Sustainability Plan Review and Guidance

The Village of Lincolnwood

Prepared by:

Weaver Consultants Group

August 2024

Contents

Sustainability Plan Review and Guidance Report for the Village of Lincolnwood, Illinois

1. Introduction

The Village of Lincolnwood, a community in Cook County, Illinois, and suburb of Chicago, has shown a growing commitment to sustainability. This report presents a review of Lincolnwood's sustainability efforts using the Greenest Region Compact (GRC) framework, a collaborative initiative designed to guide municipalities in the Chicago region toward enhanced environmental stewardship and sustainable practices.

Lincolnwood has implemented a number of practices and policies that align with several of the strategies across the 10 GRC sustainability goals; however, given the breadth of potential actions outlined in the GRC, there is a need for strategic prioritization and focused efforts. WCG assessed Lincolnwood's current progress and identified gaps to provide recommendations for future sustainability initiatives. This report outlines the results of these efforts and offers guidance as well as an action plan to help Lincolnwood concentrate its resources on the most impactful areas for improvement.

Before this sustainability plan review was conducted, WCG developed The Village's first sustainability/GHG baseline, the results of which assisted in creating unique actions, and advising on possible key performance indicators/metrics that could be monitored to show progress. The Sustainability Baseline is attached as Appendix 1, alongside a sustainability baseline memo in Appendix 2.

2. Methods

The review process encompassed an examination of Lincolnwood's current sustainability efforts across all categories defined by the GRC framework. WCG began by reviewing village documents, including Lincolnwood's existing sustainability plan as well as progress toward GRC objectives. This first step provided an understanding of Lincolnwood's current sustainability landscape. Following this, WCG conducted a gap analysis to identify areas where Lincolnwood's actions fell short of GRC recommendations. This step allowed WCG to understand which areas need improvement or more attention. WCG then engaged in a prioritization process, ranking sustainability categories based on three key factors: the urgency of need, potential impact, and alignment with WCG's understanding of Lincolnwood's broader sustainability goals. WCG used the outcomes of this analysis to determine which GRC categories the village could prioritize in its sustainability efforts moving forward. Based on the rankings, WCG created four priority areas: 1) immediate priorities, 2) high priorities, 3) moderate priorities, and 4) sustained efforts. For each priority area, WCG assessed and included actions the village could take to improve their sustainability efforts across GRC categories. WCG also offered suggestions

on key performance indicators (KPIs) to monitor for each category. This approach ensured a thorough and objective evaluation of Lincolnwood's sustainability efforts and potential areas for improvement.

3. Results

The review revealed varying levels of progress across the GRC categories (Fig. 1). Based on the analysis, WCG categorized Lincolnwood's sustainability efforts into four priority levels. For each priority area, WCG have included relevant Key Performance Indicators (KPIs) that Lincolnwood could consider tracking to measure progress.

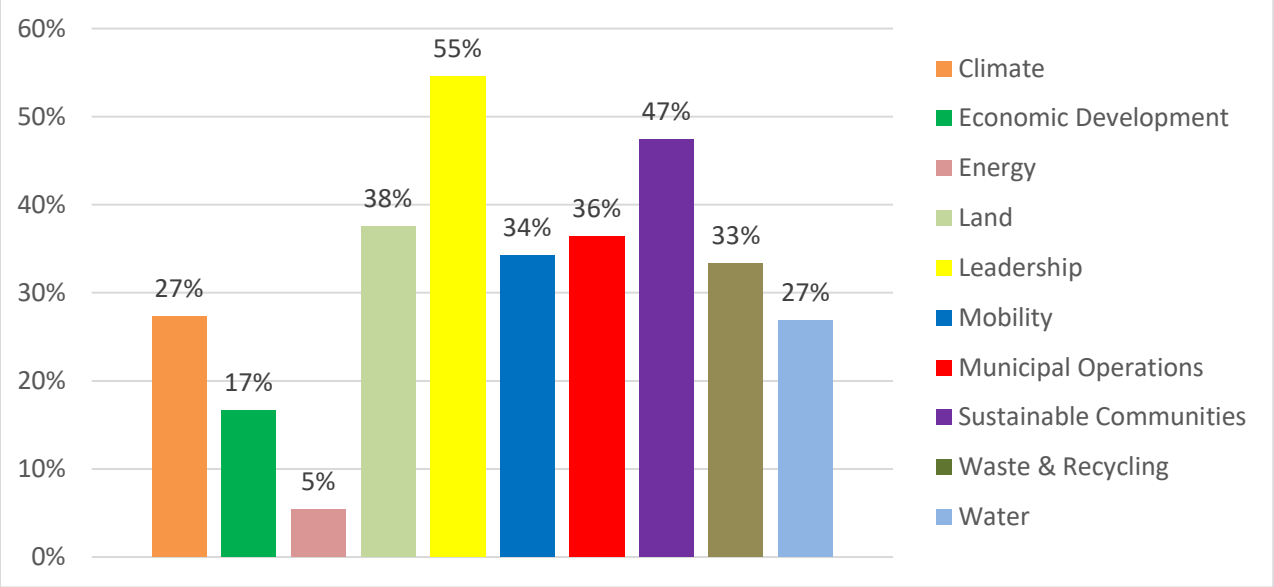


Figure 1. The Village of Lincolnwood's progress toward sustainability using the Greenest Region Compact (GRC) framework. The bar chart displays the percentage of strategies adopted or in progress for each GRC category.

3.1 Immediate Priorities

Energy and Economic Development emerged as areas requiring immediate attention due to gaps in current sustainability actions.

3.1.1 Energy

The Energy category within the GRC framework addresses one of the most important challenges in sustainable development: the transition from fossil fuels to cleaner energy sources. This transition is inherently slow and disruptive, affecting various aspects of urban infrastructure, national and regional economic systems, and daily life. The GRC framework recognizes this complexity by providing a wide range of goals and strategies that communities can implement.

Lincolnwood has implemented 2 of the 33 available strategies in the Energy category. This represents an important first step. The village's focus on LED lighting upgrades in village-owned buildings and budgeting for hybrid and electric vehicles shows a commitment to reducing energy consumption and

transitioning to cleaner transportation. These initiatives can have cumulative effects on reducing greenhouse gas emissions and energy costs over time.

The village is interested in pursuing additional strategies within the GRC Energy category; however, given the range of options available, WCG recommends prioritizing the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Energy				
E22		Offer employee awards/incentives for identifying energy management options in day-day work operations	1	2026	
E1		Use the GHG Inventory to focus energy audits on municipal operations that can provide the biggest impacts	1	2025	
E6/ E12		Assess feasibility of implementing renewable energy at current sites, focusing on Solar PV, charging infrastructure where options are more feasible.	1	2026	

By expanding its efforts in the Energy category, Lincolnwood will not only reduce its carbon footprint but could also create local green jobs and enhance community resilience to energy price fluctuations and supply disruptions.

3.1.2 Economic Development

The Economic Development category within the GRC framework seeks to foster sustainable economic growth while balancing environmental and social considerations. This process involves adapting traditional economic models to incorporate sustainability principles. This shift is often incremental and can present unique challenges. Recognizing this intricacy, the GRC framework offers an array of strategies for communities to adopt and adapt.

Lincolnwood has taken its first steps in this direction, implementing 2 of the 12 available strategies in the Economic Development category. The village's initiatives include the "In Bloom" contest, which rewards green innovation among residents and local businesses, and efforts to promote local goods and services. These programs lay the groundwork for a greener local economy and could yield long-term benefits in sustainable business practices and community economic resilience.

The village is interested in pursuing additional strategies within the GRC Economic Development category. Given the village's existing business nodes, including its traditional business corridor along Lincoln Avenue and the industrial park housing light industry and a shopping center, WCG suggests prioritizing these actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Economic Development				
ED4/ ED7		Plan local sustainability events and marketing messages to share with community residents.	1	2026	⏸
ED6		Collaborate with the City of Chicago to attract businesses that practice and promote sustainability.	1	2026	⏸
ED7		Introduce sustainability/green awards to support businesses who practice and promote sustainability.	1	2026	⏸

By broadening its approach to sustainable economic development, Lincolnwood could accrue multiple benefits, including fostering eco-friendly business practices, bolstering local economic resilience, generating green employment opportunities, and reinforcing the distinction among its business districts.

3.2 High Priorities

Water, Climate, and Waste & Recycling were identified as high-priority areas needing substantial improvements.

3.2.1 Water

The Water category within the GRC framework addresses effective water resource management and includes drinking water quality, wastewater treatment, stormwater management, and flood mitigation. The GRC framework acknowledges the complexity of water issues by offering a comprehensive set of strategies that communities can implement to enhance water sustainability.

Lincolnwood has implemented 22 of the 82 available strategies and sub-strategies in the Water category. The village's current actions focus on sustaining high-quality public water, ensuring efficient operation of drinking and wastewater systems, and encouraging flood risk reduction on private properties. These efforts reflect the village's commitment to addressing water-related challenges. Together, they can have far-reaching effects on public health, infrastructure resilience, and environmental protection.

Given Lincolnwood's unique geographical context – its proximity to Lake Michigan and the North Shore Channel of the Chicago River – and the increasing frequency and intensity of rainfall due to climate change, the village faces specific water management challenges. The village is highly developed, and its existing stormwater collection system has limited capacity, which exacerbates flood risks during heavy rainfall events.

To address these challenges and build upon its current efforts, WCG recommends Lincolnwood prioritize the following actions within the GRC Water category:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Water				
W16 / W1a		Add water consumption to the sustainability baseline and identify water efficiency measures at municipal facilities	1	2026	
W11/ W16		Support actions within the Village's stormwater management plan and infrastructure program that benefit sustainability	1	Ongoing	
W14		Label storm drains throughout the community and at municipal facilities to show destination of discharge	2	2028	

By expanding its efforts in the Water category, Lincolnwood can improve its resilience to flooding and heavy rainfall events while enhancing water quality in local water bodies, reducing water consumption, and creating more sustainable urban landscapes.

3.2.2 Climate

Within the GRC framework, the Climate category addresses the need for both mitigation and adaptation strategies for global climate change. This challenge requires a comprehensive approach, encompassing emissions reduction, resilience building, and cross-jurisdictional collaboration. The GRC framework offers an array of strategies to help communities navigate this complex landscape.

Lincolnwood has adopted 6 of the 22 available strategies in the Climate category. The village's participation in the Solid Waste Agency of Northern Cook County (SWANCC) and its implementation of stormwater infrastructure projects to combat extreme rainfall events show an awareness of climate-related challenges. Additionally, the ongoing development of the village's first greenhouse gas (GHG) inventory marks a significant step towards informed climate action planning. These efforts lay the groundwork for a more comprehensive climate action plan.

Given Lincolnwood's highly developed landscape and its vulnerability to flooding, the village faces unique climate-related challenges. The potential for urban heat island (UHI) effects further underscores the need for targeted climate strategies. To build upon its current initiatives and address these specific concerns, WCG suggests Lincolnwood prioritize the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Climate				
C+5		Sign letter of commitment to the Compact of mayors and send letter to national covenant.	1	2025	
C+5		Develop a climate risk assessment including climate mitigation and resilience targets. *(Requirement for Compact of Mayors)*	1	2027	
C1/ E1		Using the results from the energy audits and the GHG inventory, plan a realistic GHG reduction target that the Village may feasibly be able to achieve, and monitored as a KPI.	2	2027	

By expanding its climate-focused efforts, Lincolnwood can enhance its resilience to extreme weather events, reduce its carbon footprint, and create a healthier environment for its residents.

3.2.3 Waste & Recycling

In the GRC framework, the Waste and Recycling category promotes sustainable resource management and seeks to minimize environmental impact. This category encompasses a wide range of challenges, from reducing waste generation to enhancing recycling rates and managing hazardous materials. The GRC framework provides a comprehensive set of strategies to guide communities toward more sustainable waste management practices.

Lincolnwood has made progress in this area, implementing 11 of the 33 available strategies in the Waste and Recycling category. The village's initiatives span various aspects of waste management, demonstrating a multidimensional approach to the challenge. Key efforts include:

- Participation in SWANCC programs and recycling events
- Implementation of specialized collection programs for mercury and CFL bulbs
- Education programs on proper disposal of household hazardous waste
- Targeted collection initiatives, such as the Fire Department's sharps disposal and the Police Department's pill collection programs
- Seasonal collections for holiday lighting and batteries at Public Works
- Provision of curbside recycling services

These diverse initiatives reflect Lincolnwood's commitment to responsible waste management and resource conservation.

To build upon this foundation and further improve its waste management practices, WCG recommends Lincolnwood consider prioritizing the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Waste & Recycling				
WR1/ WR4/ WR9		Improve the collection of waste data and reporting to be able to demonstrate the quantity of collections, and the waste management operations.	1	2026	
WR21		Educate community on composting and recycling via Village website, Oktoberfest engagement, and with schools.	1	Ongoing	
WR1/ WR9		Set a waste reduction goal and a waste recycling goal for municipal operations.	1	2026	

By expanding its efforts in the Waste and Recycling category, Lincolnwood will reduce its environmental footprint and potentially realize cost savings, improve public health outcomes, and foster a culture of sustainability within the community.

3.3 Moderate Priorities

Mobility, Municipal Operations, and Land Use require ongoing attention to ensure progress and integration with broader sustainability goals.

3.3.1 Mobility

Within the GRC framework, the Mobility category addresses the development of sustainable transportation systems that enhance accessibility, reduce emissions, and improve quality of life. This multifaceted domain encompasses various aspects, from public transit and active transportation to electric vehicle infrastructure and green streetscapes. The GRC framework offers a diverse array of strategies to guide communities towards more sustainable mobility solutions.

Lincolnwood has made significant strides in this area, implementing 13 of the 38 available strategies in the Mobility category. The village's initiatives demonstrate a balanced approach to improving transportation options and infrastructure. Key efforts include:

- Implementation of the Pratt Avenue Bicycle Lane Improvements
- Collaboration with regional transportation agencies to enhance rail and bus connectivity
- Exploration of electric vehicle charging infrastructure, with a potential installation at Proesel Park pending grant approval
- Maintenance of Tree City USA Community status, including a curated tree planting list and assistance from a dedicated Arborist
- Interest in incorporating green infrastructure in future projects
- Advocacy for public transit funding

These actions show Lincolnwood's commitment to creating a more sustainable and accessible transportation network.

To enhance its mobility landscape, WCG recommends Lincolnwood consider prioritizing the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Mobility				
M17		Assess feasibility of electric vehicle charging at Proesel Park, and other locations	2	2027	
M4		Use the Village's 2016 Comprehensive Plan to collaborate with regional partners to connect on-and-off-road bicycle facilities and regional trail networks.	1	2026	
M34/ M35	6.2	Educate residents about the benefits of walking, biking, and using public transit (*From Village Sustainability Plan*)	1	Ongoing	

By broadening its actions in the Mobility category, Lincolnwood will continue to limit transportation-related emissions while also improving public health outcomes, enhancing community connectivity, and creating more livable streetscapes.

3.3.2 Municipal Operations

The Municipal Operations category in the GRC framework focuses on optimizing the sustainability and efficiency of local government functions. This area encompasses a wide range of activities, from procurement practices and asset management to waste reduction and energy-efficient operations. The GRC framework provides a wide-ranging set of strategies to guide communities in enhancing the sustainability of their municipal operations.

Lincolnwood has already demonstrated a commitment to sustainable municipal practices. The village has implemented 12 of the 33 available strategies in the Municipal Operations category. The village's current initiatives reflect a well-rounded approach to improving operational sustainability and include:

- Participation in collaborative purchasing programs such as the Municipal Purchasing Initiative (MPI), Sourcewell, and Suburban Purchasing Cooperative
- Extended lifecycle management of physical assets through the Fleet Division and Building Maintenance Division
- Exploration of zero-waste events, such as potentially the Lincolnwood Fest
- Consideration of formal anti-idling policies, fuel switching, and fleet speed limit observance
- Adoption of the GRC compact, signaling a broader commitment to sustainability
- Publication of the Public Works Annual Report, promoting transparency
- Integration of hybrid SUVs into the police fleet

These initiatives showcase Lincolnwood's efforts to lead by example in sustainable practices. To build on these efforts, WCG recommends Lincolnwood prioritize the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Municpal Operations				
MO14a/ MO14b/ MO18b		Annually assess fleet emissions and number of vehicles. Improve the formatting for collating fleet fuel consumption so that it can be better suited for calculating carbon emissions and tracking, etc.	1	Ongoing	
MO6	7.1	Develop a sustainability page on the Village website to document and track progress across municipal operations and throughout the community (*From Village Sustainability Plan*).	1	2026	
MO14		Operate an efficient fleet by creating an anti-idling policy, fuel switching, or electrification.	2	2030	

By strengthening its efforts in the Municipal Operations category, Lincolnwood will reduce its environmental footprint, realize cost savings, improve operational efficiency, and serve as a model for sustainable practices in the community.

3.3.3 Land Use

Within the GRC framework, the Land Use category addresses the interplay between the built environment, natural spaces, and community well-being. This domain encompasses urban planning, green space management, biodiversity conservation, and sustainable development practices. The GRC framework offers many strategies to guide communities in creating vibrant, resilient, and ecologically friendly landscapes.

Lincolnwood stands out as a leader in this category, having implemented 33 of the 88 available strategies in the Land Use category. The village's approach to land use management is both comprehensive and nuanced, reflecting a commitment to environmental stewardship and community enhancement.

At the heart of Lincolnwood's land use initiatives is a comprehensive parks and green space management program. The Public Works Department, in collaboration with the Parks and Recreation Department, maintains an extensive network of parks and recreational areas, including the Union Pacific Path and Valley Line Trail. These spaces serve as community assets, hosting annual events like the Lincolnwood Fest and the Turkey Trot. These areas also provide habitat for local flora and fauna. Furthermore, the village's commitment to biodiversity is evident in its creation of butterfly gardens along these trails and its ongoing efforts to secure grants for further ecological enhancements. Native species planting, sustainable landscaping, and invasive species management are prioritized in public spaces, as demonstrated in Centennial Park.

Lincolnwood's urban forest management is also noteworthy. The village maintains a detailed tree inventory, managed by a dedicated Forestry & Alleys Foreman, who is also a certified Arborist.

Lincolnwood also hosts an annual tree planting, which involves resident input on species selection, and the village is recognized by the Arbor Day Foundation as a Tree City USA for 26 years. These efforts will help the city expand and grow its urban forest, providing habitat, mitigating the UHI effect, and raising property values, among other benefits.

Lincolnwood also excels in community engagement and education. The village celebrates Arbor Day annually with tree planting events, hosts "Oktoberfest," and provides tree care information on its website. The Lincolnwood "In Bloom" awards program further incentivizes residents and businesses to contribute to the village's green landscape.

The village is interested in expanding its land use initiatives beyond green space management to encompass additional sustainable development practices. Lincolnwood would like to support conservation practices in line with sustainable new development, both within its boundaries and in partnership with neighboring municipalities. This approach would include efforts to protect and expand open spaces and redevelop brownfield sites, showcasing a forward-thinking stance on urban planning.

To build upon this strong foundation, WCG recommends Lincolnwood consider the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Land				
L16		Develop the new Parks and Recreation Master Plan.	1	2026	
L25/ L29/ L30 L31		Diversify the urban forest to improve resilience and manage traditional, cultivated landscapes sustainably, such as considering native planting and reduced mowing, or no-mow zones. This can include the medians on roadways.	1	2026	
L14	4.2	Evaluate tree planting strategies to determine the Village is following best practices to protect existing trees and minimize urban heat islands (*From Village Sustainability Plan*).	1	2026	

By continuing to innovate in the Land Use category, Lincolnwood will increase its ecological resilience, improve quality of life for residents, and solidify its position as a leader in sustainable urban planning.

3.4 Sustained Efforts

Sustainable Communities and Leadership show relative strength but should continue to build on existing actions, ensuring they support and enhance efforts in other areas.

3.4.1 Sustainable Communities

The Sustainable Communities category in the GRC framework serves as a holistic measure of a municipality's progress toward creating a livable, equitable, and environmentally conscious community. This multifaceted domain encompasses various aspects of community life, from cultural engagement

and public health to environmental awareness and civic participation. The GRC framework provides a comprehensive set of strategies to guide communities in fostering sustainability across all aspects of community life.

Lincolnwood has demonstrated exceptional commitment in this area, implementing a 28 of the 59 available strategies in the Sustainable Communities category. This substantial progress reflects the village's dedication to creating a vibrant, inclusive, and environmentally responsible community.

The village's approach to sustainable community development is both diverse and integrated. Cultural engagement stands at the forefront, with art displays at Village Hall, an Art/Craft Fair at Lincolnwoodfest, and a Diversity Flag Program that celebrates the community's multicultural fabric. The recognition of cultural events during Village Board Meetings further highlights Lincolnwood's commitment to inclusivity and diversity.

Environmental consciousness is integrated throughout Lincolnwood's community initiatives. The creation of an anti-idling ordinance and the implementation of bicycle lanes on busy streets like Pratt Avenue demonstrate a commitment to reducing emissions and promoting active transportation. The village's focus on restoring tree canopy on public property, coupled with encouragement for homeowners to preserve old-growth trees, showcases a dedication to urban forestry and its myriad benefits.

Public health and safety are prioritized through partnerships with organizations like the North Shore Mosquito Abatement District, ensuring residents' well-being. The village's commitment to sustainability is further evidenced by its Strategic Plan and the ongoing development of a Sustainability Plan through its Environmental Commission.

Community engagement and education also contribute to Lincolnwood's sustainable community efforts. The village leverages multiple communication channels, including Facebook, its website (which offers information in multiple languages), and newsletters to keep residents informed and involved. Regular events such as Electronics Recycling and Documents Shredding, Arbor Day Planting, Oktoberfest, and Community Clean Up Events provide hands-on opportunities for residents to participate in sustainability initiatives.

In addition, collaborations play a key role in Lincolnwood's approach, with partnerships including SWANCC and participation in the MMC Environmental Committee, allowing the village to leverage broader resources and expertise in support of its sustainability efforts.

To maintain and enhance its strong performance in the Sustainable Communities category, WCG recommend Lincolnwood consider the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Sustainable Communities				
SC9/ SC12/ SC13		Connect community to parks and recreation, and library programs to promote community health and wellness. Consider offering healthy lifestyle programs and events.	1	Ongoing	
SC+54		Create an award program or recognition to encourage sustainable behaviors for residents at home, could include other contests at Lincolnwood In Bloom.	1	2025	
SC45/ SC50		Encourage the community to take part in sustainability events: Electronics Recycling, Arbor Day Planting, Community Clean Up Events, and Lincolnwood In Bloom.	1	Ongoing	

By continuing its efforts in the Sustainable Communities category, Lincolnwood will further increase community cohesion and improve quality of life for all residents.

3.4.2 Leadership

The Leadership category in the GRC framework serves as an important measure of a municipality's ability to guide, innovate, and collaborate in pursuit of sustainability goals. This domain encompasses strategic planning, inter-governmental cooperation, community engagement, and transparent governance. The GRC framework offers a set of strategies to help communities excel in sustainability leadership.

Lincolnwood has demonstrated exceptional commitment in this arena, implementing 6 of the 11 available strategies in the Leadership category. This underscores the village's dedication to proactive and collaborative leadership in sustainability efforts.

At the heart of Lincolnwood's leadership approach is a strong emphasis on collaboration and partnership. The village actively participates in regional organizations such as SWANCC, the Northwest Municipal Conference, and the Metropolitan Mayors Caucus. These partnerships enable Lincolnwood to leverage shared resources, exchange best practices, and amplify its sustainability efforts beyond its borders.

Lincolnwood's commitment to informed decision-making is evident in its engagement with academic institutions. A recent analysis of power aggregation options, provided by Northern Illinois University students and other organizations, represents the village's approach to engaging external expertise in crafting sustainable policies.

Transparency and accountability form another portion of Lincolnwood's leadership strategy. The Public Works department's annual submission of a Consumer Confidence Report (CCR) to the Illinois Environmental Protection Agency, which measures drinking water quality, is one example of the village's commitment to open communication on essential services.

Lincolnwood also prioritizes efficient resource management by participating in the Municipal Partnering Initiative (MPI). This collaboration allows for cost-effective procurement of goods and services for infrastructure maintenance. This extends to infrastructure development and traffic management through coordinated efforts with the Illinois Department of Transportation (IDOT), Cook County, and other organizations to improve traffic flow and infrastructure.

To build on its strong performance in the Leadership category, WCG recommends Lincolnwood consider the following actions:

GRC Goal	Village ID#	Sustainability Goal	Phase	Completion Year	Status
	Leadership				
LP3		Report environmental data to support local and national sustainability effort (sustainability baseline, water quality, etc.).	1	2025	
LP4		Share information on leadership in sustainability, including via clean-Up efforts such as Union Pacific Clean Up Event, Friends of the Chicago River Annual Clean Up, and Lincolnwood In Bloom Awards.	1	Ongoing	
LP4		Strive for the leadership teams at the Village to drive and value sustainability.	1	Ongoing	

By continuing its efforts in the Leadership category, Lincolnwood will become a sustainability leader, inspire other municipalities, and drive regional progress toward sustainability goals.

4. General Guidance

To effectively implement and maintain a comprehensive sustainability strategy following the GRC framework, the Village of Lincolnwood should consider the following guidance.

First, it is important that Lincolnwood develops its own vision and goals for sustainability. While this report offers priorities based on WCG's analysis of Lincolnwood's progress within the strategies offered by the GRC framework, the true direction should come from within the community. WCG suggests engaging in a community-wide visioning process to define what sustainability means for Lincolnwood and develop specific, measurable, achievable, relevant, and time-bound (SMART) goals that align with this vision while addressing actions within the GRC framework.

Once this is achieved, Lincolnwood should develop a sustainability plan that reflects the community's shared priorities. When creating this plan, Lincolnwood should adhere to the five established milestones for sustainability planning: 1) develop a baseline, 2) set goals, 3) develop a plan, 4) implement the plan, and 5) evaluate progress. This structured approach will ensure a comprehensive and effective sustainability strategy.

To track progress and maintain accountability, WCG recommends Lincolnwood establish monitoring systems with regular data collection on KPIs. This and other information should be compiled in annual sustainability reports, detailing progress, challenges, and successes. These reports should be made easily

accessible to the public. WCG also suggests conducting biennial reviews of all sustainability goals and adjusting targets as necessary based on progress and changing circumstances.

Communication and stakeholder engagement are important to the success of any sustainability initiative. WCG encourages Lincolnwood to continue fostering community support through regular updates on sustainability initiatives via various channels, including social media, newsletters, and public meetings. WCG also suggest creating an interactive section on the village website dedicated to sustainability efforts.

To coordinate these efforts effectively, WCG suggests Lincolnwood hire a dedicated Sustainability Coordinator. This role would be responsible for liaising with all city departments, coordinating cross-departmental initiatives, and serving as the primary point of contact for public inquiries about the village's sustainability efforts.

Finally, to demonstrate Lincolnwood's commitment to climate action on a global scale, WCG suggests joining the Global Covenant of Mayors. This would involve developing a comprehensive greenhouse gas emissions inventory, assessing climate risks and vulnerabilities, setting ambitious targets, and creating detailed climate action plans.

By following this guidance and focusing on the identified priorities, the Village of Lincolnwood can develop an effective and locally relevant sustainability plan. This approach will not only help in achieving specific environmental goals but will also foster community engagement and position Lincolnwood as a leader in municipal sustainability in the greater-Chicago area.

5. Recommended KPI's

To measure sustainability, progress Lincolnwood may wish to adopt Key Performance Indicators (KPIs). KPIs can be used to regularly track meaningful progress toward an overall goal. The KPIs listed below have been grouped to suit and aid in the achievement of GRC Framework actions. KPI progress can be monitored quarterly, bi-annually, or annually. The KPIs listed below are provided as examples.

Possible Key Performance Indicators (KPI's) that could be adopted by the Village to monitor sustainability progress. Possible KPI's are broken down as per the GRC Framework.		
Priority	**GRC**	**Possible KPI**
Immediate	Energy	Total energy consumption (kWh) for municipal operations
		Percentage of municipal energy derived from renewable sources
		Number of municipal buildings that have undergone energy efficiency upgrades
		Percentage reduction in greenhouse gas emissions from municipal operations
		Number of electric vehicle charging stations installed in the community
		Percentage of municipal fleet vehicles that are hybrid or electric
		Community-wide energy consumption per capita
		Number of residential and commercial buildings that have undergone energy audits
		Adoption rate of smart meters in the community
		Energy cost savings from efficiency measures and renewable energy adoption
Immediate	Economic Development	Number of businesses participating in green innovation programs
		Percentage of local businesses adopting sustainable practices
		Number of new green businesses established in the community
		Local economic impact of buy-local initiatives
		Number of green jobs created in the community
		Occupancy rates in the industrial park and main street area
		Diversity of business types in the community
		Revenue generated from sustainable business initiatives
		Number of businesses participating in sustainability training or workshops
		Community satisfaction with local goods and services
High	Climate	Total community-wide GHG emissions
		Percentage of village covered by UHI mapping
		Number of climate-resilient infrastructure projects implemented
		Area of green space added (e.g., trees planted) to mitigate UHI effects
		Reduction in flood-prone areas
		Community engagement in climate education programs

High	Climate	Number of buildings retrofitted for energy efficiency
		Adoption rate of renewable energy in the community
		Frequency and severity of climate-related incidents
		Progress towards specific emissions reduction targets
		Number of days air quality exceeds health standards
		Number of buildings retrofitted for climate resilience
		Percentage UHI reduction
		Number of heat-related emergency room visits during summer months
High	Water	Percentage of water loss in the supply system
		Number of water main breaks per year
		Volume of stormwater captured by green infrastructure
		Frequency and severity of flooding events
		Water quality indicators for the North Shore Channel
		Per capita water consumption
		Number of properties implementing flood risk reduction measures
		Percentage of permeable surfaces in the village
		Efficiency metrics for wastewater treatment
		Community participation in water conservation programs
High	Waste & Recycling	Overall waste diversion rate
		Per capita waste generation
		Recycling contamination rate
		Volume of hazardous waste properly collected and disposed
		Participation rate in special collection events
		Number of residents reached through waste education programs
		Quantity of compostable materials diverted from landfills (if implemented)/ Percentage of waste composted
		Cost savings from waste reduction and recycling efforts
		Number of local businesses adopting zero-waste practices
		Community satisfaction with waste management services
		Recycling rate (percentage of waste diverted from landfills)
		Total waste generated per capita

Moderate	Municpal Operations	Percentage of municipal fleet vehicles that are hybrid or electric
		Energy consumption in municipal buildings
		Waste diversion rate for municipal operations
		Number of employees trained in sustainable practices
		Cost savings from energy efficiency and sustainable procurement
		Fuel consumption reduction from anti-idling policies
		Number of zero-waste municipal events held
		Greenhouse gas emissions from municipal operations
		Percentage of procurement meeting green standards
		Employee satisfaction with sustainability initiatives
Moderate	Mobility	Miles of bike lanes and pedestrian-friendly infrastructure added
		Public transit ridership numbers
		Number of electric vehicle charging stations installed
		Percentage of trips made by sustainable modes of transportation
		Tree canopy coverage along transportation corridors
		Number of green infrastructure projects implemented
		Community satisfaction with transportation options
		Reduction in transportation-related greenhouse gas emissions
		Number of mobility-related community engagement events held
		Success rate in securing grants for sustainable transportation projects
		Percentage of trips made by public transit, cycling, or walking
Moderate	Land Use	Percentage of land area dedicated to parks and green spaces
		Number of trees planted annually and overall tree canopy coverage
		Biodiversity indices in key green spaces
		Area of brownfield sites redeveloped
		Community participation in green space volunteer programs
		Reduction in urban heat island effect
		Percentage of native species in public landscaping
		Water quality in local water bodies
		Community satisfaction with parks and green spaces
		Percentage of city area covered by green space

Moderate	Land Use	Number of trees planted annually
		Biodiversity index (e.g., number of species in urban areas)
		Number of community gardens or urban farms
Sustainaed	Sustainable Communities	Community participation rates in sustainability events and programs
		Diversity of languages and cultures represented in community engagement
		Percentage of residents engaged in community volunteering
		Community health indicators
		Number of sustainability-focused community partnerships
		Resident satisfaction with community programs and services
		Social media engagement rates for sustainability-related content
Sustained	Leadership	Number of inter-governmental sustainability initiatives participated in
		Percentage of staff and elected officials trained in sustainability principles
		Community satisfaction with village leadership on sustainability issues
		Success rate in securing grants for sustainability projects
		Frequency of sustainability reporting to the public
		Number of sustainability best practices shared with or adopted by other municipalities
		Recognition or awards received for sustainability leadership
		Number of participants in sustainability education programs
		Progress towards specific sustainability goals (e.g., carbon neutrality by a certain year)

Appendix 1:

Sustainability Baseline Report

Sustainability Baseline

The Village of Lincolnwood

Reporting Year 2023

Prepared by:

Weaver Consultants Group

July 2024

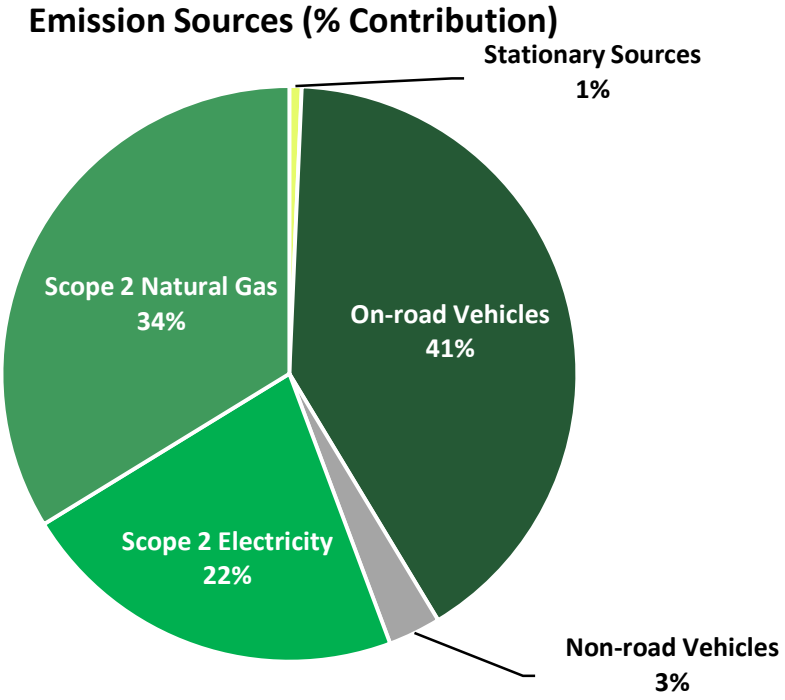
Sustainability Scorecard- RY 2023
Village of Lincolnwood

The following report summarizes sustainability data gathered for The village of Lincolnwood reporting Year 2023. This first section includes a summary. The following sections include specific information regarding each dataset.

Carbon Emissions

Scope 1		
	2023 Baseline MTCO2e	2024 MTCO2e
Stationary Combustion Sources & Equipment	8	
On road Vehicles	457	
Nonroad Vehicles	33	
Total Scope 1 Emissions	**498**	

Scope 2		
Type/Unit	**2023 Baseline MTCO2e**	**2024 MTCO2e**
Purchased Electricity	246	
Purchased Natural Gas	379	
Total Scope 2 Emissions	**626**	
Total Emissions	**1,124**	



Weaver Consultants Group

RY 2023 Scope 1 Greenhouse Gas Emissions
Village of Lincolnwood Scorecard

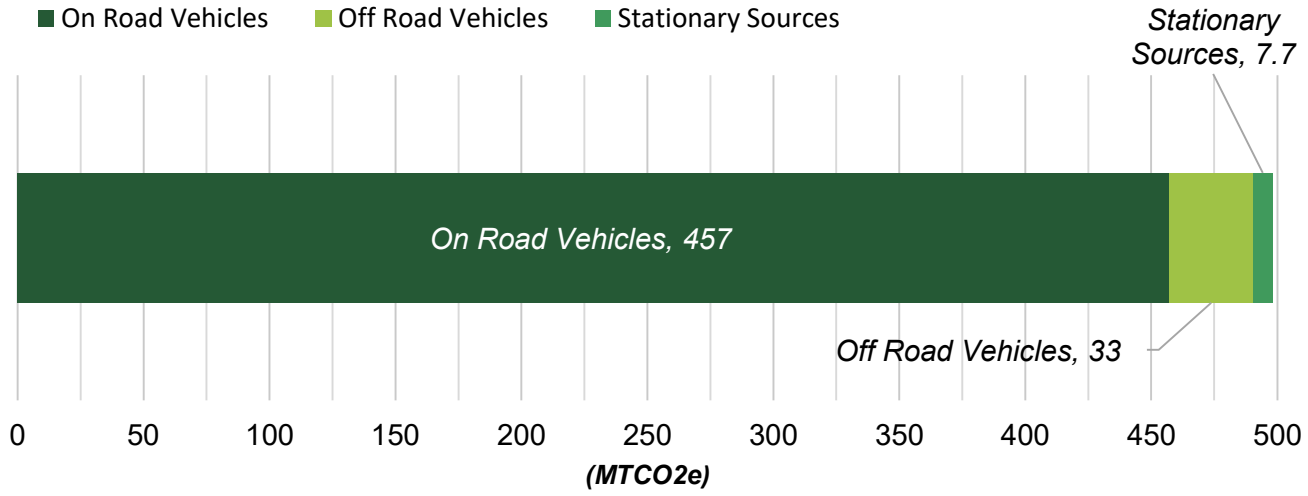
Parameters:

Scope 1 emissions included data from three different emission sources: on-road vehicles, off-road vehicles, and stationary sources. The city's on-road vehicle fleet generated the largest GHG emissions, largely from on-road gasoline vehicles. The police department's gasoline vehicles generated 42% of total on-road vehicle emissions, followed by Public works' on-road Gasoline vehicles (21%).

Usage & Emissions from Fuel Consumption [1]:

Fuel Type	Total units[2]	2023 Fuel Gallons Used	2023 MTCO2e
On-road vehicles[3]			
Diesel	10	10,736	111
Gasoline	36	38,965	346
Electric	2	N/A	0
Total	**46**	**49,700**	**457**
Off-road vehicles[4]			
Diesel	9	3,166	33
Gasoline	0	0	0
Electric	0	0	0
Total	**9**	**3,166**	**33**
Stationary sources & Equipment[5]			
Diesel	2	748	8
Gasoline	0	0	0
Other	0	0	0
Total	**2**	**748**	**8**
Grand Total	**57**	**53,615**	**498**

Scope 1 GHG Emission Sources (MTCO2e):



Weaver Consultants Group

RY 2023 Scope 1 Greenhouse Gas Emissions
Village of Lincolnwood Scorecard

Emissions:

Pollutant	Scope 1 GHG Emissions (MTCO2e)
CO2	488
CH4	0
N2O	6
Total:	**495**

Global Warming Potentials (GWP) [6] ***:***

CO2 Global Warming Potential = 1
CH4 Global Warming Potential = 28
N2O Global Warming Potential = 265

Footnotes:

1. Based on data provided by the facility. Data was extracted from the 2023 Fuel Data spreadsheet. The GHG emission factors for stationary sources were obtained from EPA GHG emission factors; 40 CFR Part 98; e-CFR. Table C-1 and Table C-2 , Table AA-1. Emission factors for on-road and off-road vehicles were sourced from 40 CFR Part 98, and the Inventory of GHG Emissions and Sinks Table A-84 to A-92. For mobile on-road vehicles, N2O and CH4 were calculated using The Climate Registry Simplified Emission Methods because accurate mileage data could be calculated. To improve accuracy, it is advised that data availability and aggregation is improved in the future.

2. Total units were calculated using the total units listed on the 2023 Fuel Data spreadsheet.

3. On road vehicle data were calculated by using the latest emission factors for vehicle types to separately calculate CO2, CH4, and N2O emissions. CH4 and N20 emissions were calculated using the Climate Registry Simplifed Emissions Methods as vehicle distance could not be accurately calculated.

4. Off road vehicle data were calculated by using the latest emission factors for off road vehicle types to separately calculate CO2, CH4, and N2O emissions.

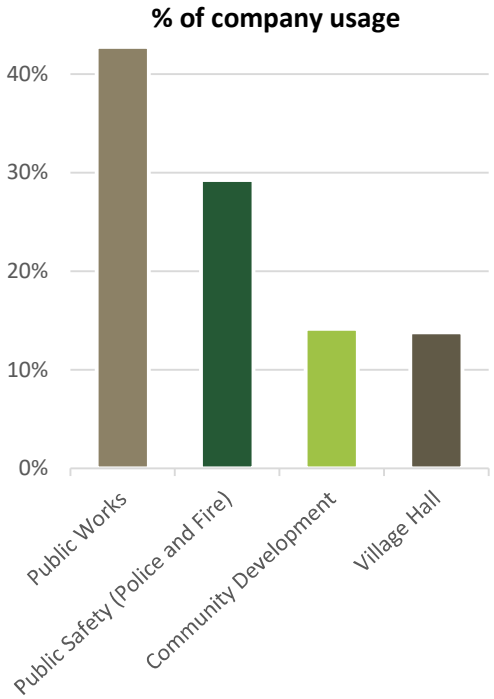
5. Stationary sources data were calculated by using the latest emission factors for fuel consumption in stationary sources to separately calculate CO2, CH4, and N2O emissions.

6. The global warming potentials (GWPs) were taken from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5), 100-yr average.

RY 2023 Scope 2 Greenhouse Gas Emissions - Purchased Natural Gas
Village of Lincolnwood Scorecard

Usage [1]:

2023 Natural Gas Usage (Therms)	71,396
2023 Natural Gas Usage (scf):	6,961,115



Emissions:

Pollutant	Scope 2 GHG Emissions (MTCO2e)
CO2	379.0
CH4	0.2
N2O	0.2
Total:	**379**

Sites ordered by highest natural gas consumption [2]:

Top sites	Site name	Usage (Therms)	% of company total
1	Public Works	30,537	43%
2	Public Safety (Police and Fire)	20,877	29%
3	Community Development	10,118	14%
4	Village Hall	9,863	14%

Emission Factors (EF) [3]:

CO2 Emission Factor (kg CO2 per scf) =	0.05444
CH4 Emission Factor (g CH4 per scf) =	0.00103
N2O Emission Factor (g N20 per scf) =	0.00010

Global Warming Potentials (GWP) [4]:

CO2 Global Warming Potential =	1
CH4 Global Warming Potential =	28
N2O Global Warming Potential =	265

Footnotes:

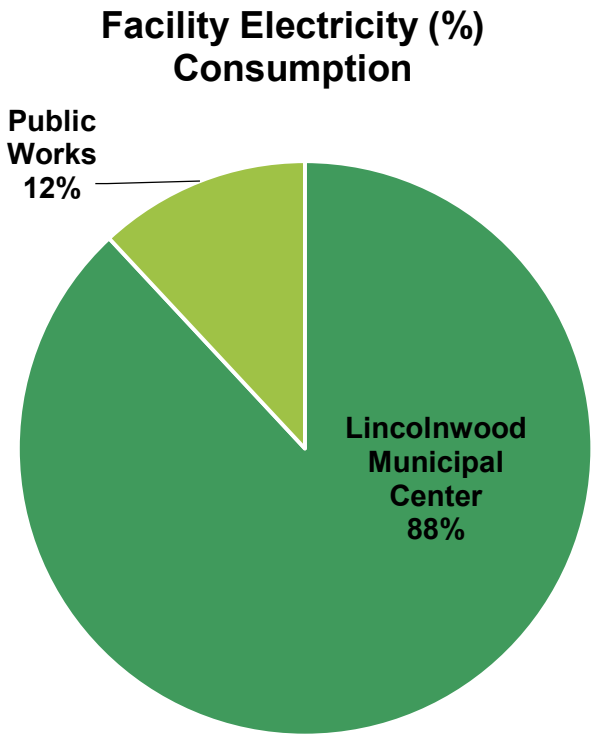
1. Natural gas usage was based on data provided by the facility.
2. The annual natural gas consumption for each site was ordered to display consumption use per facility.
3. The GHG emission factors were obtained from EPA GHG emission factors; 40 CFR Part 98; e-CFR. Table C-1 and Table C-2 , Table AA-1.
4. The global warming potentials (GWPs) were taken from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5), 100-yr average.

Weaver Consultants Group

RY 2023 Scope 2 Greenhouse Gas Emissions - Electricity
Village of Lincolnwood Scorecard

Usage [1]:

Month	2023 Electricity Usage (kWh)
January	70,298
February	52,039
March	0
April	53,316
May	58,429
June	69,439
July	73,752
August	0
September	92,673
October	7,020
November	0
December	63,404
Total (kWh)	**540,370**
Total (MWh)	**540**



Total Emissions:

Pollutant	Scope 2 GHG Emissions (MTCO2e)
CO2	245
CH4	1
N2O	1
Total:	**246**

Top 10 sites with highest electricity consumption [2]:

Top sites	Site name	Scope 2 Emissions (MTCO2e)	KWH	% of company total
1	Lincolnwood Municipal Center	217	475,870	88%
2	Public Works	29	64,500	12%

Weaver Consultants Group

RY 2023 Scope 2 Greenhouse Gas Emissions - Electricity
Village of Lincolnwood Scorecard

Emission Factors (EF) [3] ***:***

E-Grid Location =	RFC West
CO2 Emission Factor (lbs/MWh) =	1,000.053
CH4 Emission Factor (lbs/MWh) =	0.087
N2O Emission Factor (lbs/MWh) =	0.012

Global Warming Potentials (GWP) [4] ***:***

CO2 Global Warming Potential =	1
CH4 Global Warming Potential =	28
N2O Global Warming Potential =	265

Parameters:

1 MWh =	1000	kWh
1 lb =	0.000453593	1 MT

Footnotes:

1. Electrical usage was based on data provided by the facility.
2. The annual electricity consumption for each site was ordered to display consumption use per facility.
3. The GHG emissions were estimated based on the location-based method using emission factors from the most-recent eGRID data published in the EPA's 2023 updated emission factors. All sites were located in RFCW grid.
4. The global warming potentials (GWPs) were taken from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5), 100-yr average.

FY 2023 Waste Report
Village of Lincolnwood

Parameters:

This page has been provided as an example to discuss how waste data may be expanded in the future.
The total community yard waste reported was included.
In the future, waste data can be expanded on to evaluate waste reported across various sites/ geographies, or begin to show a city total.
In the future, the EPA Warm Model may be used to help demonstrate GHG emissions and reductions from city waste operations (e.g., composting, anaerobic digestion etc.)
The waste report may also help to evaluate cost benefits, cost per tons for the city's waste operations.

Usage [1] :

Monthly Community Yard Waste Totals	
Month	**Tons**
May	63.43
June	24.44
July	13.35
August	19.94
September	39.00
October	36.11
November	81.49
December	72.88
Average Generation / month	**43.83**
8 Month Total	**350.64**

Footnotes:

1. Tons of waste was based on data provided by the facility. Data is for the 2023 fiscal year

Weaver Consultants Group

Appendix 2

Sustainability Baseline Memo

Weaver Consultants Group

6420 SOUTHWEST BLVD., STE. 206
FORT WORTH, TEXAS 76109
PHONE: (817) 735-9770
FAX: (817) 735-9775

MEMONRANDUM

To:	Natalie Benner Village of Lincolnwood	**Date:**	August 15, 2024
From:	Kate Howe Weaver Consultants Group, LLC	**Project:**	Sustainability Plan Review and Baseline
Re:	Sustainability/ GHG Baseline Guidance Memo		

Weaver Consultants Group (WCG) is pleased to provide The Village of Lincolnwood (The Village) with their first sustainability baseline, developed for the 2023 Reporting Year. This memorandum has been produced alongside the baseline to help the Village understand how the baseline may be developed in the future. It also briefly discusses what steps the Village may wish to take if they wish to develop a carbon reduction target.

The Village's first sustainability baseline reported the Scope 1 (Direct) and Scope 2 (in-direct) greenhouse gas (GHG) emissions for The Village's owned Government operations. The methods used to report GHG emissions followed the GHG Protocol for the U.S. Public Sector, which recognizes the International Council for Local Environmental Initiatives (ICLEI) U.S. Community Protocol for Accounting and Reporting of GHG Emissions (2019). As this was the first year The Village internally reported their community GHG Inventory, ICLEI's recommendations were followed: where a GHG Inventory was constructed where the Village has "*the most significant influence*", which ICLEI defined as ownership, operational control, regulatory, or budget. So, The Village's decision was to focus on utilities, buildings, transit, fleet, and stationary combustion sources that The Village owned or operated.

The Village decided that they would use 2023 as the baseline year, and construct the Inventory based on calendar year, the preferable method of the GHG Community Protocol. The inventory recorded emissions from Scope 1 stationary combustion sources (e.g., generators), mobile sources (E.g., on-road and off-road fleet vehicles), plus Scope 2 emissions from purchased electricity, and purchased natural gas used for heating and cooling. The report summarized the emissions from each source category, and where the data was available, information on The Village's activities

and usage was provided to enable the GHG Baseline report to be used for future improvements and discussion on sustainability.

The Village may wish to update the sustainability baseline report annually. Regarding GHG emissions, it may be more valuable for the Village to continue to report only on The Village's owned/ operated Scope 1 and Scope 2 emissions. However, it is important to note that ICLEI offers the ability to expand the community GHG Inventory to model emissions across an entire community, such as community transportation, livestock, forest land, and solid waste emissions from across the community, however prior to The Village expanding to include GHG emissions from community sources, they may wish to evaluate what community sources they would wish to include, and understand if the inclusion of these GHG metrics would provide additional value.

Instead, it may be more beneficial for The Village to focus on other sustainability metrics that can assist the Village in understanding how their own operations can be improved. Valuable information that could be reported includes water consumption and waste generation from Village operations. Eventually these metrics could be developed to report at a community scale, if added value can be achieved.

In the future, The Village may wish to also create a GHG reduction target. It is advised that the GHG Inventory is updated and compared for 2024, and sustainability actions listed in the action plan are pursued to understand where energy reducing activities may occur. It is recommended to evaluate the feasibility of meeting a carbon reduction goal prior to formally publishing. This will enable the Village to develop a realistic goal, more likely of year-on-year achievements.

Targets or key performance indicators can also be established for other sustainability metrics, as discussed in the Sustainability Plan Review.