Priority Climate Action Plan Report

April 2024

PREPARED FOR:

State and Local Climate and Energy Program

U.S. Environmental Protection Agency

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Executive Summary

In response to the escalating climate crisis, the Mille Lacs Band of Ojibwe (Band) has formulated a Priority Climate Action Plan (PCAP). The main ideas of this document which outline strategic actions to promote sustainability and reduce environmental impacts are summarized here. The urgent need for change in our approach to environmental stewardship is addressed in the PCAP, which include reducing carbon emissions, enhancing resilience to hazards associated with climate change, and encouraging sustainable practices throughout our activities.

This report is divided into three main sections that give details and specificity of the action plan:

1. An overview of the CPRG and PCAP, that highlights the scopes and gives a detailed timeline of the program.
2. The Tribal organization which includes the development team, factors that were considered for the plan and collaboration that were underwent during the process.
3. The PCAP elements, including the greenhouse gas inventory, greenhouse gas reduction measures and the benefit analysis.

The PCAP focuses on short-term objectives and defines a phased implementation strategy. It highlights how crucial it is to maintain ongoing observation, review plans, and be flexible in modifying strategies in response to the changing climate. This report highlights how these objectives would be achieved through collaborative means such as interacting with stakeholders in order to promote a common commitment to tackle climate change and reduce greenhouse gas emissions. Also contained in this report are emission reduction targets identified by the developing agency that would implement methods and practices aimed at significantly reducing carbon impact. Efforts towards resilience and adaptation are also shown in this report where thorough risk assessments were carried out in order for more effective measures, and the energy audit from NORESCO showed how the Band is incorporating climate resilience into its operational procedures to withstand the impacts of climate change.

This PCAP serves as the road map for the Band to a resilient and sustainable future. As the original stewards of the land, by making climate action a top priority, we lead the way in reducing the effects of climate change and support international initiatives. This report further shows the Band's dedication in promoting a legacy of environmental care by ensuring that the EPA's goals for climate pollution reduction are met.

1 Introduction

The Mille Lacs Band of Ojibwe (Band) is a federally recognized Native American Tribe in the United States. The Band is primarily located in east-central Minnesota and is named after the Mille Lacs Lake. In its early interactions with the United States, the Band ceded millions of acres of land in various treaties, including the 1837 Treaty of St. Peters (7 Stat. 536) in what today are portions of Minnesota and Wisconsin. In the 1855 Treaty of Washington (10 Stat. 1165), the Mississippi Bands of Chippewa Indians reserved several areas for exclusive Tribal use, of which approximately 61,000 acres of land in the south and west of the Mille Lacs Lake became the Mille Lacs Indian Reservation. The Band has a long history and rich cultural heritage, including a distinct language, Anishinaabemowin, and a tradition that showcases its unique identity. The Band comprises of nearly 5000 enrolled members dedicated to preserving its unique culture, tradition, and history, as well as promoting prosperous future for the Tribal citizens.

The Band has its own Tribal Government, governed by the Constitution of Minnesota Chippewa Tribe and enacted in law by the Mille Lacs Band Statutes to administer the affairs of the Band. As a self-governing Tribal government, our three-branched governing structure is typical for a democratic system, but is different from what is generally found in Indian Country in the United States. Our governance structure consists of an Executive branch, a Legislative branch, and a Judicial branch. The Executive branch is responsible for enforcing Band laws through various programs through our Departments of Administration, Community Development, Corporate Affairs, Education, Health and Human Services, Justice, and Natural Resources. The Legislative Branch makes and passes laws, amends laws and appropriates funds for all Tribal programs. The Judicial Branch interprets the law, preserves and maintains justice, accords equal rights and opportunities to Band members. The elected Chief Executive heads the Executive Branch; the Chief Executive recommends the appointments of Commissioners to head Executive Branch Departments to the Band Assembly. The Legislative Branch consists of elected Band Assembly, comprised of three District Representatives, led by the Speaker of the Assembly/Treasurer; Band Assembly appoints the Commissioner of Finance, who oversees the Office of Management and Budget. The Judicial Branch, headed by the Chief Justice, consists of District Courts and a Court of Appeals.

The Priority Climate Action Plan (PCAP) is part of the first phase in the planning process of the Climate Pollution Reduction Grants (CPRG), whose purpose is to meet the EPA's fiscal year 2022–2026 Strategic Plan goals in order to address the climate change crisis and reduce the emissions that cause climate change. In 2020 through the Band's membership with the Midwest Tribal Energy Resources Association (MTERA), NORESCO, an Energy Service Company was chosen to carry out an Investment Grade [Energy] Audit (IGA) for the Band. This IGA's goal was to find areas for energy savings through several measures, including system upgrades to various Tribal facilities, with a recommended implementation plan to put these savings into practice. NORESCO presented the results of a thorough energy audit as well as a possible $2.23 million Energy Savings Project that can be entirely funded by energy and operational savings. Should the project be carried out, it would enable the Band to move faster and with less risk towards its energy and GHG emission targets.

The PCAP has various deliverables in its development approach; however, in order to submit our PCAP by April 1, 2024, the Band converted the NORESCO IGA into our PCAP. Some PCAP required deliverables are:

- GHG Inventory
- Quantified GHG Reduction
- Benefit Analysis
- Review of Authority to Implement
- Workforce Planning Analysis etc.

To ensure these deliverables, the Band first determined that the NORESCO IGA is compatible with the PCAP goals; however, NORESCO's results must first be confirmed and converted into the frame-work specified by the PCAP. These PCAP-required items include emission projections and reduction targets that must be translated to near term projections/reductions in order to suit the PCAP.

1.1 CPRG Overview

As a federally recognized Tribe, the Band is involved in activities and projects targeted at cutting greenhouse gas emissions and mitigating climate change. These projects are coordinated with other governments that provide financial assistance, including the Climate Pollution Reduction Grant (CPRG) made available through the US Environmental Protection Agency (EPA). The CPRG process kicked-off with the grant's goal, and total award amount eligibility requirements announced. Prior to application, the grant makes known all the qualifying requirements, which all eligible entities must meet. This included project's scope, target audience, geographic location, or other standards set out by the EPA. Entities applying are expected to show how their project fits into the grant program's particular objectives. And, this entails providing specifics about the planned project, including its goals, budget, schedule, technique and anticipated results. After eligibility requirements have been fulfilled and grant applications have been submitted, EPA evaluated each proposal based on factors such as feasibility and compatibility with program's objectives. The later stages of the grant entails carrying out tasks, gathering information, and strategizing aimed at reducing climate pollution, hence the need to provide reports and updates on various projects during the funding period.

Based on NORESCO's IGA, the PCAP's scope will mainly focus on key Band facilities that were subject to audit. Actions carried out include; GHG inventory, a benefit analysis, and a list of actions to be implemented for the chosen main Band facilities. The MLBO recognizes the need to address climate pollution for sake of the planet's health and the welfare of the future generations. The Band also acknowledges various approaches to reducing climate pollution such as, switching to more sustainable and clean sources of energy, increasing energy efficiency, and putting emission-reduction laws into place. Participating in the CPRG program would help the Band achieve these sustainability goals and further enhance its ability to transition to a clean energy economy. In line with the Band's ideology of leaving the earth a better place for future generations, the CPRG program would assist our efforts to using renewable energy and improving energy efficiency, reducing greenhouse gas emissions, reducing energy and water consumption, creation of local jobs etc. All these actions would reduce negative health impacts on the environment and people, thereby improving the welfare of Band members.

1.2 Approach to Developing the PCAP

In developing the PCAP, the IGA from NORESCO was considered and the purpose of this was to pinpoint areas for facility upgrades and energy-saving potential. The MLBO plans to use an energy savings performance contract or another form of procurement to put the suggestions into practice. NORESCO was aware that putting in place an energy service project would be necessary for a competitive procurement. The following objectives were taken into consideration when developing this energy audit and possible energy savings project:

1. Leaving seven generations with a better Earth.
2. Reducing energy and water consumption
3. Reducing greenhouse gas emissions
4. Creating efficient and functional building environments
5. Enhancing energy resilience and utilizing renewable energy
6. Creating local/tribal jobs

There are individuals, community members, groups, and organizations that are directly or indirectly affected by or have interest in the PCAP, and these groups have been identified as key stakeholders. Other internal stakeholders that were put into consideration include Band departments other than the Department of Natural Resources. Public engagement with stakeholders is carried out through the Quarterly Energy and Climate Forum where the environmental office discusses what the Mille Lacs Band's Climate and Energy options are. The MLBO DNR also drafted the DNR Climate Change Mitigation and Adaptation Plan (CCMAP), as well as the Strategic Energy Plan (SEP). These plans, though not fully completed are additional steps taken in developing the PCAP because they contain CPRG requirements in them. The CCMAP overall goal and objectives are to identify and assess current impacts of climate change, assess regional climate change trends, develop and implement climate adaptation actions. The Mille Lacs Band through the CCMAP showed the role that land plays in the climate system and the ways in which managing land resources sustainably can contribute to mitigating climate change. This is because land-use changes such as forestry, agriculture, and other land-use changes account for a portion of greenhouse gas emissions worldwide. The Band also has water programs' mitigation and adaptation strategies which include assistance for construction stormwater compliance, implementing surface and groundwater programs, monitoring Mille Lacs Lake for long-term trend etc.

On the other hand, the SEP aims at establishing an Environmental Protection Commission that will foster the Band's Strategic Plan, the DNR's Integrated Resources Management Plan (IRMP), CCMAP, and the Solid Waste Management Plan (SWMP). All these align with the goals listed in the NORESCO IGA, as well as the United Nations Sustainability Development Goals. At the Quarterly Energy and Climate Forum, issues ranging from the CPRG, CCMAP, and SEP are discussed, in terms of status and progress. Regarding the SEP, issues about sections under review were mentioned, as well as the need for public review and feedback. Updates on the CCMAP were also given with regards to the feedback from the Midwest Climate Adaptation Center based on their document review.

1.3 Scope of the PCAP

The MLBO's Priority Climate Action Plan aims to set out strategies and actions meant to tackle the issues related to climate change. The PCAP scope includes mitigation and adaptation strategies, policy and regulatory frameworks, internal collaboration, public enlightenment and education, monitoring and reporting. Some implementation strategies include activities for afforestation and reforestation targeted at capturing CO_2, energy-saving techniques for buildings and industries, practice of more sustainable farming activities and execution of initiatives such as renewable energy. Adaptation strategies such as sustainable use of water in response to change in precipitation patterns and infrastructure development to withstand climate related impacts have also been identified in the scope. Policies are another way in which the MLBO tends to achieve the goal of the PCAP. There will be policies put in place that supports cutting greenhouse gases, encourage environmentally friendly behavior across industries and sectors and incorporate climate change into urban planning strategies. Community engagement and awareness campaign regarding climate change and its implications would be carried out, in order to educate Band members on more sustainable lifestyles and habits. The last part of the scope would be creation of monitoring systems that evaluate how well climate pollution targets are being met, and constant reporting on climate-related activities and greenhouse gas emissions.

The Mille Lacs Indian Reservation consists of nine communities across three Districts that are geographically separated by vast distances.

- *Neyaashiing* District (District I) consists of the *Neyaashiing/*Vineland, MN, Community located on the south-western shores of Mille Lacs Lake and its environs. The lake is a cultural and natural Trust resource. The lake is also a universally recognized as a premier subsistence fishing and trophy fishing lake, which lake-related tourism adds an estimated $150 million into the local economy annually. However, for more than a decade, *ogaa* (walleye : *Sander vitreus*) population have been declining. Tribal and State resource management agencies hypothesize changing of the lake's ecosystem is causing *ogaa* population decline; this ecosystem change appears to be driven by a complex interaction of invasive species and other factors (such as climate instability). In the Summer of 2015, Minnesota Department of Natural Resources have closed the fishing season for the *ogaa*, while the Band's *dewe'iganan debenimaajig* (Drum Keepers) have called for a suspension of *ogaa* gillnetting on Mille Lacs Lake for at least one year, but have extended the suspension for an additional year. A segment of US Highway 169, a main north-south travel corridor established by Article III of the 1855 Treaty of Washington (10 Stat. 1165), also runs through this district.
- *Gaa-mitaawangaagamaag* District (District II) consists of one community in the sub-district of *Chi-minising* (District IIa), located along the south-eastern area of Mille Lacs Lake around the *Chi-minising/*Isle, MN, Community), and three Communities in the District II proper—the *Minisinaakwaang/*East Lake, MN, which is located approximately 40 miles north of *Chi-minising/*Isle on Minnesota State Highway 65, *Chi-manoominikaang/*Minnewawa, MN, located approximately 10 miles north of the *Minisinaakwaang/*East Lake, near McGregor, MN, on the south end of Big Sandy Lake and the *Gaa-mitaawangaagamaag/*Sandy Lake, MN, on the north end of Big Sandy Lake, which is located approximately 20 miles farther north of the *Minisinaakwaang/*East Lake, near Libby, MN.
- *Aazhoomog* District (District III) consists primarily of *Gaa-zhiigwanaabikokaag/*Hinckley, MN, and *Aazhoomog*/Lake Lena, MN, Communities. Hinckley is located on US Interstate Highway 35

and is about 60 miles east of District I. *Aazhoomog*/Lake Lena is located near the St. Croix River, which forms the Minnesota–Wisconsin border, and is about 30 miles east of Hinckley, connected to Hinckley via Minnesota State Highway 48. Two other smaller Communities of *Ne-zhingwaaakokaag*/Pine City, MN, and *Asiniikaaning*/Sandstone, MN), and the *Misi-zaaga'igani Anishinaabe Izhitwaawin* Cultural Centre in Rutledge, MN, are also located within this district.

The Band also has nearly 5,000 enrolled members, of which:

- 1,702 in District I
- 233 in District II
- 158 in District IIa
- 637 in District III
- 922 in the Urban Service Area
- 825 in non-District areas of Minnesota
- 497 in the United States outside of Minnesota

Table 1: Timeline of the PCAP

Task					
1. Air Quality Specialist prepares CPRG					
2. Initial application submitted June 15, 2023					
3. Begin CPRG pre-planning on June 15, 2023					
4. Climate Specialist job description developed					
5. CPRG Kick-off Event (Shakopee, MN) on August 23, 2023					
6. Band Assembly acceptance and award appropriations within 2 weeks of CPRG Planning award letter.					
7. Submittal and approval of CPRG Planning budget to Administrated Policy Board within 1 week of Band Assembly acceptance and appropriations.					
8. Posting of Climate Specialist upon Administrative Policy Board approval of the CPRG Planning budget on September 15, 2023.					
9. Climate Specialist job interviews and selection					
10. Begin CPRG Planning on project start date per award letter.					
11. Hire Climate Specialist					
12. Climate Specialist orientation and training					
13. Air Quality Specialist works on CPRG					
14. Environmental Compliance Technician works on CPRG					
15. Environmental Programs Coordinator works on CPRG					
16. CPRG Phase 2 Implementation NOFO out September 20, 2023					
17. Submit QAPP (September 29, 2023)					
18. Execute EPA approved QAPP					
19. Climate Specialist works on CPRG					
20. Verify workforce planning in MLBO SEP					
21. Verify GHG sources identified in MLBO SEP					
22. Verify GHG sinks identified in MLBO SEP					
23. Verify GHG sectors identified in MLBO SEP					

24. Identify long term GHG Emissions Projections					
25. Identify long term GHG Reduction Targets					
26. Determine intersection with other funding availability					
27. Verify authority to implement in MLBO SEP					
28. Participation in Climate Innovation Teams					
29. Participation in LADCO IRA CPRG Forums					
30. Participation in Tribal/Territorial Technical Assistance Forums					
31. Participation in Commercial and Residential Buildings Technical Assistance Forums					
32. Participation in Agriculture/Natural and Working Lands Technical Assistance Forums					
33. Attend miscellaneous CPRG/Climate-related Trainings					
34. Participate in MPCA CPRG Work Group					
35. Participate in Metropolitan Council CPRG Work Group					
36. Participate in Clean Air Tampa CPRG Work Group					
37. Participate in Association for Central Oklahoma Governments CPRG Work Group					
38. Participate in District of Columbia Government Department of Energy and Environment CPRG Work Group					
39. Verify short term GHG Emissions Projections identified in NORESCO IGA					
40. Verify short term GHG Reduction Targets identified in NORESCO IGA					
41. Quarterly reporting					
42. Public engagement					
43. Quantify short term GHG reduction identified in NORESCO IGA					
44. Verify benefit analysis in NORESCO IGA					
45. Write short term CCAP as PCAP					
46. Submit Notice of Intent for CPRG Phase 2 Implementation by February 1, 2024					
47. Attain authority to implement where authority does not exist					
48. Submit short term CCAP as PCAP on March 1, 2024 (for General Implementation)					
49. Submit short term CCAP as PCAP on April 1, 2024 (for Tribal/Territorial Implementation)					
50. Apply for CPRG Phase 2 Implementation by April 1, 2024					
51. Edit DNR CCMAP					
52. Complete, approve, and implement DNR CCMAP					
53. Hold public meetings on MLBO SEP					
54. Edit MLBO SEP based on public meeting comments					
55. Complete MLBO SEP					
56. Conduct GHG inventory for long term CCAP					
57. CPRG Phase 2 Implementation awarded					
58. Begin CPRG Phase 2 Implementation					
59. Quantify long term GHG reduction					
60. Cost-benefit analysis by MTERA-contractor (Environmental Protection Network)					
61. Hold public meetings on CCAP					
62. Write long term CCAP based on public meeting comments					
63. Submittal of long term CCAP on March 1, 2025					

64. Submittal of PCAP as short term CCAP as supporting document on March 1, 2025	
65. Submittal of MLBO SEP as supportive document on March 1, 2025	
66. Submittal of DNR CCMAP as supportive document on March 1, 2025	
67. EPA review and comment of Band's CCAP and its supporting documents	
68. Mille Lacs Band response to EPA comments	
69. End of project on August 31, 2025	
70. Band's CPRG Planning grant close-out by November 30, 2025	
71. Public notice of Band's CCAP and supporting documents on September 1, 2025	
72. Band's CCAP and MLBO SEP authorized for implementation on October 1, 2025	

Apr-23	**May-23**	**Jun-23**	**Jul-23**	**Aug-23**	**Sep-23**	**Oct-23**	**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**May-24**	**Jun-24**	**Jul-24**
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2 Tribal/Territorial Organization and Considerations

2.1 The Tribal/Territorial PCAP Management and Development Team

The PCAP report was drafted by Mille Lacs Band of Ojibwe Department of Natural Resources (DNR) in collaboration with other Band Departments and groups. The DNR comprises of Programmatic Offices for Agricultural, Environment, Fisheries, Land Management, and Resource Management, in addition to Cultural Resources, Enrollments, and Tribal Historic Preservation Office. The communication and coordination between these various groups was essential in ensuring that the Band's overall mission and vision for pollutant reduction was well aligned and that the guidelines of the EPA were met. From the DNR, the key staff in charge of the PCAP development and who make up the management team are the Climate Specialist and Air Quality Specialist, with the Environmental Compliance Officer serving as the project's Quality Assurance Manager. The team sets strategic goals and works towards achieving these goals through effective planning and execution.

The organizational structure of the PCAP development includes the Tribal leaders, Departmental Directors, Project Managers and Community members. The key decision-making lies with the Commissioner for Natural Resources, Executive Director, and Director of Environmental Programs at the DNR. They decide on significant policy choices, the distribution of resources and other strategic orientations. The Climate Specialist and Air Quality Specialist who are the project managers/coordinators are responsible for implementing recommendations made by the Commissioner and Director, and their authority to make decisions lies within their own field of expertise. They report the major developments and progress regarding the PCAP to the Director and Commissioner. Quarterly community engagement is the last part of the PCAP development, and this ensures that the community input is considered in the decision-making process and their interests and concerns are put into consideration.

2.2 Special Considerations for Tribal/Territorial Entities

The Mille Lacs Band of Ojibwe Department of Natural Resources took into consideration a number of Band and culture-specific factors when developing the Priority Climate Action Plan. This was done in order to ensure that the tribe's values and traditions are respected and that Band context is well resonated. The Band members view their cultural values and traditions as sacrosanct, and also have a personal interaction with their environment, as well as respect for nature. Band members have a strong bond with their land and natural resources, and plans and strategies of the PCAP to address climate change and greenhouse gases had to be in line with cultural values that preserve the environment and promote sustainable resource use. As part of the PCAP development, Indigenous Applied Science was included. This concept has passed down from generations prior and it has improved the Band's knowledge of the ecosystem and helped develop solutions for climate resilience.

Community engagement was another important factor to the build-up of the PCAP. Community input is necessary in order to guarantee that all viewpoints of Band members are taken into account, include community members in the planning and decision-making process. The Mille Lacs Band leaders in various capacities and important stakeholders were not left out in the development process, and their inputs were taken into account for approval. Community engagement is also important because we

need to consider economic activities that are of importance to the Band members. All strategies identified in the PCAP have to promote culturally sensitive and sustainable economic growth. And lastly, when engaging with community members on a quarterly basis, we must ensure that everyone partakes fairly in the advantages and costs of climate change projects. The PCAP also aims to address climate justice by looking into past injustices which may have affected band members as a result of climate change. This report also ensures that the measures put in place to address the climate crisis advance environmental and social justice in general. In addition to addressing environmental justice and fostering community engagement, the inclusion of Band members in decision making about the construction of infrastructure, the use of renewable energy sources, and other climate-related projects in their territories was taken seriously and their suggestions during this planning phase was taken into account and well honored.

2.3 Collaborations

The MLBO developed a DNR Climate Change Mitigation and Adaptation Plan that would facilitate interagency coordination. The PCAP management team collaborated with the Minnesota Pollution Control Agency, Minnesota Department of Natural Resources, Minnesota Department of Commerce, and other Band agencies and departments to make sure that the plan covers a range of projects, such as the installation of community solar panels and heat pumps in homes for energy efficiency. The management team set up systems for tracking and reporting the climate action plan's advancement by coordinating with other organizations in charge of gathering and processing data that are necessary for the PCAP. Within the Band, the private sector plays an important role in climate action and sustainable business practices. The management team collaborated with Utilities serving Band communities. Mille Lacs Corporate Ventures, a Band-owned corporation, and other Tribal-government facilities will be analyzed for our Comprehensive Climate Action Plan (CCAP) in order to further incorporate private sector contributions and commitments into the plan.

3. PCAP Elements

3.1 Greenhouse Gas (GHG) Inventory

The GHG inventory was used to measure and monitor emissions from different sources in order to assist the Band and corporations in understanding how they contribute to climate change. NORESCO was selected by the Midwest Tribal Energy Resources Association (MTERA) to conduct Investment Grade Energy Audits (IGAs) for interested Member Tribes, and they executed an Audit Work order and Notice to Proceed to conduct an audit for the Mille Lacs Band of Ojibwe (MLBO). An engineering analysis of the property's potential for energy conservation was also carried out by NORESCO. The analysis included a review of the current state of affairs, possible improvements, expected energy savings and the costs of implementing those changes. Below are the potential project scope and financial performance according to NORESCO's Audit.

Potential Project Scope of Work (Energy Conservation Measures: ECMs)

1. LED Lighting Upgrades
2. High Efficiency Boilers
3. Control Systems Optimization
4. Renewable Energy Solar PV System
5. Refrigeration Efficiency Upgrades

Potential Project Financial Performance

1. Estimated Turnkey Project Installation Costs = $2,231,000
2. Estimated Utility Rebates = $25,300
3. Estimated Year One Energy & Operational Savings = $135,400
4. Estimated Project Simple Payback = 16.3 years
5. GHG Emissions Reduction = 1,127 tons CO2 equivalent
6. GHG Emission Reduction Equivalent to Carbon Sequestered by 839 Acres of Forest.

Based on NORESCO's findings, a comprehensive energy audit as well as a possible $2.23 million Energy Savings Project that can be entirely funded by energy and operational savings was presented. If implemented, the project would enable the MLBO to move faster and with less risk towards its energy and GHG emission targets. GHG goals include;

- Reducing aggregate energy consumption by 21.4%
- Reducing GHG emissions by 1,127 tons of CO2 equivalent
- Replacing end of life equipment with new high efficiency technology
- Updating existing lighting with high efficiency, high quality & low maintenance LED technology
- Optimizing control systems with the most energy efficient strategies
- Investing in renewable energy
- Preserving capital for other initiatives.

NORESCO conducted facility energy audits of 17 government facilities to identify potential energy and water conservation measures, with a plan that the recommended measures may be implemented through an Energy Services Performance Contract (ESPC) or other procurement method. They analyzed the historical utility consumption data for each of the 17 facilities using utility bills and data from the Band. Data from January 2019 to April 2021 was assessed and contrasted with weather data for the same period that showed temperatures in degrees Celsius and Fahrenheit. The utility consumption for Band facilities' electric use from April 2019 to March 2020 and the natural gas and propane use baselines from May 2020 to April 2021 are considered the baseline years.

3.2 GHG Reduction Measures

As part of the IGA process, NORESCO assessed Energy Conservation Measures (ECMs) and facility upgrade options for chosen Band buildings. The energy, water, and/or operational cost reductions as well as the significant equipment upgrade needs that NORESCO or facility staff indicated were taken into consideration by the ECMs evaluated. Based on data from the Band, field observations, the proposed

scope of work, current market costs, and engineering assumptions for particular building and equipment operating practices, NORESCO's IGA estimated costs and savings.

Table 2: Potential Energy Savings Project Financial Projections

ECM	ECM Description	Estimated Turnkey Price	Year One Energy Savings	Year One O&M Savings	Year One Total Savings	Estimated Rebate	Simple Payback Years
1	LED Lighting Upgrades	$939,000	$86,900	$9,800	$96,700	$4,900	9.7
2	High Efficiency Boiler Replacements	$937,000	$13,900		$13,900	$19,400	>30
3	Controls Systems Optimization	$34,000	$15,900		$15,900		2.1
4	Renewable Energy Solar PV Systems	$268,000	$5,300		$5,300		>30
5	Refrigeration Efficiency Upgrades	$53,000	$3,600		$3,600	$1,000	14.4
	Estimated Project Totals	**$2,231,000**	**$125,600**	**$9,800**	**$135,400**	**$25,300**	**16.3**

Table 3: Potential Project Summary by Building

Building	LED Lighting ECMs	Mechanical and Controls ECMs	Renewable Energy ECMs	Kitchen Related ECMs
D1 AANJIBIMAADIZING WORKFORCE CENTER				
D3 AAZHOOMOG CLINIC	LED Lighting Upgrades			
D2A CHIMINISING COMMUNITY CENTER		Controls Optimization		
D1 COMMODITIES FOOD SHELF	LED Lighting Upgrades	Controls Optimization		
D1 COMMUNITY CENTER (OLD)	LED Lighting Upgrades	High Efficiency Boilers Controls Optimization		

D2 EAST LAKE ASSISTED LIVING UNIT	LED Lighting Upgrades	Controls Optimization		
D2 EAST LAKE COMMUNITY CENTER	LED Lighting Upgrades	Controls Optimization		
D1 GOVERNMENT CENTER	LED Lighting Upgrades	Controls Optimization		
D3 HINCKLEY ASSISTED LIVING UNIT	LED Lighting Upgrades	Controls Optimization		
D3 LAKE LENA COMMUNITY CENTER	LED Lighting Upgrades	Controls Optimization		
D2 MINISINAAKWAANG LEADERSHIP ACADEMY	LED Lighting Upgrades	Controls Optimization		Refrigeration Efficiency Upgrades
D1 MINO-BIMAADIZIWIN HOTEL	LED Lighting Upgrades			
D1 NAY AH SHING LOWER SCHOOL	LED Lighting Upgrades	High Efficiency Boilers Controls Optimization		Refrigeration Efficiency Upgrades
D1 NAY AH SHING UPPER SCHOOL	LED Lighting Upgrades	Controls Optimization		Refrigeration Efficiency Upgrades
D1 VINELAND ASSISTED LIVING UNIT	LED Lighting Upgrades	High Efficiency Boilers Controls Optimization		
D1 WEWINABI EARLY EDUCATION	LED Lighting Upgrades	Controls Optimization	Solar PV	Refrigeration Efficiency Upgrades
D1 WOMEN'S SHELTER				

NORESCO also recommended implementing the following energy efficient control strategies listed below;

- Unoccupied scheduling and temperature set back
- Demand controlled ventilation
- Temperature resets
- Optimized boiler and chiller staging
- Economizer outside air cooling

Table 4: PCAP Measures

Reduction Measure	Facility	Area sq.ft.	Electricity kWh	Fraction
T8 lighting to LED lighting conversion	D1 Aanjibimaadizing	17900	321080	N/A
	D1 ALU	33600	355120	0.25
	D1 Commodities Food Shelf	6100	106516	0.25
	D1 Early Ed	47737	747500	0.25
	D1 Government Center	50616	663600	0.25
	D1 Mino-bimaadiziwin	9000	164960	0.25
	D1 NAS Lower School	40455	358040	0.25
	D1 NAS Upper School	38000	345680	0.25
	D1 Old Community Center	19554	245360	0.25
	D1 Women's Shelter	5787	46479	N/A
	D2 ALU	15000	209560	0.25
	D2 Chiminising CC	15554	147720	N/A
	D2 East Lake CC	15107	220350	N/A
	D2 Minisinaakwaang Leadership	25000	367250	0.25
	D3 Aazhoomog Clinic	11300	82560	0.25
	D3 ALU	15000	210720	0.25
	D3 Lake Lena CC	16170	13328	0.25
Boiler Replacements	D1 Aanjibimaadizing	17900	321080	0.3
	D1 ALU	33600	355120	0.3
	D1 Commodities Food Shelf	6100	106516	0.3
	D1 Early Ed	47737	747500	0.3
	D1 Government Center	50616	663600	0.3
	D1 Mino-bimaadiziwin	9000	164960	0.3
	D1 NAS Lower School	40445	358040	0.3
	D1 NAS Upper School	38000	345680	0.3
	D1 Old Community Center	19554	245360	0.3
	D1 Women's Shelter	5787	46479	0.3
	D2 ALU	15000	209560	0.3
	D2 Chiminising CC	15554	147720	0.3
	D2 East Lake CC	15107	220350	0.3
	D2 Minisinaakwaang Leadership	25000	367250	0.3
	D3 Aazhoomog Clinic	11300	82560	0.3
	D3 ALU	15000	210720	0.3
	D3 Lake Lena CC	16170	13328	0.3
HVAC controls upgrades	D1 Aanjibimaadizing	17900	321080	0.09
	D1 ALU	33600	355120	0.09

	D1 Commodities Food Shelf	6100	106516	0.09
	D1 Early Ed	47737	747500	0.09
	D1 Government Center	50616	663600	0.09
	D1 Mino-bimaadiziwin	9000	164960	0.09
	D1 NAS Lower School	40445	358040	0.09
	D1 NAS Upper School	38000	345680	0.09
	D1 Old Community Center	19554	245360	0.09
	D1 Women's Shelter	5787	46479	0.09
	D2 ALU	15000	209560	0.09
	D2 Chiminising CC	15554	147720	0.09
	D2 East Lake CC	15107	220350	0.09
	D2 Minisinaakwaang Leadership	25000	367250	0.09
	D3 Aazhoomog Clinic	11300	82560	0.09
	D3 ALU	15000	210720	0.09
	D3 Lake Lena CC	16170	13328	0.09
50-kW solar PV array additions	D1 Aanjibimaadizing	17900	321080	31.08
	D1 ALU	33600	355120	59.2
	D1 Commodities Food Shelf	6100	106516	42.92
	D1 Early Ed	47737	747500	106.56
	D1 Government Center	50616	663600	17.76
	D1 Mino-bimaadiziwin	9000	164960	29.6
	D1 NAS Lower School	40455	358040	97.68
	D1 NAS Upper School	38000	345680	149.85
	D1 Old Community Center	19554	245360	66.6
	D1 Women's Shelter	5787	46479	3.33
	D2 ALU	15000	209560	148
	D2 Chiminising CC	15554	147720	38.85
	D2 East Lake CC	15107	220350	16.65
	D2 Minisinaakwaang Leadership	25000	367250	18.5
	D3 Aazhoomog Clinic	11300	82560	29.6
	D3 ALU	15000	210720	148
	D3 Lake Lena CC	16170	13328	50.32
Walk-in refrigerators/freezer upgrades	D1 Aanjibimaadizing	17900	321080	N/A
	D1 ALU	33600	355120	
	D1 Commodities Food Shelf	6100	106516	
	D1 Early Ed	47737	747500	0.22
	D1 Government Center	50616	663600	N/A
	D1 Mino-bimaadiziwin	9000	164960	N/A
	D1 NAS Lower School	40445	358040	0.22
	D1 NAS Upper School	28000	345680	0.22
	D1 Old Community Center	19554	245360	

	D1 Women's Shelter	5787	46479	N/A
	D2 ALU	15000	209560	
	D2 Chiminising CC	15554	147720	
	D2 East Lake CC	15107	220350	
	D2 Minisinaakwaang Leadership	25000	367250	0.22
	D3 Aazhoomog Clinic	11300	82560	N/A
	D3 ALU	15000	210720	
	D3 Lake Lena CC	16170	13328	

Electricity kWh	Conversion	Natural Gas mcf	Conversion	CO2e before	CO2e after	CO2e Diff
	0.000417					
88780	0.000417			37.02126	7.404252	29.61701
26629	0.000417			11.104293	2.2208586	8.883434
186875	0.000417			77.926875	15.585375	62.3415
165900	0.000417			69.1803	13.83606	55.34424
41240	0.000417			17.19708	3.439416	13.75766
89510	0.000417			37.32567	7.465134	29.86054
86420	0.000417			36.03714	7.207428	28.82971
61340	0.000417			25.57878	5.115756	20.46302
	0.000417					
52390	0.000417			21.84663	4.369326	17.4773
	0.000417					
	0.000417					
91812.5	0.000417			38.2858125	7.6571625	30.62865
20640	0.000417			8.60688	1.721376	6.885504
52680	0.000417			21.96756	4.393512	17.57405
3332	0.000417			1.389444	0.2778888	1.111555
96324	0.000417	1165.9459	0.055			
106536	0.000417	7400.8326	0.055	409.045793	368.1412137	40.90458
31954.8	0.000417	2745	0.00561905			
224250	0.000417	44.0769	0.055			
199080	0.000417	11148.8286	0.055			
49488	0.000417	1982.3902	0.055			
107412	0.000417	1909.3179	0.055	105.0124845	94.51123605	10.50125
103704	0.000417	2207.4451	0.055			
73608	0.000417	4306.9845	0.055	236.8841475	213.1957328	23.68841

13943.7	0.000417	2000	0.00561905			
62868	0.000417	11323	0.00561905			
44316	0.000417	3425.933	0.055			
66105	0.000417	11404	0.00561905			
110175	0.000417	18872	0.00561905			
24768	0.000417	9931	0.00561905			
63216	0.000417	1511.25387	0.055			
3998.4	0.000417	14211	0.00561905			
28897.2	0.000417			12.0501324	8.43509268	3.61504
31960.8	0.000417			13.3276536	9.32935752	3.998296
9586.44	0.000417			3.99754548	2.798281836	1.199264
67275	0.000417			28.053675	19.6375725	8.416103
59724	0.000417			24.904908	17.4334356	7.471472
14846.4	0.000417			6.1909488	4.33366416	1.857285
32223.6	0.000417			13.4372412	9.40606884	4.031172
31111.2	0.000417			12.9733704	9.08135928	3.892011
22082.4	0.000417			9.2083608	6.44585256	2.762508
4183.11	0.000417			1.74435687	1.221049809	0.523307
18860.4	0.000417			7.8647868	5.50535076	2.359436
13294.8	0.000417			5.5439316	3.88075212	1.663179
19831.5	0.000417			8.2697355	5.78881485	2.480921
33052.5	0.000417			13.7828925	9.64802475	4.134868
7430.4	0.000417			3.0984768	2.16893376	0.929543
18964.8	0.000417			7.9083216	5.53582512	2.372496
1199.52	0.000417			0.50019984	0.350139888	0.15006
-3720	0.000417					
-6200	0.000417					
-4960	0.000417					
-12400	0.000417			0	-5.1708	5.1708
-1240	0.000417					
-1240	0.000417					
-11160	0.000417			0	-4.65372	4.65372
-17360	0.000417			0	-7.23912	7.23912
-7440	0.000417					

0	0.000417					
-17360	0.000417			0	-7.23912	7.23912
-3720	0.000417					
-1240	0.000417					
-1240	0.000417					
-2480	0.000417					
-17360	0.000417			0	-7.23912	7.23912
-2480	0.000417					
	0.000417					
	0.000417					
	0.000417					
164450	0.000417			68.57565	48.002955	20.5727
	0.000417					
	0.000417					
78768.8	0.000417			32.8465896	22.99261272	9.853977
76049.6	0.000417			31.7126832	22.19887824	9.513805
	0.000417					
	0.000417					
	0.000417					
	0.000417					
	0.000417					
80795	0.000417			33.691515	23.5840605	10.10745
	0.000417					
	0.000417					
	0.000417					
				1494.093124	962.7779299	531.3152

Colour Code for Table 4 indicates the following:

NORESCO recommends

NORESCO does not recommend

Add to NORESCO

Follow Up

Delete from NORESCO

3.3 Benefits Analysis

The following analysis are NORESCO Measures compared to the Band's Measures analysis

In the NORESCO IGA the following Measures were proposed:

- T8 Lighting to LED Lighting Conversion
- Boiler (HVAC) Replacement
- HVAC Controls Upgrades
- 50-kW Solar PV Array Addition
- Walk-in Refrigerator/Freezer Upgrades

NORESCO T8 Lighting to LED Lighting Conversion

The following facilities were recommended for LED Lighting Conversions—

- D1 Assisted Living Units
- D1 Commodities Food Shelf
- D1 Early Education
- D1 Government Center
- D1 Mino-bimaadiziwin Hotel
- D1 NAS Lower School
- D1 NAS Upper School
- D1 Old Community Center
- D2 Assisted Living Units
- D2 Minisinaakwaang Leadership
- D3 Aazhoomog Clinic
- D3 Assisted Living Units
- D3 Lake Lena Community Center

These buildings were not recommended by NORESCO for upgrades:

- D1 Aanjibimaadizing
- D1 Women's Shelter
- D2 Chiminising Community Center
- D2 East Lake Community Center

Our analysis agrees that the buildings not recommended for lighting upgrades should not have upgrades because the rate of reductions are much less than 10 metric ton of CO2e. To that, we also recommend the following facilities recommended for upgrades by NORESCO also not get lighting conversion for the same metric:

- D1 Commodities Food Shelf
- D3 Aazhoomog Clinic
- D3 Lake Lena Community Center

NORESCO Boiler (HVAC) Replacement

NORESCO had provided preliminary and final recommendations (marked by *) of several types of HVAC component replacement:

- Boiler replacement—

    - D1 Assisted Living Units *
    - D1 NAS Lower School *
    - D1 Old Community Center *
    - D2 Chiminising Community Center
    - D2 East Lake Community Center
    - D3 Assisted Living Units
- Chiller replacement—
    - D1 Assisted Living Units *
    - D1 Government Center
    - D2 Assisted Living Units
    - D3 Assisted Living Units
- Furnace replacement—
    - D2 East Lake Community Center
    - D3 Lake Lena Community Center
- RTU replacement—
    - D1 Aanjibimaadizing
    - D1 NAS Lower School *
    - D1 NAS Upper School

However, with our analysis, we also recommend the following due to end of useful life and GHG reductions of greater than 15 metric ton CO2e:

- Boiler replacement—
    - D2 Chiminising Community Center
- Chiller replacement—
    - D1 Government Center
- RTU replacement—
    - D1 NAS Upper School

NORESCO HVAC Controls Upgrades

NORESCO recommended upgrades to HVAC controls to all MLBO facilities except for D1 Aanjibimaadizing, D1 Mino-bimaadiziwin Hotel, D1 Women's Shelter, and D3 Aazhoomog Clinic.

Although if all the D1 Mino-bimaadiziwin Hotel room-level HVAC systems were replaced, the GHG reductions would be greater than 1 metric ton of CO2e, but because these units have relatively short use life and gets replaced frequently, we agree that HVAC Controls Update for D1 Mino-bimaadiziwin Hotel would not be of benefit. However, we disagree with the NORESCO analysis on two items. We recommend the HVAC control upgrades to D1 Aanjibimaadizing because of greater than 1 metric ton of CO2e, but we do not recommend this upgrade for D3 Lake Lena CC due to less than 1 metric ton of CO2e.

NORESCO 50-kW Solar PV Array Addition

NORESCO made recommendation for 50-kV solar PV array addition to D1 Early Education and to the D1 Government Center. Considering the size of a 50-kV PV system, our analysis indicates the usable rooftop space is not available on the D1 Government Center. If we remove the 50-kV PV system and size it to what the rooftop potentially can host, based on the Minnesota Solar Suitability Analysis tool

(https://solar.maps.umn.edu/) to determine which roofs are feasible for the most solar PV power production, and then rounding down to the nearest 10-kV PV system, with the assumption that each panel is 370-W that is 1.00-m x 1.75-m in size, we end up with the following recommendations:

- D1 Early Education: 100-kV
- D1 NAS Lower School: 90-kV
- D1 NAS Upper School: 140-kV
- D2 Assisted Living Units: 140-kV
- D3 Assisted Living Units: 140-kV

Costs may be prohibitive, but with Minnesota Solar for Schools program, this is a potential venue to fund the D1 NAS Lower School and D1 NAS Upper School. Through funding made available through Minnesota Department of Commerce and through EPA Solar for All via MTERA, paired with funding through CPRG, D1 Early Education, D2 Assisted Living Units, and D3 Assisted Living Units have the potential to have solar PV units.

NORESCO Walk-in Refrigerator/Freezer Upgrades

Evaluating the walk-in refrigerator/freezers, NORESCO recommended upgrades to the following facilities:

- D1 Early Ed
- D1 NAS Lower School
- D1 NAS Upper School, and
- D2 Minisinaakwaang Leadership

We agree with NORESCO analysis. However, in our analysis, we have also identified D1 Assisted Living Units as another potential upgrade as the potential GHG reductions from them is also greater than 9 metric ton of CO2e.

3.4 Review of Authority to Implement

Mille Lacs Band of Ojibwe Climate Pollution Reduction Grants planning will be done in parts, due to large territorial spread, and diverse land holding types. Coordinating entities for the Mille Lacs Band of Ojibwe will be:

- Mille Lacs Band of Ojibwe Department of Natural Resources (DNR) — for project management, Tribal trust and fee-simple designated for wildlands, agricultural lands, forest lands, fisheries, cemeteries, and cultural lands.
- Mille Lacs Band of Ojibwe Department of Community Development (CMD) — for Tribal trust and fee-simple designated for Tribal housing and Tribal government services.
- Mille Lacs Band of Ojibwe Administration Department (Admin) — for Tribal government operations.
- Mille Lacs Band of Ojibwe Office of Management and Budget (OMB) — for operational financial oversight and review.
- Mille Lacs Corporate Ventures (MLCV) — for properties owned or managed by the Tribally-owned corporation.

- Other State and Regional agencies — for planning and implementation flexibility for the Band through coordination of planning and implementation beyond the Mille Lacs Service Area in Minnesota, the United States, and elsewhere.
- Environmental Protection Network (EPN) — for benefit analysis.

In order to conduct the NORESCO IGA, the Band's DNR had to work cooperatively with CMD, OMB, and the Mille Lacs Band of Ojibwe Office of Solicitor General (OSG). During the PCAP-development period of the CPRG Phase 1 Planning, the same entities will be kept abreast of the conversion of the NORESCO IGA into a PCAP. While the PCAP is being developed, these other Tribal agencies will review the draft MLBO Strategic Energy Plan and the DNR Climate Change Mitigation and Adaptation Plan, and will provide feedback on authority to implement, and make recommendations on what additional authority must be sought for implementation.

Conclusion

This Priority Climate Action Plan is an important first step towards mitigating the threats of climate change. In this report, we determined important priorities and put up feasible plans to reduce greenhouse gas emissions, strengthen community resilience through collaboration and stakeholder involvement. This plan shows how all societal levels must take coordinated action towards the overwhelming evidence of climate crisis we are faced with, because in an absence of prompt action, the effects of climate change will only worsen, hence putting our ecosystem, economy, and human welfare at serious danger. However, we have the chance to create a more affluent and sustainable future for future generations by putting this plan's suggested activities into practice. In the end, government entities, corporations, civil society organizations, and individual citizens must demonstrate consistent commitment, cooperation, and leadership for this climate action plan to be successful. The Mille Lacs Band of Ojibwe is therefore using this as a defining moment to go forward as a Nation towards a more sustainable future.