phases of green infrastructure projects (23 sites) that are estimated to manage up to 16.1 million gallons of stormwater runoff per year. Participation in the Community Rating System program provides an opportunity to lower Etna's vulnerability to flooding through a series of volunteer initiatives. Beginning in 1996, the Borough of Etna has reduced its class rating from 10 to 7, which allows for a 15% discount on flood insurance premiums to anyone in Etna purchasing insurance. These resilience initiatives in the Borough have been presented to the community as part of the Etna EcoDistrict Education Series, and future sites in the GI Master Plan have been included in the Etna EcoDistrict Plan designs.

> **Applicable Priorities:** *All four of these plans and initiatives are related to Living Infrastructure (improving connection to water, managing stormwater for ecosystem health, improving natural features), as well as Resource Restoration (improving water quality).*

River Bend Joint Comprehensive Plan

Etna's **Joint Comprehensive Plan (River Bend)** (published in 2014) is shared with the neighboring Boroughs of Millvale and Sharpsburg and identifies shared issues throughout

each community and opportunities for collaboration to access greater pools of resources to meet collective needs. This initial collaboration allowed for each Borough to share a zoning map to better distribute zoning requirements across the three Boroughs and led to the Triboro Ecodistrict Initiative.

> **Applicable Priorities:** *This plan addresses Place (with recommendations related to public spaces and housing), Prosperity (addressing economic development and vitality), Health and Wellbeing (recommendations for a "food niche"), Connectivity (improvements related to street network and mobility), Living Infrastructure (connecting residents to nature and improving natural features), and Resource Restoration (land use recommendations and gardens to improve air quality).*

Allegheny Health Department (ACHD) Health Equity Briefs

At the county level, the Allegheny County Health Department has published **Health Equity Briefs** (published in 2018) on Health Access, Chronic Disease and Risk Behaviors, Environment, Maternal and Child Health, and Mental Health and Substance Use that describe the causes of differences in the quality of health across different populations and municipalities in Allegheny County, including Etna. The briefs identify disparities related to chronic diseases, access to healthcare, the environment, maternal and child health, and mental health and substance abuse. The Health Equity Briefs were used as a resource to provide statistics on health and equity in Etna during the Etna EcoDistrict Social Equity Education Series.

> **Applicable Priorities:** *These briefs primarily address Health and Wellbeing.*

Pittsburgh Climate Action Plan (PCAP) 3.0

At the regional level, the **Pittsburgh Climate Action Plan (PCAP) 3.0** (completed in 2018) is a comprehensive plan to address climate change. Within this plan are 2030 District Goals that set national standards for high performance buildings by committing properties to 50% reduction in energy use, water consumption, and transportation emissions by 2030, while improving indoor air quality. The Etna EcoDistrict will use the PCAP 3.0 as a resource and potential model to reduce the Borough's carbon footprint and transition to carbon neutrality.

> **Applicable Priorities:** *This plan is focused on Resource Regeneration (reducing greenhouse gas emissions, renewable energy, and reducing waste). It is also touches upon Health & Wellness (food system).*

PA State Incentives for Renewable and Efficiency

At the state level, there are a number of different **incentives for renewables and efficiency** to encourage individuals to be more energy efficient and transition to alternative fuel for their homes and/or vehicles. These include tax credits, rebates, and loan programs, including but not limited to Tax Credits for Consumer Renewable Energy and Energy Efficiency Products, the Alternative Fuel Vehicle (AFV) Rebate Program, and the Keystone Home Energy Loan Program. The Etna EcoDistrict Plan will consider these programs as options to share with the community when pursuing initiatives to reduce resident energy burden and encourage the use of alternative fuel.

Applicable Priorities: These incentives are focused on Resource Restoration (reducing greenhouse gas emissions, renewable energy, and energy efficiency).

It can be seen from the review local plans that there are several Priorities that are not currently being addressed. The Etna EcoDistrict Roadmap seeks to align with existing plans and fill gaps in the areas of Place (engagement and inclusion, culture and identity, public spaces, and housing), Prosperity (innovation), Health and Wellbeing (active living, safety, and food systems), and Connectivity (digital network).

ONGOING AND IMMINENT ACTIVITIES BY OTHERS

The following table (Table 4) and narrative describes important ongoing and imminent activities by organizations other than ECO that have been considered during Roadmap preparation because of their significance for the Etna EcoDistrict.

Table 4: *Ongoing and imminent activities by other organizations that are significant for the Etna EcoDistrict.*

Ongoing and Imminent Activities	Description and Applicable Priorities
Etna Riverfront Park *(Borough of Etna)*	Phase I of the Etna Riverfront Park is currently under construction. The Park is located along the Allegheny RIver and will reconnect residents to the riverfront while also acting as a key link on a regional trail system (the Three Rivers Heritage Trail). This project is related to **Place** because it will become a key part of Etna's identity as a Rivertown and will be a public space. It will also encourage **Health and Wellbeing** by encouraging active living. As a key link on the regional trail it relates to **Connectivity**. Lastly, by providing a connection to nature it is supporting **Living Infrastructure.**
Three Rivers Heritage Trail *(Friends of the Riverfront)*	In the future (timeline TBD), Friends of the Riverfront will extend the Three Rivers Heritage Trail from Millvale through Etna to Sharpsburg and Aspinwall. This trail will improve **Connectivity** as well as support a connection to nature, as related to **Living Infrastructure**.
Pine Creek Connector Trail *(Borough of Etna)*	The Pine Creek Connector Trail improves **Connectivity** to Shaler Township by providing a safe bicycle and pedestrian route from the Kiwanis Park in Shaler to Etna's Butler Street Commercial District.
Green Streetscaping (future phases) *(Borough of Etna)*	Future phases of green streetscaping, including underground stormwater retention on site 5A, will support **Living Infrastructure** through natural features, supporting ecosystem health, and improving connection to nature. It will also support **Resource Regeneration** by improving air quality and managing stormwater.
Tree planting as part of the ACHD Pollution Prevention Grant *(Borough of Etna)*	The Borough of Etna received funding to plant 100 trees in the community to mitigate air pollution from heavy traffic ways. The addition of these trees will support **Living Infrastructure** through natural features, supporting ecosystem health, and improving connection to nature. They will also support **Resource Regeneration** by improving air quality and managing stormwater.
Permanently Affordable Housing *(City of Bridges Community Land Trust)*	The City of Bridges Community Land Trust (CLT) is in the early stages of developing newly constructed housing units that will be permanently affordable through a CLT. This is a housing project, contributing to the **Place** Priority.

PRIORITIES & OBJECTIVES

The Etna EcoDistrict Roadmap contains a series of community-identified goals and sub-goals for each Quality of Life Issue. These goals are equivalent to the objectives described in the EcoDistricts Certified Handbook. The Etna EcoDistrict Roadmap, while not organized by the EcoDistrict Priorities, does include at least one goal for each of the priority objective categories, as shown in Table 5.

*Table 5: The Etna EcoDistrict's Goals as related to each EcoDistrict Priority Objective Category. Please note that this is not a comprehensive list of Etna's Goals and Actions. More information on the Etna EcoDistrict Roadmap Priorities & Objectives can be found in **Exhibit E**, a draft of the Etna EcoDistrict Plan, pages 25 - 113. Please refer to the footnotes on these pages. The language in this table describing the Etna EcoDistrict Goals incorporates further detail than is described in the Etna EcoDistrict Plan regarding the intent of these goals. In the Etna EcoDistrict Plan, the intent of these goals is reflected in the actions and indicators.*

EcoDistrict Priority	EcoDistrict Objective	Etna EcoDistrict Goal	QoL Issue
Place	Engagement & Inclusion	Engage in an equitable and transparent process that equitably distributes the benefits of place-based projects and programs throughout Etna	Social Equity
Place	Culture & Identity	Support and celebrate Etna's vibrant identity and culture	Social Equity
Place	Public Spaces	Improve quality of life for all by creating dedicated public spaces for youth and community enrichment	Social Equity
Place	Housing	Build community wealth by providing permanently affordable housing options	Social Equity
Prosperity	Access to Opportunity	Build community wealth by training residents for jobs in emerging sectors such as energy conservation, renewable energy, and technology	Energy, Social Equity
Prosperity	Economic Development	Build community wealth by supporting and incentivizing businesses and essential services to relocate to Etna	Social Equity
Prosperity	Innovation	Leverage energy initiatives to promote innovative and build community wealth	Energy
Health & Wellbeing	Active Living	Provide enjoyable biking and walking route options throughout Etna that promote active living	Mobility
Health & Wellbeing	Health	Improve nutritional health and wellness	Food, Social Equity
Health & Wellbeing	Safety	Improve Etna's street safety and connectivity	Mobility
Health & Wellbeing	Food Systems	Localize Etna's food system across the full food life cycle from production to disposal	Food
Connectivity	Street Network	Support all modes of transportation through Complete Streets strategies, including bike lanes, crosswalks, traffic calming, and intersection improvements	Mobility

Connectivity	Mobility	Increase the use of alternative transportation and advocate for enhanced public mobility options that connect Etna residents to the region	Mobility
Connectivity	Digital Network	Establish public access sites for free wi-fi available to all Etna residents	Social Equity
Living Infrastructure	Natural Features	Protect our natural environment through intentional restoration and conservation interventions	Water
Living Infrastructure	Ecosystem Health	Restore the Pine Creek riparian buffer (vegetated area near streams that protect adjacent land)	Water
Living Infrastructure	Connection with Nature	Celebrate water with productive, enjoyable places for Etna residents to connect with nature	Water, Social Equity
Resource Regeneration	Air & Climate	Maximize renewable energy production and minimize sources of outdoor air pollution	Energy
Resource Regeneration	Water	Establish stormwater parks, pocket wetlands, and gardens to reduce flooding, filter stormwater runoff pollution, and allow residents to enjoy water	Water
Resource Regeneration	Waste	Minimize the environmental impact of Etna's waste cycle	Food, Energy

INDICATORS

The Etna EcoDistrict Roadmap contains a series of four to nine indicators for each of the six Quality of Life Issues. The Etna EcoDistrict Roadmap, while not organized by the EcoDistrict Priorities, does include one unique indicator for each of EcoDistrict Priority Objective. Unique objectives for each of the Imperatives are included in the Etna EcoDistrict Imperatives Commitment. Additional information on Etna EcoDistrict Roadmap Indicators can be found in the "Action Plan" chapter of the Etna EcoDistrict Plan (**Exhibit E**, pages 25 - 113). Please refer to the footnotes on these pages.

EXISTING CONDITIONS & BASELINE PERFORMANCE ASSESSMENT

The existing conditions of the Etna EcoDistrict are documented in the Etna Education Booklets (**Exhibit A**). This includes the:

- **Water Booklet** - water supply, wastewater treatment, rainwater management, natural environment (Exhibit A1)
- **Mobility Booklet** - safety and transportation - all modes (Exhibit A2)
- **Air Booklet** - natural environment and climate (Exhibit A3)
- **Energy Booklet** - land use, energy use, carbon emissions, and climate (Exhibit A4)
- **Food Booklet** - solid waste management and climate (Exhibit A5)
- **Equity Booklet** - demographics, housing, employment, education facilities and programs, recreation facilities and programs, historic and cultural resources, and health and human services (Exhibit A6)

In addition to the information provided in the Etna EcoDistrict Education Series Booklets, supplemental information about land use and public safety is provided below.

Land Use

A land use map can be found in the Energy Education Booklet (Exhibit A4, pg. 20), which is also displayed below (Figure 2). Etna contains 1,417 residential buildings (totaling 2,164,077 square feet), 129 commercial buildings (totaling 638,849 square feet), and 5 industrial buildings (totaling 484,891 square feet). Etna also contains steep wooded hillsides and urban green space (totaling approximately 6,052,003 square feet).

Figure 2: *Etna land use map distinguishing between residential, commercial, industrial, and wooded hillside or green space land uses.*

Public Safety

General information about vehicular, bicycle, and pedestrian safety can be found in the Mobility Education Booklet. To expand upon this information, Etna had 122 vehicle accidents over the past 12 months. Of these crashes, 32 required a vehicle to be towed or an injury was incurred; 2 crashes involved pedestrians; 1 involved a motorcycle; and 0 involved a bicycle. Etna contains a few intersections that have had clusters of traffic crashes over the

past ten years. The map below (Figure 3) provides a red dot for each traffic crash that has occurred in Etna within the past ten years, including along Route 8 and Route 28. The map shows clusters of crashes along Route 28, near the intersection of Washington Street and Butler Street, the intersection underneath the 62nd Street Bridge, Butler Street between Freeport Street and Parker Street, as well as along Mt. Royal Blvd. These areas tend to be unsafe for pedestrians and bicyclists as well.
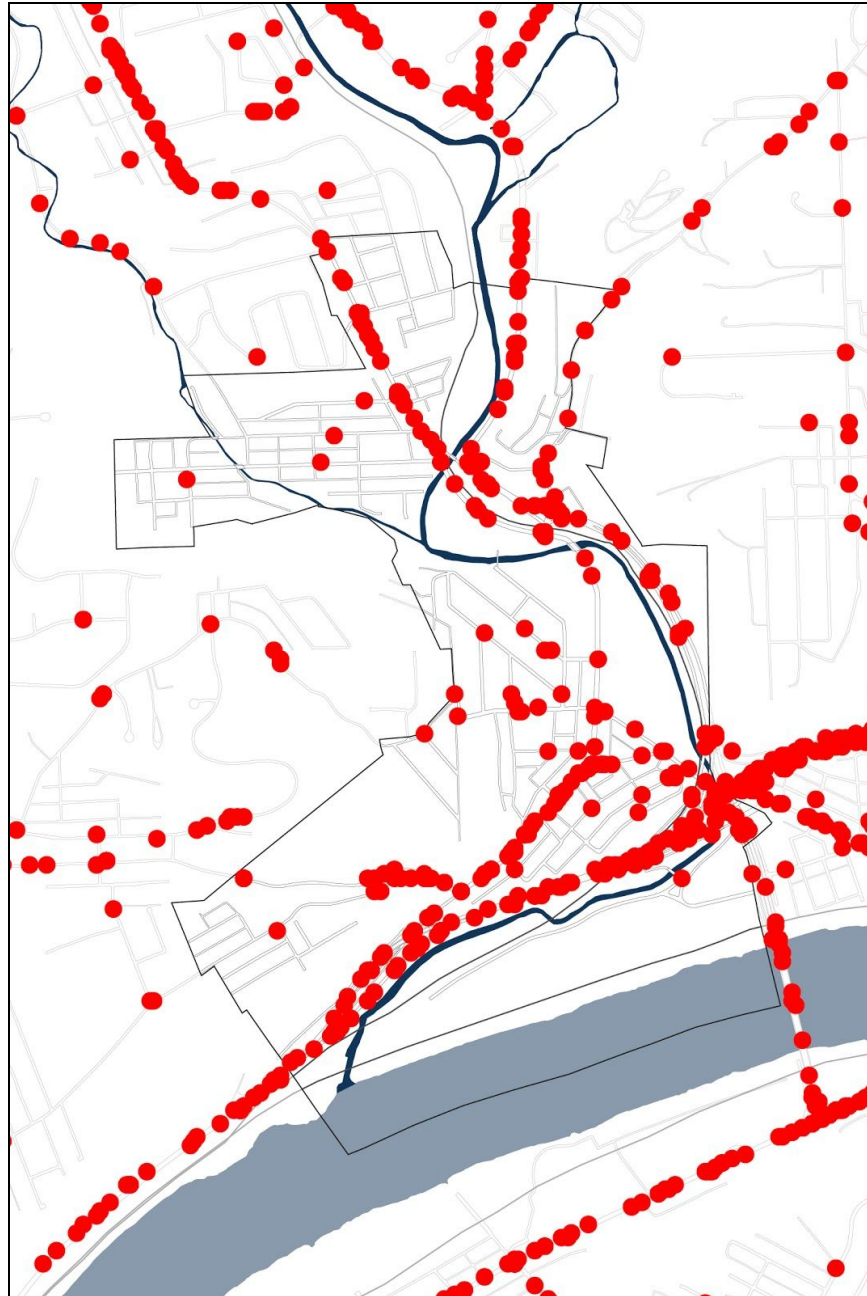

Figure 3: *Locations of reportable (required a vehicle to be towed or an injury was incurred) traffic crashes since 2018.*

In general, Etna is a very safe community to live in with few incidents of violent or extreme crimes. According to Etna Borough Police Department incident report data, there have been less than 100 counts of criminal activity (e.g., thefts, burglaries, assaults, drug violations) since the beginning of 2019. Additionally, The Borough of Etna Police have a strong and positive relationship with the community. Every year, Etna's youth participate in a "Kids vs. Cops" basketball game at the Etna Playground. Additionally, in August 2019 Etna celebrated it Police and Fire Departments with a National Night Out ceremony and event.

Baseline Energy Consumption & CO2 Emissions Inventory
At this time, Etna is only able to provide the baseline energy consumption and CO2 emissions inventory informed by regional averages and publicly available data instead of measured community-wide sub-metered energy data. Etna's baseline energy consumption (using best available data from Summer 2019) is documented in the table and narrative below. There is no energy consumption or carbon emissions related to infrastructure (wastewater treatment facilities, landfills, etc.) within the physical boundary of Etna, and is therefore considered Scope 3 emissions. The energy baseline and CO2 emissions inventory only accounts for Scope 1 and Scope 2 emissions as described in the Global GHG Protocol and the EcoDistricts Certified Handbook (page 56).

The U.S. Department of Energy's Energy Efficiency and Renewable Energy State and Local Energy Data City Energy Profile Tool was used to inform the baseline energy performance and CO2 emissions inventory, as well as train schedules, the Bureau of Transportation Statistics, and the Borough of Etna's utility bills. The process abides by the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories.

Table 5: *Etna's baseline energy consumption in million BTU/year using best available data from Summer 2019.*

Energy End Uses	Scope 1			Scope 2			Total Annual Energy Use	% of Total Annual Energy Use
	Buildings Using Natural Gas	Transp. Using Gasoline	Transp. Using Diesel	Grid-Supplied Electricity				
				Buildings Using Electricity	Transp. Using Electricity	District Infra.		
BUILDINGS								
Residential	144,311	-	-	41,116	-	-	185,427	31.7%
Non-Residential	82,580	-	-	42,310	-	-	124,890	21.3%
Buildings Subtotal	226,891	-	-	83,426	-	-	**310,317**	**53.0%**
TRANSPORTATION								
On-Road Transportation	-	225,047	46,397	-	0	-	271,444	46.4%
Railroads	-	-	3,082	-	-	-	3,082	0.5%
Transportation Subtotal	-	225,047	49,479	-	0	-	**274,526**	**46.9%**
INFRASTRUCTURE								
Street Lights	-	-	-	-	-	442	442	0.05%
Traffic Control	-	-	-	-	-	173	173	0.05%
Infrastructure Subtotal	-	-	-	-	-	615	**615**	**0.1%**
TOTAL								
District Total	226,891	225,047	49,479	83,426	0	615	**585,458**	**100%**

Table 6: *Etna's baseline CO2 emissions in metric tons/year using best available data from Summer 2019.*

Energy End Uses	Scope 1			Scope 2			Total Annual CO2 Emissions	% of Total Annual CO2 Emissions
	Buildings Using Natural Gas	Transp. Using Gasoline	Transp. Using Diesel	Grid-Supplied Electricity				
				Buildings Using Electricity	Transp. Using Electricity	District Infra.		
BUILDINGS								
Residential	7,711	-	-	9,327	-	-	17,038	29.5%
Non-Residential	4,412	-	-	9,598	-	-	14,010	24.3%
Buildings Subtotal	12,123	-	-	18,925	-	-	**31,048**	**53.8%**
TRANSPORTATION								
On-Road Transportation	-	21,603	4,700	-	0	-	26,303	45.6%
Railroads	-	-	225.5	-	-	-	225.5	0.4%
Transportation Subtotal	-	21,603	4,926	-	0	-	**26,529**	**46.0%**
INFRASTRUCTURE								
Street Lights	-	-	-	-	-	92	92	0.19%
Traffic Control	-	-	-	-	-	36	36	0.01%
Infrastructure Subtotal	-	-	-	-	-	128	**128**	**0.20%**
TOTAL								
District Total	12,123	21,603	4,925.5	18,925	0	128	**57,705**	**100%**
ADJUSTED BASE YEAR EMISSIONS								
On-Site Sequestration*	-	-	-	-	-	2.4	**2.4**	-
Excess Renewable Power Sales Offsets	-	-	-	0	-	-	**0**	-
Adjusted District Total	-	-	-	-	-	125.6	**57,702.6**	**100%**

*At this time, only includes Etna Borough planted trees (12 trees in 2019). Assuming 1 tree can sequester 48 lbs of CO2 annually (or .02 metric tons). (NC State University)

EXISTING LOCAL TARGETS AND PARALLEL EFFORTS

There are currently no existing policies, programs, or plans on the municipal, regional, or county scales that set future performance targets that are applicable to the Etna EcoDistrict. The Etna EcoDistrict has chosen to align with Pittsburgh's Climate Action Plan and Pittsburgh's 2030 District future performance targets of reducing energy use, water consumption, and transportation emissions by 50% by the year 2030.

Programs operated by entities other than the Etna Community Organization that serve Etna and have been included in calculating the achievement of 2030 performance targets have been described in the "Source" information that accompanies each indicator in the Etna EcoDistrict Plan (**Exhibit E**, pgs. 24-113).

ROADMAP HORIZON YEAR

The Etna EcoDistrict Roadmap's horizon year is the year 2030. This is in alignment with the Triboro Ecodistrict's horizon year and regional efforts related to the 2030 Challenge. The Etna EcoDistrict aims to be a carbon-neutral community by the year 2050.

DISTRICT BUILD-OUT ESTIMATE

The Borough of Etna is a densely populated community -- approximately 3,400 residents within 0.8 square miles -- with little room for infill development or new construction projects. To account for this, building reuse is being prioritized to improve underutilized buildings and bring new amenities to Etna, in addition to a few new construction projects. Over the next ten years, the Etna EcoDistrict Plan proposes three new construction projects (Permanently Affordable Housing and two Commercial Redevelopment projects), as well as nine renovation projects (Open Air Market, Grocery Store, Floodproof Redevelopment, Creekside Restaurant and Brewery, Etna Center for the Arts, Upper Floor Apartments, Community Library, Net-Zero Energy Public Works Building, and the Etna Solar Grab-n-Go).

It is anticipated that these projects will result in a slight population increase, bring new jobs to Etna, and contribute to Etna's EcoDistrict performance targets. More specifically, the impact of these initiatives will result in a population increase of 52 residents (increase of 1.75%) and 95 new jobs (increase of 5%). However, it must be noted that not all place-related projects proposed in the Etna EcoDistrict Plan will be achieved by the year 2030. Additionally, these projects must be implemented in tandem with the EcoDistrict Actions to achieve the performance targets established - neither the place-based projects nor the Action Plan can achieve the performance targets independently. Separate from the projects proposed in the Etna EcoDistrict Plan, residential population and employment growth is expected to stay relatively stable until the year 2050 (the carbon neutrality horizon year). Proposed new construction and major renovation projects are described in great detail in the Key Places chapter of the Etna EcoDistrict Plan (pages 114 - 162) and are referenced in

the "Source" information that accompanies each indicator, where applicable. For more information, please see below:

New Construction Projects
Permanently Affordable Housing
Four permanently affordable housing units are currently planned for Etna, which is a project of the City of Bridges Community Land Trust. These projects will accommodate approximately 16 additional Etna residents. This project directly contributes to increasing the number of permanently affordable housing units in Etna (Place: Housing performance target). This project indirectly contributes to other EcoDistrict performance targets as well, including decreasing the percentage of the population living below the poverty level (Economic Resilience performance target). The addition of these housing units will increase community-wide energy consumption and carbon emissions, however, energy efficiency best practices and solar arrays are currently being investigated as part of this project, which would minimize the additional energy and carbon contribution to the greater community. For more information about this project, please see page 154 of the Etna EcoDistrict Plan.

Commercial Redevelopments (2 sites)
Two commercial redevelopment sites are proposed as part of the Etna EcoDistrict Plan. The first is located at the corner of Butler Street and High Street. The project is currently in progress by the Rear End Gastropub and will become a restaurant and brewery with green infrastructure along the corner of the site. This project will create about 20 new jobs in Etna. Rear End plans to reuse the existing building on the site and add an addition of equal or greater size. This project will increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target), by selling food in the community. Food processing may also occur on site. In addition, a green infrastructure project is planned for the corner of the site, which will increase the millions of gallons of stormwater managed through green infrastructure projects in Etna (contributing to the Resource Regeneration: Water and Resiliency/Living Infrastructure: Ecosystem Health indicators). The addition of this gastropub will increase community-wide energy consumption and carbon emissions, however, energy efficiency best practices and solar arrays are currently being investigated as part of this project, which would minimize the additional energy and carbon contribution to the greater community.

In addition to this, a second commercial redevelopment project is proposed on a vacant site along Butler Street between Elm Street and Walnut Street. The project would include a restaurant on the ground floor (creating 20 new jobs) and apartments on the upper floors. This project will increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target), by selling food in the community. Food processing may also occur on site. This project indirectly contributes to other EcoDistrict performance targets as well, including decreasing the percentage of the population living below the poverty level (Economic Resilience performance target) by providing affordable housing and preventing displacement. The

addition of this commercial redevelopment project will increase community-wide energy consumption and carbon emissions, however, energy efficiency best practices and solar arrays will be incorporated as part of this project, which would minimize the additional energy and carbon contribution to the greater community.

For more information about both commercial redevelopment projects, please see pages 152 and 154 of the Etna EcoDistrict Plan.

Renovation Projects

Open Air Market

The Plan proposes the renovation of a currently vacant industrial building into an open air market. This project would provide approximately 20 new jobs in Etna and would increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target) by providing a space for independent shop owners and farmers to distribute and sell their goods. Food processing may also occur on site. In addition, the building will have solar panels that meet the building's energy needs (with the inclusion of carbon offsets if necessary). This will increase the community's annual megawatt-hours per year of renewable energy produced (contributing to the Climate Protection performance target) and will neither increase nor decrease community-wide energy consumption and carbon emissions. For more information about this project, please see page 130 of the Etna EcoDistrict Plan.

Grocery Store

A small-scale grocery store or market is proposed for an underutilized site right outside of the boundary of Etna in Sharpsburg Borough. This project would increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target), by selling food in the community. Food processing may also occur on site. For more information about this project, please see page 144 of the Etna EcoDistrict Plan.

Floodproof Redevelopment

Four permanently affordable housing units are proposed for a currently vacant building adjacent to the Open Air Market (referred to by locals as the "Blarney Stone"). This project would accommodate approximately 16 additional Etna residents. This project directly contributes to increasing the number of permanently affordable housing units in Etna (Place: Housing performance target). This project indirectly contributes to other EcoDistrict performance targets as well, including decreasing the percentage of the population living below the poverty level (Economic Resilience performance target). The project will demonstrate how to flood-proof a building in the floodplain with its elevated and FEMA floodplain compliant design. While this renovation project will not remove the building from its location in the floodplain, it indirectly contributes to decreasing the percentage of buildings within or touching the 100-year floodplain (Resilience performance target) by demonstrating flood resilient renovation practices that can act as a model for other

renovation projects. The addition of these housing units will increase community-wide energy consumption and carbon emissions, however, energy efficiency best practices and solar arrays would be incorporated as part of this project. These would minimize the additional energy and carbon contribution to the greater community. For more information about this project, please see page 154 of the Etna EcoDistrict Plan.

Creekside Restaurant and Brewery
A Creekside Restaurant and Brewery is proposed in the Plan on the site of an underutilized building at the intersection of Butler Street and Kittanning Street, creating 20 new jobs in Etna. This project will increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target), by selling food in the community. Food processing may also occur on site. In addition, the building will have solar panels that meet the building's energy needs (with the inclusion of carbon offsets if necessary). This will increase the community's annual megawatt-hours per year of renewable energy produced (contributing to the Climate Protection performance target) and will neither increase nor decrease community-wide energy consumption and carbon emissions. For more information about this project, please see page 134 of the Etna EcoDistrict Plan.

Etna Center for the Arts
The Etna Center for the Arts is proposed to fill a currently vacant building located at the corner of Freeport Street and Butler Street, creating 10 new jobs in Etna. This center will act as the hub of all arts activity in Etna by contributing public art and murals to various locations in Etna, organizing the Etna Art Tour, and offering classes and space for local youth and artists. This project will indirectly contribute to increasing the number of public art installations and culturally interpretive installations in Etna (contributing to the Place: Culture identify performance target) by acting as the organizer and convenor for these types of projects. In addition, the building will have solar panels that meet the building's energy needs (with the inclusion of carbon offsets if necessary). This will increase the community's annual megawatt-hours per year of renewable energy produced (contributing to the Climate Protection performance target) and will neither increase nor decrease community-wide energy consumption and carbon emissions. For more information about this project, please see page 150 of the Etna EcoDistrict Plan.

Upper Floor Apartments
Many of the upper floors of existing buildings along Etna's Butler Street commercial district are vacant or underutilized. The Plan proposes that these upper floors be converted into apartments. This project would accommodate up to 20 additional Etna residents. This project directly contributes to increasing the number of permanently affordable housing units in Etna (Place: Housing performance target). This project indirectly contributes to other EcoDistrict performance targets as well, including decreasing the percentage of the population living below the poverty level (Economic Resilience performance target) by providing affordable housing and preventing displacement. The addition of these housing

units will increase community-wide energy consumption and carbon emissions, however, energy efficiency best practices and solar arrays will be evaluated as part of this project, which would minimize the additional energy and carbon contribution to the greater community. For more information about this project, please see page 154 of the Etna EcoDistrict Plan.

Etna Community Library
The Etna Community Library is currently planned for Etna, which is a project of ECO. The Library will provide books to lend, it will provide classes and resources to community members, and it will include a pay-what-you-can-cafe. This project directly contributes to increasing the number of public spaces that have free wi-fi (Connectivity: Digital Network performance target) by offering free use of computers with wi-fi and it will increase the number of people directly employed by the Etna EcoDistrict by adding 10 new jobs to Etna (Prosperity: Access to Opportunity performance target). This project indirectly contributes to other EcoDistrict performance targets as well, including decreasing the percentage of the population living below the poverty level (Economic Resilience performance target) by providing free access to resources for community members. The pay-what-you-can cafe would create an additional 15 new jobs in Etna and would increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target), by providing food to community members at a price they determine they can afford. Food processing may also occur on site. In addition, the building will have solar panels that meet the building's energy needs (with the inclusion of carbon offsets if necessary). This will increase the community's annual megawatt-hours per year of renewable energy produced (contributing to the Climate Protection performance target) and will neither increase nor decrease community-wide energy consumption and carbon emissions.

Net-Zero Energy Public Works Building
Retrofitting the existing Etna Public Works Building into a net-zero energy demonstration building is proposed as part of the Plan. The building would be extremely energy efficient and would have a solar array on the roof that meets the energy needs of the building. This will increase the community's annual megawatt-hours per year of renewable energy produced (contributing to the Climate Protection performance target) and will contribute to the community's carbon neutrality goal by reducing carbon emissions from one building. For more information about this project, please see page 162 of the Etna EcoDistrict Plan.

Etna Solar Grab-n-Go
In the Plan, a solar grab-and-go is proposed for the site of a former gas station located at the intersection of Butler Street and Washington Street. The grab-no-go would be a quick serve healthy fast food restaurant and would create 20 new jobs in Etna. This project would increase the number of food production, processing, and distribution places (contributing to the Prosperity: Economic Development performance target), by providing a place where the community can buy healthy food. Food processing may also occur on site. This project

would also contain electric vehicle charging stations, the presence of which will encourage community members to transition to electric vehicles. This would indirectly contribute to increasing the percentage of residents who get to work by means other than driving a vehicle powered by gasoline (Connectivity: Mobility performance target). In addition, the building will have solar panels and wind turbines that meet the building's energy needs (with the inclusion of carbon offsets if necessary). This will increase the community's annual megawatt-hours per year of renewable energy produced (contributing to the Climate Protection performance target) and will neither increase nor decrease community-wide energy consumption and carbon emissions. For more information about this project, please see page 162 of the Etna EcoDistrict Plan.

Additional Roadmap **District Build-out Estimate** content can be found in the "Key Places" chapter of the Etna EcoDistrict Plan (**Exhibit E**, pages. 114 - 163).

HORIZON YEAR PERFORMANCE TARGETS

The Etna EcoDistrict Roadmap contains a series of four to nine indicators for each of the six Quality of Life Issues. The Etna EcoDistrict Roadmap, while not organized by the EcoDistrict Priorities, does include one indicator for each of the priority objective categories and for each of the Imperatives. The baseline performance and 2030 targets for each indicator are documented in the Action Plan chapter of the Plan, and they are accompanied by supporting information about how the baseline and target performance was calculated. The short, mid, and long term projects are described in the Implementation Plan for each Quality of Life Issue.

Additional Roadmap **Indicators** content can be found in the "Action Plan" chapter of the Etna EcoDistrict Plan (**Exhibit E**, pages 25 - 113). Please refer to the footnotes on these pages.

POTENTIAL STRATEGIES

The Etna EcoDistrict Roadmap contains a series of two to seven actions (equivalent to the EcoDistrict Certification requirement for "strategies") for each of the Quality of Life Issue Goals. The Etna EcoDistrict Roadmap, while not organized by the EcoDistrict Priorities, does include at least one action for each of the priority objective categories. Please see the **Exhibit B** for more information.

Roadmap **Potential Strategies** content can be found in the "Action Plan" chapter of the Etna EcoDistrict Plan (**Exhibit E**, pages 25 - 113), as well as in the Actions Crosswalk (**Exhibit B).**

STRATEGIES ASSESSMENT & RANKING

The Etna EcoDistrict seeks to achieve all of the actions listed in the Action Plan, however, given ECO's projected capacity over the next few years, achieving all of the actions in such a short time frame in unattainable. ECO has prioritized the actions and chosen several to focus on over the next three years. These actions are listed in the "Getting Started" portion of the Plan. ECO has prioritized actions that are fully within the control of the organization, match the organizational capacity and funding available for the next three years, in addition to evaluating the benefits in regards to social equity, resilience, and environmental stewardship. ECO also considered risk, level of stakeholder support, and impact on 2030 performance targets when assessing these actions as well as the additional actions listed for the next ten years (see **Exhibit B** for the full strategies assessment).

Table 7: *Ranking criteria and scoring descriptions for Etna EcoDistrict Action Items*

Ranking Criteria	Score 1	Score 2	Score 3
Technical Readiness	*Few to no key steps for implementation of this project/program are in place*	*Some but not all key steps for implementation of this project/program are in place*	*All key steps for implementation of this project/program are in place*
Financial Soundness	*ECO has neither sufficient funds nor a fundraising plan to implement this project/program*	*ECO has partial funds and/or a fundraising plan to implement this project/program*	*ECO has full funds to implement this project/program*
Risk	*Implementation of this project/program has high risk of negative social, economic, or environmental consequences*	*Implementation of this project/program has moderate risk of negative social, economic, or environmental consequences*	*Implementation of this project/program has low risk of negative social, economic, or environmental consequences*
Capacity to Manage	*ECO will not have sufficient capacity to implement this project/program until 7+ years from now*	*ECO has sufficient capacity and partner support to implement this project/program within the next 4-6 years*	*ECO has sufficient capacity and partner support to implement this project/program within the next 3 years*
Level of Stakeholder Support	*Stakeholders have not expressed support for this project/program, or have expressed concern*	*Stakeholders have expressed moderate support of this project/program*	*Stakeholders have expressed enthusiastic and full support of this project/program*
Impact on Targets	*Implementation of this project/program would make minor progress towards fulfilling ECO's six Quality of Life Vision Statements and carbon neutrality targets*	*Implementation of this project/program would make moderate progress towards fulfilling ECO's six Quality of Life Vision Statements and carbon neutrality targets*	*Implementation of this project/program would make significant progress towards fulfilling ECO's six Quality of Life Vision Statements and carbon neutrality targets*

There are several actions listed in Etna's EcoDistrict Plan that do not directly contribute to the goal of carbon neutrality, but indirectly or cumulatively contribute. The carbon impact of these actions are listed in column AE of **Exhibit B**. Based on the actions and performance targets that are directly quantifiable, it has been calculated that the community will reduce its carbon emissions by 34,669 metric tons over the next ten years. This is about 60% of Etna's baseline carbon emissions. After setting the groundwork over the next ten years, Etna will re-evaluate its carbon emissions inventory and progress towards carbon neutrality as part of a planning process in 2030 that will result in updated indicators, goals, and actions. Depending on the nature of these future actions, Etna will purchase carbon offsets to ensure that the EcoDistrict achieves carbon neutrality by the year 2050. See below and **Exhibit B** for more detail.

Pathway to Carbon Neutrality

1. **Increase the rate of alternative transportation to connect to the region.** This includes the following actions:
    - *Advocate for PAAC routes that connect to regional job centers*
    - *Establish the Pine Creek Connector Trail to connect the Etna Riverfront Park to Shaler (already in process by Etna Borough)*
    - *Extend the Three Rivers Heritage Trail to the Etna Riverfront Park and to Sharpsburg*
    - *Establish a Healthy Ride bike share station in Etna*
    - *Offer free bikes, bike education, and/or bike repair at community events*
    - *Support all modes of transportation through Complete Streets strategies, including bike lanes, crosswalks, traffic calming, intersection improvements, etc.*
    - *Support last mile connections with a local shuttle, bike rentals, walking trails, or other connections*
    - *Develop a youth mobility campaign to encourage alternative transportation, including a youth walking campaign, neighborhood tours, scavenger hunts, etc.*
    - *Target highly used bus stops for improvements, including benches, vegetation, lighting, and art*
    - *Issue a mobility survey with a focus on vulnerable populations to identify the biggest needs and barriers related to mobility*
    - *Establish a weekly shuttle to grocery stores*

The impact of each individual action cannot be quantified at this time, however, the cumulative impact of these actions aims to increase Etna's alternative transportation rate from 20.7% to 35% (a 14.7% improvement). Assuming that these actions can achieve this goal, this will result in a **reduction of 9,073 metric tons of carbon emissions annually**. This is an ambitious goal for the year 2030. Additional actions will support achievement of this goal between the years 2030 and 2050.

2. **Sequester carbon with trees and vegetation.** This includes the following actions:
    - *Use vegetation to screen, filter, and beautify major roadways, such as Route 8, Route 28, and the railroads*
    - *Create a network of green spaces throughout the community to sequester pollution*
    - *Incentivize the installation of green roofs and walls on private property*

Etna has a performance target to plant at least 100 trees over the next 10 years, including the locations listed in the first action above. This will result in a reduction of 2 metric tons of carbon emissions annually. The impact of the other two strategies cannot be quantified at this time, however an estimate considering the green space proposals in the Etna EcoDistrict Plan indicate an additional reduction of 4 metric tons of carbon annually. Cumulatively considering all three actions, this will result in a **reduction of 6 metric tons of carbon emissions annually**. This estimate is informed by the Plans established for the year 2030. Additional carbon sequestration actions will be taken between the years 2030 to 2050.

3. **Reduce the energy burden.** This includes the following actions:

- *Partner with organizations such as Conservation Consultants Inc. (CCI) and Rebuilding Together to establish an energy efficiency program that provides assistance to homeowners and renters to receive free or reduced cost energy audits and retrofits*
- *Establish energy education programs for adults and youth*
- *Start a campaign encouraging residential adoption of solar panels*
- *Solarize municipal-owned & nonprofit-owned buildings, such as the Borough Building and the new Library*
- *Incentivize large parking lots to install solar arrays with electric vehicle charging stations and electric vehicle car rentals*
- *Establish a renewable energy commitment program for businesses and residents*
- *Investigate efficacy of wind turbines along the highways*
- *Implement microgrid technology, connected to solar farms and large-scale arrays in Etna*
- *Establish an Etna solar co-op*

Etna has a performance target to reduce energy consumption by 50% over the next 10 years. The first step is energy conservation, including the first two actions listed above. Energy efficiency improvements on average reduce energy consumption by 15 - 30%. In Etna the energy efficiency improvements will be aggressive and deep retrofits. This will result in a **reduction of 9,314 metric tons of carbon emissions annually**. As a note, not all buildings will undergo a deep energy efficiency retrofit before 2030, but all buildings will by the year 2050.

Next, Etna will install solar panels on solar-eligible rooftops, including two of the strategies listed above, in addition to residential and commercial solar installation. According to Project Sunroof, 78% of the roof area in Etna is solar viable. If all of the solar viable buildings installed solar arrays, this would result in 21,200 mWh of renewable energy produced annually. This will result in a **reduction of 16,276 metric tons of carbon emissions annually**. As a note, installation of residential solar arrays is not in the Plan for the next ten years, but is part of the plan leading up to 2050.

Following the year 2030, Etna will utilize new smart energy technology, employ additional carbon sequestration techniques, and install additional forms of renewable energy, such as solar arrays over parking lots and wind turbines along the highways. While these ideas are mentioned in the 2030 Etna EcoDistrict Plan, they benefit of these initiatives cannot be quantified at this time.

Finally, Etna will purchase carbon offsets to reach their goal of carbon neutrality by the year 2050. See Table 8 below for Etna's outlined pathway to carbon neutrality.

Table 8: Etna EcoDistrict carbon neutrality strategies and corresponding carbon emission offsets, reductions, and sequestrations. If all actions are implemented, including further strategies beyond our 2030 horizon year, Etna will achieve carbon neutrality by 2050.

2050 Carbon Neutrality Strategy	CO_2 (metric tons)
2019 Carbon Emissions Baseline	57,705
Increase alternative transportation rate	- 9,073 (15.7% decrease)
Sequester carbon with trees and vegetation	-6 (0.01% decrease)
Reduce energy burden through improved energy efficiency	-9,314 (16.1% decrease)
Reduce energy burden through solarization	-16,276 (28.2% decrease)
Strategies in years 2030-2050	To Be Determined
Reduce the energy burden through carbon offsets (depending on the nature of projects occurring in the years 2030 to 2050, this number could be smaller)	-23,082 (40% decrease or less)
Total Carbon Emissions Removed	57,705
Net Carbon Emissions	**0**

RESPONSIBILITIES, FUNDING, AND IMPLEMENTATION SCHEDULE

The Etna EcoDistrict seeks to achieve all of the actions listed in the Action Plan, however, given ECO's projected capacity over the next few years, achieving all of the actions in such a short time frame in unattainable. ECO has prioritized the actions and chosen several to focus on over the next three years. An implementation plan has been created for each of the actions that ECO plans to achieve in the next three years, organized by quality of life area. This implementation plan includes responsible parties, potential funding sources, and an implementation schedule. Implementation costs will be determined on a project by project basis and is contingent on available funding. Actions to be completed after 3 years are represented with a rough timeline, which can be found in the Action Plan.

Roadmap **Implementation Plan** content can be found in the "Action Plan" chapter of the Etna EcoDistrict Plan (**Exhibit E**, pages 25 - 113).

EXHIBITS

A. **Etna EcoDistrict Education Booklets:** The Etna EcoDistrict Education Booklets are a set of educational resources on our Quality of Life Issues produced from the Etna EcoDistrict Education Series. They are a public resource that can be accessed digitally online by anyone. Additionally, there are 42 printed booklets that are shared and circulated by community members using a lending system.
   1. Etna EcoDistrict Water Booklet
   2. Etna EcoDistrict Mobility Booklet
   3. Etna EcoDistrict Air Booklet
   4. Etna EcoDistrict Energy Booklet
   5. Etna EcoDistrict Food Booklet
   6. Etna EcoDistrict Equity Booklet

B. **Etna EcoDistrict Actions Crosswalk:** The Etna EcoDistrict Actions Crosswalk provides a list of each Etna EcoDistrict Action organized by Quality of Life Issue and goal. The priority objectives addressed by each action are noted to the right as well as the Strategies Assessment. The total number of actions that relate to each priority objective area are totaled at the bottom.

C. **Etna EcoDistrict Community Engagement Schedule, Agenda, and Record:** This document describes each of the 33 community engagements throughout our EcoDistrict process to date, as well as outlined future meetings. Date, location, agenda, and outcomes are included for each meeting.

D. **Community Asset Map of Etna:** The Community Asset Map of Etna graphically details Etna's existing assets by category, including natural features; regional assets, such as neighboring communities and transportation routes; municipal assets; environmental assets; educational and spiritual assets; social, cultural, and historical assets; recreational assets, and commercial assets.

E. **Etna EcoDistrict Plan (Draft):** The EcoDistricts Roadmap is considered an appendix to the Etna EcoDistrict Plan. The Roadmap refers to pages within the Etna EcoDistrict Plan for additional information. The Plan is near-complete but is still in draft form, and we request that EcoDistricts does not make this draft version publicly available. ECO will provide a link to the final version of the Plan when available.