

BUSES ONLY

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# **2023** Sustainability Plan

Minnesota Valley Transit Authority

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The American Institute of Architects (AIA): a professional organization for architects in the United States

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE): a global engineering society that compiles and publishes building standards for health, comfort, and efficiency

American Public Transportation Association (APTA): a non-profit organization that advocates for the progression of public transit in the US

B3: The State of Minnesota's sustainability program, Buildings, Benchmarks and Beyond, for (tracking performance related to) state-funded building construction projects

British Thermal Unit (BTU): a standard unit of energy

Carbon Dioxide Equivalent (CO<sub>2</sub>e): a measure of carbon dioxide equivalents used to measure greenhouse gas emissions; determined by converting the global warming potential of various greenhouse gases to the equivalent amount of CO<sub>2</sub> with the same global warming potential

Climate Change: changes in global and regional climate patterns in response to increased levels of atmospheric greenhouses gases produced by the use of fossil fuels

Climate Resilience: the ability of a system to manage stresses and maintain function despite external changes imposed by climate change

**CPTED:** Crime Prevention Through Environmental Design

Federal Transit Administration (FTA): offers financial and technical assistance to US public transportation agencies

Greenhouse Gas (GHG): contributes to the atmospheric greenhouse effect, the leading cause of climate change, sources of which include fossil fuel consumption

Kilowatt Hours (KWH): a common billing unit for electrical energy delivered to consumers by electric utilities; one kilowatt of power for one hour

Miles per Gallon (MPG): a standard unit of fuel efficiency; measures vehicular miles traveled per gallon of fuel Platform Miles: total miles traveled by transit agency vehicles

Red List: maintained by the International Living Future Institute (ILFI) Living Building Challenge (LBC), The Red List includes names of materials, chemicals and elements categorized as harmful to human health and the greater ecosystems

SB2030: Minnesota's B3 Sustainable Building 2030 Energy Standard, based on the national Architecture 2030 program

Semi-impermeable Surface: a surface that allows some liquid or precipitation to pass through

Single Occupancy Vehicle (SOV): a non-commercial car whose only occupant is the driver

Social Justice: equitable distribution of wealth, opportunity, privilege, and fairness within a society

Transit Oriented Development (TOD): a community development plan which include mixed-use buildings for residential, commercial, retail and entertainment. These plans prioritize mass transit, walking or biking over personal vehicles

Triple Bottom Line: a framework that measures a business's success in three key areas: social, environmental and financial

Weather Normalized Energy Consumption: energy used by a building under average weather conditions, accounting for differences between average weather conditions and extreme cold or heat events

Zero Net Energy Buildings (ZNEB): total annual energy consumed by a building is offset by either on-site or off-site renewable energy

# **EXECUTIVE** SUMMARY

#### Message from the CEO

"Minnesota Valley Transit Authority is committed to building the greener and more equitable public transit system of the future. Reducing the carbon generated by our own operations will be at the forefront of our inaugural Sustainability Plan, and MVTA is committed to being an industry leader in sustainability.



Beyond reducing the carbon generated by our own operations, our goal is to get more people on our buses and more cars off the road. Simply by riding transit, our customers have been significantly reducing their carbon footprint and MVTA is committed to holding up our end of the bargain by making public transit a reliable and equitable option for more people.

The inaugural MVTA Sustainability Plan is a roadmap for bringing resources and capabilities across all agency departments to bear to achieve carbon reduction goals. MVTA will forge a regional coalition with community leaders, local government agencies, non-profits, and private businesses to achieve the needed transformative change. MVTA's core mission is to provide transformative transportation services to those who live, work, and play in our communities and implementing this sustainability plan will redouble our efforts to provide that service."

Lither Wynder Luther Wynder, CEO



#### **MVTA'S SUSTAINABILITY FRAMEWORK**

For decades, sustainable practices have been integrated within MVTA's culture and operations. To bring these long-standing values, commitment, and desired progress to light, MVTA invested in a discovery phase with both internal and external community engagement. While the feedback included a wide range of past and future sustainability actions, the results clearly expressed opportunity for sustainability actions that align with core agency strategic initiatives. MVTA believes that enhancing the natural sustainability of its public transit system is dependent on both fiscal responsibility through efficient resource management and social values which enhance community quality of life. Supporting these strategic values, MVTA's 2023 Sustainability Plan uses a triple bottom line framework with 3 key sustainability priorities: environment, social, and economic value. Each of these priorities are further defined by **13 goals**, as summarized on the next page

#### **KEY SUSTAINABILITY PRIORITIES**

The framework of MVTA's Sustainability Plan is categorized into three sustainability priorities, outlining values which support the agency's triple bottom line.



The Goals and Metrics section of the Sustainability Plan further details MVTA's 13 selected goals, along with each of the goal's objectives, actions, and performance metrics to track progress over time. Each identified action is a unique implementable project with either a short, medium, or long-term time horizon. It is MVTA's vision to implement each of these actions over time, review progress and report outcomes on an annual basis.

Through the development and launch of our 2023 Sustainability Plan, MVTA documents our commitment to a sustainable and equitable future for all those who live, work and play in our communities.



#### KEY **SUSTAINABILITY** PRIORITIES

#### **PERFORMANCE CRITERIA**



#### **GOALS**

**Energy Efficiency** 

Resilience

Safety



#### GOALS Diversity, Equity, Inclusion, and Belonging (DEIB) **Healthy Communities**

#### **OBJECTIVES**

**OBJECTIVES** 

averages

Support continuous expansion of agency **DEIB** initiatives

in half by 2030, based on a 2018 baseline

Reduce water consumption by 2% each year

Match Minnesota's statewide recycling rate

the agency's Scope 1 and 2 portfolios by 2050

Transform existing green spaces into more

future infrastructure investment projects

sustainable environments

Foster healthy communities for workforce and riders

Maintain safety of MVTA employees, riders, and community

# CONOMIC

#### GOALS

Vehicles Miles Traveled (VMT) Reduction

Procurement

**Transit Oriented Development (TOD)** 

**Sustainability Management** 

#### **OBJECTIVES**

Support state-wide goal of 20% VMT reduction by 2050

Increase sustainable procurement by 2% of annual expenses each year

Support increased local transit-oriented development throughout MVTA service area

Enhance MVTA resources and foster continual expansion of the management of sustainability initiatives and programs



#### **CONTINUOUS PLAN REVIEW PROCESS**

Initiated in 2023, MVTA developed this plan for prioritization, distribution, and transparency. Intended to be a living document, MVTA acknowledges that changing economic, technology or social drivers may require adjustments to the sustainability plan. To track and report on progress, MVTA commits to an annual performance review following these repeatable steps:

Verify progress toward ey sustainability priorities and objectives

Gather performance data

> **Adjust historic** trends and goal timelines

#### SUSTAINABILITY MATTERS

#### **Transportation Climate Change Impact:**

Globally, the transportation sector accounts for roughly 14% of global greenhouse gases. In the United States, transportation accounts for 27% of GHGs. In 2016, transportation became the largest source of CO<sub>2</sub>e emissions, representing roughly a quarter of total GHG emissions in Minnesota..

#### **MVTA Acknowledgment:**

MVTA acknowledges the urgency of action to mitigate climate change through emission reduction from its sources, facilities and fleets, and encouraging community reduced use of single occupancy vehicles (SOVs).

# INTRODUCTION

#### **Agency Overview**

Minnesota Valley Transit Authority (MVTA) is one of the largest transit providers in Minnesota, based on ridership. The service area includes seven suburban cities south of Minneapolis and Saint Paul and expands across Dakota and Scott Counties. MVTA operates local, express, special services, and on-demand microtransit services for Apple Valley, Burnsville, Eagan, Rosemount, Savage, Shakopee and Prior Lake.

The Minnesota Valley Transit Authority (MVTA) is a joint powers organization created under Minnesota Statutes, Section 471.59. The MVTA governing body is an eight-member board consisting of elected officials or their designees from each member city. Each of the seven cities appoints one elected official to the MVTA Board and one city staff person as an alternate board member. The remaining one seat is filled by a Scott County commissioner and staff alternate. The governing body is a collaborative community. As such, MVTA is committed to meaningful engagement within its community, defined as where riders and community members and riders live, work, and play.

#### **Minnesota Valley Transit Authority Service Area**



# NTRODUCTION



Combining fixed routes, special service and on-demand services, MVTA provided roughly 3 million miles of service in 2022. The number and percentage of total ridership for each type of route are as follows:



#### **Growing MVTA Workforce**



28 Full-Time Equivalent (FTE) Staff in 2022

MVTA internal staffing has increased to 28 Full-Time Equivalent (FTE) positions in 2022. In addition, MVTA employed 13 interns across all departments, in pursuit of workforce development initiatives. These positions serve the functional areas of:

- Administration
- Planning
- Information Technology
- Transportation/Operations

#### Vision

As a critical community asset, MVTA provides vital support to citizens and economies through reliable, safe, sustainable, and equitable movement of people where they live, work and play. Aligning with the best-in-class transportation agencies, MVTA seeks to develop a forwardthinking vision regarding sustainability and climate action. In developing overarching themes for our new sustainability plan, MVTA purposefully selected a triple-bottom-line prioritization of **environmental**, **social and community**, as well as **economic** solutions. This approach is common practice in sustainability planning and follows the definition of sustainability, as included in the United States' National Environmental Policy Act of 1969: "to create and maintain conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations." MVTA's identified business priorities support long term sustainability.



#### **MVTA's Triple Bottom Line - Key Sustainability Priorities**

#### **MVTA's sustainability plan was developed within the context of:**

- Increasing local, state and federal sustainability recommendations in the transportation sector
- A global pandemic and emphasis on public health
- A global economic slowdown, specifically for public transit agencies because of the pandemic shutdowns and ongoing employee work flexibility
- Local and national attention to social and environmental justice
- Global climate change commitments and resulting push for energy transitions and resilience
- Evolving regulations and technologies impacting transportation, utilities, and facility systems

#### **MVTA's Past and Current Initiatives**

As an integral and caring community partner, MVTA has already implemented sustainable measures within our business operations, facilities, and transportation services. Our past and current initiatives set a foundation for future initiatives.



#### **Energy Efficiency**

- Conducting energy efficiency assessments for conservation opportunities
- Replacing inefficient lamps with LEDs
- Complies with Minnesota's progressive SB2030 Energy Standard when facility projects include state bond funding
- Installation of rooftop solar array at Eagan Bus Garage

#### Water Efficiency

- Native prairie grasses and rain garden installations at two facilities
- Installation of bus wash systems to capture and recycle up to 70% of the wash water

#### Waste Efficiency

- Placed recycling receptacles at all facilities
- Contracted for recycling pickup
- Limiting paper printing by prioritizing one centralized printer instead of personal office printers
- Reducing paper waste through restroom hand dryer installation

#### **Greenhouse Gas Emissions**

- Signed on to the Federal Transit Administration (FTA)'s Sustainable Transit for a Healthy Planet Challenge
- Completed a Phase 1 Zero-Emissions Bus Transition Plan
- Submitted an FTA Low-No Emissions grant for future zero emissions bus investments

#### **Green Space**

- Installation of prairie grasses at two facilities
- Designated funding for existing green space maintenance





#### Diversity, Equity, Inclusion, and Belonging

- Free fares for youth and service agents
- ADA accessibility
- Free WI-FI on buses
- Providing opportunities for community feedback
- Advertise open positions in broad communities of interest
- (CITY) Internship Program
- Provide floating holidays for staff to use as they choose

#### **Healthy Communities**

- service offerings
- Established a Transit Rider Recognition Program
- Flexible work programs during the pandemic

- Constructing Wellness Spaces for staff

#### Safety

- Increased air filtration in facilities and buses



#### **VMT** Reduction

• Year over year ridership increases until the 2020 pandemic

#### Procurement

- Procuring sustainable office supplies
- areas
- distribution emission
- Procuring cleaner fleet diesel to expand market demand

#### **Transit Oriented Development (TOD)**

#### Sustainability Management

- Created a sustainability workgroup of internal staff

• Discounts for seniors, low-income users, and persons with disabilities

• Applied to host 4 interns through COMTO's Careers in Transportation for Youth

• Promoting community, sporting, and entertainment events through special

• Partnering with local community organizations to increase food access • Ongoing staff recognition events and community-building activities • Supporting local art community through design-a-bus competitions

• Supports riders in need through community services collaborations • Investing in real-time customer information via phones and kiosks • Implementation of application to report safety concerns to agency via texting

• Limiting single use water bottles and providing dishware for use in staff break

• Prioritizing local vendor contracts to bolster community economies and reduce

• Prioritizing equitable and healthy communities in TOD planning contract

• Designated MVTA staff to manage the sustainability plan development

#### **Plan Development Process**

MVTA desired an inclusive sustainability plan. As an integral part of the plan's development, MVTA hosted both internal and external community workshops. Internal workshops documented ongoing sustainability initiatives supporting MVTA's American Public Transportation Association (APTA) commitment and additional initiative ideas generated by MVTA's participants. The summary list of sustainability initiatives was then evaluated for feasibility and ranked for near and long-term planning. In addition to the internal stakeholder input, MVTA hosted public engagement sessions to further account for community interests and needs.

City and county goals in the MVTA service area were reviewed, including the following (as available/ applicable by city or county): GreenStep Cities' status, Energy Action Plans, Comprehensive Plans related to transportation and/or sustainability/resiliency or sustainability plans, and additional benchmarks such as the B3 Benchmarking, Regional Indicators Initiative, SolSmart, and the Metropolitan Council's GHG Inventory.

Broad stakeholder engagement was a critical priority for the development of MVTA's Sustainability Plan. Public outreach included a review of regional and national sustainability plans and frameworks for best practices and collaboration, an on-site public open house, a web-based survey, and internal engaging MVTA staff. Both peer and larger transit agency sustainability plans were reviewed for best practices in sustainability strategies and public transparency. In summary, MVTA has committed to applying transit agency best practices, where we align with the agency size and feasibility of implementation.

MVTA staff understand the intricacies of the working relationships with its member cities and counties and will have the first- hand knowledge to identify specific strategies to pursue based on prior, current, or future work and relationships with the city or county.

MVTA is a leader among peer agencies for equity, environmental justice, and community engagement.





# **BASELINE** ANALYSIS

#### **Internal Sustainability Workshop**

The United States is in a period of historic public infrastructure investments, and MVTA hosted an internal staff workshop to review the USDOT's FY 2022-2026 Strategic Plan. Recognizing that initiatives aligning with these goals are more competitive for funding opportunities, MVTA will keep these strategic initiatives in mind while evaluating & prioritizing sustainability initiatives in strategic planning.

#### Relevant alignment between USDOT and MVTA's sustainability goals

Safety	Make our transportation transportation s
Economic Strength and Global Competitiveness	Grow an inclusive and s system to provide Ame access to resources, ma
Equity	Reduce inequities acros we affect. Support and affordable, accessible, a while reducing transpor and health effects.
Climate & Sustainability	Tackle the climate crisis role in the solution. Sub transportation-related p transportation systems
Transformation	Design for the future. In meet the challenges of the future that serves ex

The USDOT's Strategic Planning document can be found here.

In addition, MVTA's current signatory regarding APTA's Sustainability Commitment sets out core sustainability principles, an action plan, and a course for progress. MVTA's existing sustainability commitments were reviewed and expanded upon during our Sustainability Plan workshop sessions.

#### The key parameters of the APTA Sustainability Commitment are as follows:

- 1. Core Principles
- Make sustainability part of the organization's strategic objectives
- Establish an employee outreach program
- Undertake a sustainability inventory
- 2. Complete and commit to an increasing number of Action Items
- 3. Achieve and commit to increasing reductions from baseline indicators
- 4. Complete and commit to an increasing number of Stretch Goals

Additional information about the APTA Sustainability Commitment can be found here

n system safer for all people. Advance a future without serious injuries and fatalities.

sustainable economy. Invest in our transportation rican workers and businesses reliable and efficient arkets, and good-paying jobs.

ss our transportation systems and the communities engage people and communities to promote safe, and multimodal access to opportunities and services rtation-related disparities, adverse community impacts,

by ensuring that transportation plays a central ostantially reduce greenhouse gas emissions and collution and build more resilient and sustainable to benefit and protect communities.

nvest in purpose-driven research and innovation to the present and modernize a transportation system of veryone today and in the decades to come.

• Identify a sustainability champion within the organization and supply proper resources

#### Sustainability Workshop & Feasibility Analysis

#### Workshop Goals

To better understand MVTA's sustainability goals and priorities, a workshop was held to collaboratively discuss key drivers, alternatives, frameworks and goal alignment with grant-funding bodies. The internal workshop first compiled a comprehensive list of MVTA's past and ongoing sustainability initiatives. Then, we explored additional ideas that would support continued sustainability progress. The workshop was held at the Burnsville Bus Garage on June 15th, 2022 and representatives from multiple MVTA work groups attended the session. Their diverse views formed the basis of this holistic Sustainability Plan.

#### **Workshop Synopsis & Outcomes**

MVTA's internal sustainability workshop centered around a comprehensive approach to goal setting, utilizing six principles of sustainability: Ecosystems, Materials, Wellbeing, Vision, Elements and Resilience. MVTA reviewed core concepts of these workshop principles as a guide for the sustainability goals and initiatives brainstorming process. Once the stakeholders reviewed the framework concepts, time was dedicated for all present MVTA stakeholders to write goals and ideas on post-it notes and share on a group idea board. Participants were encouraged to consider ideas without limitations of time or costs constraints.

After developing an exhaustive list of goals under each of the key principles, MVTA stakeholders were asked to prioritize the six core concepts to help provide a values-based priority weight to the generated ideas. The ranking responses were averaged to show collective priorities for MVTA, where a 1 = highest priority and a 5 = lowest priority. As shown in the Summary Wheel of MVTA's Internal Priority Matrix, key values with Vision and Wellbeing were ranked as most important, followed by Resilience and Elements. Materials and Ecosystems were ranked as least important.

The compilation of MVTA's proposed sustainability goals can be found on the following pages under the MVTA Workshop Goals - Feasibility Filter summary. The summary displays MVTA's proposed sustainability goals and initiatives categorized under the six principles of sustainability, and these principles are listed in order of MVTA's ranked priorities. Further internal discussions of each sustainability goal or initiative provided insight to perceived feasibility constraints. The feasibility review included a high-level and consistent consideration of cost, time, resources, technical implementation difficulty, local support/ internal buy-in and estimated barrier to viability. Each of these constraint considerations were collectively categorized by MVTA's stakeholders as either low barrier, medium barrier, or high barrier.

The final sustainability workshop summary was utilized during the development of the remaining Sustainability Plan. The workshop sustainability goals and initiatives are included within the Sustainability Plan where they support MVTA's key sustainability priorities: Environment, Social & Community, and Economic. MVTA's feasibility rankings informed the ranking of goal or initiative implementation time horizons. Where sustainability goals are clearly identified with low barriers across all of the considered feasibility constraints, the sustainability plan categorizes the action with a short time horizon. Similarly, goals clearly identified with all high barrier goals are identified as long time horizon actions. Where a goal was identified with a range of feasibility barrier rankings, the time horizon was listed as a weighted average between short, medium, and long term. MVTA is committed to implementing the final sustainability plan action items, subject to MVTA budget and resource constraints.







# **BASELINE** ANALYSIS

Input from the stakeholders was organized into a matrix to evaluate the feasibility based on the constraints of cost, time, resources, technical implementation difficulty, local support/internal buy-in, and estimated barrier to visibility. Each idea was then assigned an "average ranking" based on the assessed feasibility of each of the constraints.

#### **MVTA Workshop Goals - Feasibility Filter**



Cost: Capital Cost of Implementation, or ongoing

operational cost

Time: Upfront time investment and/ or action time of implementation

maintenance

support

Center)\*



**Resources:** 

Staff Availability,

Equipment, Real

resource outside of

Capital/Operating

Estate, etc. Any

Cost

Use CPTED principles to create places that feel

safer and reduce likelihood of vandalism

Provide customers real-time information via informational kiosks, mobile app, and call/text

"Tell the story" of how electrification would

Create more intentional TOD and promote

opportunities for density (Burnsville Transit

reduce MVTA's carbon footprint

Create a dedicated space for facilities

Technical Implementation Difficulty: Technical Expertise or Specialized Technology required.

Low Barrier



effort

Medium Barrier

**Estimated Barrier** to Viability: Average Estimated staff support this Barrier, based on 5 previous constraints

High Barrier



Create a transit system that is a better option for more people in the communities MVTA serves



Create an office

opportunities for

connection

culture that supports

wellness and creates

Initiate a "mini-breaks" policy. Institutionalize time for taking an actual lunch, ending meetings 10 minutes before the hour so there are gaps between meetings, and encourage breaks to look away from screens, walk around, get water, and talk to colleagues

Create opportunities to connect such as fun activities where staff are encouraged to mingle

Create exercise opportunities on campus, potentially including walking paths around the site, a gym space, and a program where you can "check out" office workout equipment (desk peddling machines, resistance bands, balance balls/boards, etc.) that can be used in meetings or at desks\*

Make healthier foods convenient for staff via vending machines, with MVTA community gardens, or a CSA box ordered in		Ø	රීරී	₽.	
Bring nature in to facilities through plants, wood, natural materials	P.s	B	රීරී	Ţ	
Formalize a support program for unhoused or at risk customers/visitors*		P	8 878		
Patio/grill area!		<b>E</b>	Å		



Investigate the potential uses of battery/ energy storage backups rather than generators\*

Determine the potential uses and needs for system infrastructure for fleet, employee, and public vehicles\*

**Consider resilience** of energy systems

Consider the future growth needs for infrastructure to support EV charging for flee employee, and public vehicle. "Future-proof to the extent feasible

Uses "bikes that power stuff" as an awareness of the amount of energy needed to power various elements\*

Reduce IT footprint by minimizing systems needed and streamlining processes

Pursue increased solar potential via panel canopies or facility roofing

**Reduce and offset** energy usage

Implement programs both internally and externally to increase bike usage such as bike amenities and tools stations for MVTA riders, and bike to work incentives for staff. Bike min stations at facilities, stations & shelters. "Bike work" incentives

Pilot a carpooling effort for staff

Create and implement sustainable procurem policies for both large and small procurement



Minimize single-use plastic in procurement & encourage staff to use reusable water bottles, silverware, plates, etc

Reduce usage of paper through using sharea digital notes platforms, dry erase boards, and

Reduce consumption of single-use items and favor longlasting materials

provide training to staff for use

Reduce single-use signage for public use by implementing dynamic signage at stations

Implement recycling program for surplus equipment to minimize needed storage space and housekeeping

Use materials that are resilient and resistant to vandalism

Use sustainable and biophilic materials. Cons avoiding items on the Red List



Consider integrating natural habitat into

the interior and exterior of MVTA Pilot pollinator/vegetable gardens

Introduce native, local plantings into the landscape at MVTA facilities

Create exterior and interior spaces that conne with nature for small "breaks" or non-digital meetings. Make space comfortable for connecting with nature and each other

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#### **Sustainability Metrics**

#### **Facility Benchmarking**

The Energy Star Portfolio Manager is a free online tool to securely document and track building performance over time. MVTA uses Portfolio Manager to benchmark our facility energy, water and waste performance. Nearly 25% of U.S. commercial buildings are benchmarked within Portfolio Manager, allowing MVTA to access the largest database of peer facilities for national performance comparisons. When new construction or major remodeling projects include MN state bond funding, MVTA will benchmark our building project data in the MNB3 Benchmarking platform, in compliance with the MN legislative requirements. Strategically, MNB3 Benchmarking pushes facility benchmarking data into Portfolio Manager, maintaining a consistent database of all MVTA facility benchmarking data. All energy, water, waste and GHG emission data has been compiled, for each facility, between the years 2018-2021. Data is included within the attached Appendices.



9	Transit Stations (owned): Transit Stations (leased):	5 1
	Number of parking spaces:	4,046
•	Park & Rides (owned): Park & Rides (leased):	3 4
	Number of parking spaces:	2,479
9	Bus Garages: Bus storage capacity:	2 150
	Number of maintenance bays:	15
0	Layover Facility associated with the Apple Valley Transit Station	1



#### **MVTA Facility Locations**

#### **Personal EV Charging Analysis**

The transportation sector is currently undergoing a significant transition to reduce greenhouse gases through alternative fuel and electric vehicles (EVs). Encouraged by both consumer interests and prioritized government funding for EV infrastructure, MVTA investigated innovative solutions to serve their transforming communities. To investigate ridership and community interest in and need for electric charging stations, a feasibility and siting analysis for electric vehicle charging infrastructure was conducted. This included a comprehensive community EV market analysis, feasibility evaluation, and preliminary financial assessment for installation of EV chargers on our properties.



Prior to the pandemic, the majority of MVTA ridership identified as commuters to Minneapolis. Ridership is anticipated to fully return and surpass pre-pandemic levels. The majority of MVTA's riders live in owner-occupied housing in single-family home neighborhoods, providing opportunities for residential charging at night. However, to address critical service gaps for riders without home charging opportunities, MVTA will consider a third-party vendor pilot installation at our centralized transit station in Burnsville.

#### **Considerations for Electric Vehicle Chargers at MVTA:**

**Commuter parking norms:** most MVTA commuters park their cars for the workday **Power Sharing:** with anticipated 6+ hour parking timelines, slower power sharing may be sufficient **Cellular data signals:** currently available on all sites for third party installations electrical service

#### Third Party EV Charging Vendors' Recommendations:

- 6 or more stalls near public amenities like restrooms, Wi-Fi restaurants, or shopping
- On-site full-time employees
- Clear cellular data signals
- Approximately 20-45 Amps per charger when installed with power sharing breakers per charger

"An increasing number of governments and businesses are pledging to achieve carbon neutrality within the next few decades. The electrification of vehicles is a big component of this plan. At COP26 in Glasgow, November 2021, 6 automakers and 30 countries pledged to phase out gasoline car sales."

Source: S&P Global Mobility Vehicle Electrification Trends & Compliance

According to the 2022 S&P Global Mobility reports, less than 3% of new Twin Cities vehicle registrations were electric. Less than the national metropolitan averages, this shows expansion from the current statewide average of 0.4%. To educate and assess public interest in EV charging, MVTA hosted both an in-person session with a local EV charger vendor and a virtual questionnaire regarding public EV charging needs. While less than 25% of responding riders would currently use an EV charging station if they were provided by MVTA, more than 75% of responding riders noted interest in purchasing an EV for their next car. Based on S&P Global, it is anticipated that the tipping point for global adoption of EV cars will be seen in the year 2026. This gives a window of time for MVTA to develop a EV charging master plan for our facilities.

- Efficiency: cluster parking stations together to reduce installation costs, cluster parking stations near





# PUBLIC ENGAGEMENT

Aligning with our community service vision, MVTA prioritizes a transparent sustainability planning strategy and public engagement with both with riders and our broad collaborators. After MVTA's internal sustainability workshop, the identified key sustainability priorities were shared with our general ridership and the community members who live, work or play in the MVTA service area. Announcements for an in-person open house and a virtual survey were posted in transit facilities, on the MVTA website, via email to community leaders, and through social media.

#### **In-Person Open House**

To present MVTA's sustainability planning process, demonstrate electric vehicle charging options, and gather feedback from riders to inform this plan, an in-person open house was held at the Burnsville Transit Station on Tuesday, July 12th from 4-6 pm. This time and location provided the best opportunity to reach MVTA's largest commuter population. Riders were presented with information about MVTA's current and potential sustainability initiatives. They were also asked about how they would utilize electric vehicle charging stations if they were provided at transit station and Park & Ride locations, what they would like MVTA to prioritize when creating a vision for environmental justice, and what mixed-use transit facilities they would find most helpful in our community.



#### **Virtual Open House**

Mirroring the in-person open house, an online questionnaire was developed for people to review and provide feedback between August 1st - 12th. To increase accessibility, translation options were provided within the online survey which allowed the viewer to modify the entire site to a language of their choice. Links to the virtual open house survey were posted on MVTA's webpage, promoted on social media accounts and further distributed by Green Step Coordinators from cities within the MVTA service area.

#### **Environmental Justice**



Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income in the development of environmental policies. This goal will be achieved when everyone enjoys:

- The same degree of protection from environmental and health hazards
- Equal access to the decision-making process to have a healthy environment in which to live, learn, and work

\*Adapted from the EPA's definition of Environmental Justice

I would like MVTA to prioritize for Environmental Justice.

when creating a vision



Example of MVTA Sustainability Plan Public Engagement Questionnaires

#### **Summary of Community Feedback**

Of the people who stopped by at the in-person open house or participated in the virtual open house, there was almost universal support for MVTA's efforts to be intentional and invest in sustainability. One respondent noted, "Don't be afraid to be ambitious!". Almost everyone who participated was an MVTA rider or lived, worked or played in the MVTA service area, with exception of one online survey responder.

Respondents showed interest in seeing MVTA transition to cleaner sources of energy and making investments to electrify our buses. At the same time, there was desire for MVTA to take a holistic approach to its sustainability efforts, such as awareness of the community impacts of sound from buses, as well as the impact to drivers and staff responsible for implementing these initiatives.

An overview of results for each question are presented as follows, with combined responses from the in-person and virtual open houses.

#### **Environmental Justice**

Responses were evenly spread across the options people would like MVTA to prioritize when creating a vision for environmental justice. The three most highly rated options were Frequency of Service, Health & Wellness and Efficiency.





# ENGAGEMENT PUBLIC

#### **Electric Vehicle Charging Stations**

While less than 25% of people would currently use an electrical charging station if they were provided at Park & Ride locations, more than 75% responded they would use one after their next car purchase or lease. A small number of people envisioned an MVTA charging station as being the primary place to charge their vehicle, with an even split of responses related to how long they would be parked at a charging station.







#### **Mixed-Use Transit Facilities**

The mostly highly desired mixed-use facilities at or near transit stations included Food/ Grocery, Restaurants, and Parks & Trails. Respondents showed less interest in having nearby access to Gyms or Childcare.



**PUBLIC** ENGAGEMENT



# **GOALS &** METRICS

**Energy Efficiency** 

**Greenhouse Gas Emissions** 

GOALS & METRICS - ENVIRONMENT

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## GOAL ENVIRONMENT



Cut existing annual building energy consumption in half by 2030, based on a 2018 baseline

Minnesotans value and commit to protecting our surrounding natural treasures: abundant water, clean air, and rich lands. As a public transit provider, MVTA shares these environmental values and seeks to integrate environmental protection within our operations. The agency has reviewed environmental themes and selected overarching goal categories in which our agency can make impactful environmental change: Energy Efficiency, Water Efficiency, Waste Efficiency, Greenhouse Gas Emissions, Green Space, and Resilience.

#### **MVTA'S ENERGY PORTFOLIO INCLUDES BOTH BUS DIESEL AND FACILITY UTILITIES, SUCH AS ELECTRICITY AND NATURAL GAS**

- total annual energy
- Buildings account for electricity and natural gas

- Fleet fuel accounts for roughly 75% of MVTA's
  - 75% is natural gas due to Minnesota's cold climate • 86% of annual natural gas is consumed in bus garages



#### 2018-2021 MVTA Annual Energy Consumption (MMBTUs)



#### Weather Normalized Energy

**Consumption:** energy used by a building under average weather conditions, accounting for differences between average weather conditions and extreme cold or heat events.

**MMBTU's:** a standard unit of energy, Metric Million British Thermal Unit

#### **Energy conservation**

Energy efficiency presents multiple co-benefits such as reduced energy costs, minimized energy, related environmental impacts and reduced demand on community resources.

Most facility energy consumption in MVTA's operations is related to safety requirements such as lighting, indoor air quality and temperature criteria.

#### MAXIMIZE FLEET EFFICIENCY

#### (Short Time Horizon)

MVTA's bus fleet supplies our primary service. To improve fleet energy efficiency, MVTA has committed to the following actions and performance metrics:

1. Action: Improve fleet Miles per Gallon (MPG)

츾

• Metric: Report on annual total fleet mileage divided by total purchased gallons of diesel



#### **REDUCE FACILITY ENERGY USE** (Medium Time Horizon)

Energy efficiency is achievable in both new facility designs and existing building remodels. The American Institute of Architects (AIA) and the engineering society ASHRAE, recommend that new construction projects strive to follow Net Zero Energy Building (NZEB) standards.



BJECTIL

building energy = renewable energy



Renewable energy can be either onsite or bought from off-site producers.

for public buildings. This requires both that new buildings and major renovations achieve NZEB by the year 2030. Continued industry research, technological advances and improved market costs offer solutions for robust energy retrofits in existing buildings. MVTA commits to assessing energy conservation measures for our existing buildings through a triple bottom line approach: balancing environmental, social and economic benefits.

#### 1. Action: Require triple bottom line NZEB assessments within design and construction contracts

line return on investment is beneficial and approved

OBJECT

Energy conservation starts with understanding energy trends. MVTA created a secure Energy Star Portfolio Manager portal and documented each of our facility's

1. Action: Maintain and review monthly energy consumption and cost benchmarking for all buildings in Energy Star Portfolio Manager

• Metric: Report each facility's monthly energy consumption in kBtu and

2. Action: Track monthly fleet diesel purchased and fleet mileage

• Metric: Report fleet's monthly diesel purchased in gallons and total mileage

Portfolio Manager®

Current technology is available to support NZEB design and construction in Minnesota. Minnesota has a large pool of experienced consultants experienced in state's legislatively required Sustainable Buildings 2030 (SB2030) Energy Standards

• Metric: New construction projects achieve NZEB status, when triple bottom



OBJECT

#### **IMPROVE FACILITY SYSTEM PERFORMANCE**

(Medium Time Horizon)

Scheduled equipment replacement is a good intervention point for energy efficiency upgrades, capitalizing on planned demolition, system expenses, and installation costs for improved energy savings.

- 1. Action: Develop an asset management plan that itemizes major building systems, age, anticipated replacement schedule, replacement budget, and increased efficiency criteria for system replacement
  - Metric: Asset Management Plan is approved and in use

#### **REDUCE INFORMATION TECHNOLOGY FOOTPRINT** (Short Time Horizon)

IT closets and server room systems consume electricity and require air conditioning for continuous operation. Efficiency in IT space reduces energy demands.

- 1. Action: Streamline IT department processes to minimize overall energy use, as applicable
  - Metric: Conduct annual review of IT department processes

# OBJECTIL MAX

#### MAXIMIZE ENERGY RETURN ON INVESTMENT (ROI)

(Short Time Horizon)

MVTA's building energy consumption is dominated by bus garage heating. The greatest reduction to total energy consumption will come from prioritizing heating energy conservation measures in these facilities.

- 1. Action: Install new air curtains at bus garage bays to minimize heat loss
  - Metric: 10% reduction in annual bus garage energy use at half of operating and maintenance facilities



Cold climate bus garages have shown an 80% improvement in heat loss with air curtain installations

Image credit: Engineered Systems and Central Ohio Transit Authority

### **GOAL** ENVIRONMENT





Reduce water consumption by 2% each year

GOALS & METRICS - ENVIRONMENT

Minnesota is the land of 10,000 lakes, yet our growing population is depleting our aquifers and impairing our freshwater lakes, rivers, and streams. MVTA acknowledges that Minnesota's clean water is a community resource and that water resources require both conservation and protection by all community partners.

Reducing water consumption has already been prioritized at MVTA through bus wash wastewater recovery. To track water saving improvements over time, MVTA has benchmarked indoor and outdoor water consumption within all our leased and owned properties and will strive to reduce water consumption by 2% each **year.** Further conservation considerations will include replacing plumbing fixtures with low flow alternatives, rainwater reuse, and increased landscaping that requires little or no irrigation. MVTA's water consumption within transit stations and park and ride facilities is driven by maintaining landscaping through irrigation.





#### TRACK ANNUAL WATER CONSUMPTION (Short Time Horizon)

Water conservation starts with understanding historic consumption and trends. MVTA created a secure Energy Star Portfolio Manager portal and documented each of our facility's domestic and irrigation consumption from 2018-2022.

- Manager

# OBJECT

#### **UPGRADE PLUMBING FIXTURES**

(Medium Time Horizon)

National water conservation policies have driven market research and availability of low-flow alternatives to MVTA's existing plumbing fixtures. To reduce annual domestic water consumption, MVTA commits to replacing existing high water demand toilets and faucets with lower flow alternatives

- replace with dual flow alternative
- faucets
- Metric: 2% reduction in annual facility domestic water consumption

#### 1. Action: Maintain and review monthly water consumption and cost benchmarking for all buildings in Energy Star Portfolio

• Metric: Report each facility's monthly water consumption in gallons

#### 1. Action: Identify all existing 1.6 gallons per flush toilets and

• Metric: 2% reduction in annual facility domestic water consumption

#### 2. Action: Identify all existing hand washing faucets over 0.5 gallons per minute and adjust flow or replace with more efficient





#### **REDUCE IRRIGATION DEMANDS**

(Medium Time Horizon)

The majority of MVTA's demand for municipal water is used to maintain the property's plants and lawns. To reduce demand on community potable water, MVTA will modify our landscaping and irrigation practices to low-water plantings and high-performance irrigation.

- 1. Action: Invest in high performance irrigation practices such as drip irrigation and rainwater reuse
  - Metric: 2% reduction in facility irrigation gallons/month demand

# GOAL **ENVIRONMENT**





#### Match Minnesota's statewide recycling rate averages



The amount of waste routed to Minnesota landfills has increased by 30% between the years 2020 and 2021. Currently, the waste-to-energy facilities in the Twin Cities metropolitan area are at capacity. Southern suburbs, including MVTA's service area, are considering expansion of existing landfills to accommodate the region's increasing waste demands. As a state leader in waste policy, the Minnesota Pollution Control Agency (MPCA) has set the ambitious statewide recycling goal of 75% by 2030. As of 2022, Minnesota recycles 50% of statewide waste. MVTA strives to match the statewide annual recycling rate.

Waste collection within MVTA buses and facilities is a necessary service to reduce waste pollution and keep our communities clean. Strategies to improve waste reduction follow the three R's: reduce, reuse and recycle.

MVTA's average recycling percentage, based on hauling service records from 2018-2022, has consistently maintained 21%. MVTA's priority is to educate riders and staff on our waste impact and encourage waste reduction and increased recycling.



OBJECT,

#### TRACK ANNUAL FACILITY WASTE AND RECYCLING COLLECTION (Short Time Horizon)

Waste conservation starts with understanding historic consumption and trends. MVTA created a secure Energy Star Portfolio Manager portal and documented each of our facility's waste and recycling rates from 2018-2022.

#### 1. Action: Maintain and review monthly waste and recycling rates for all buildings in Energy Star Portfolio Manager

• Metric: Report each facility's monthly waste and recycling in tons

#### PROMOTE RECYCLING AND REUSE OF IT EQUIPMENT (Short Time Horizon)

As technology advances and systems become obsolete, recycling and reuse of IT parts can solve our increasing electronic waste (e-waste) pollution. Recycling or reuse of computer parts can reduce the demand on raw materials, especially precious metals and leaching of toxins into our landfills and water sources.

- 1. Action: Maintain and enhance participation in electronics recycling program
  - Metric: Divert 25% of surplus equipment quantities to recycling program year-over-year

#### **REDUCING WASTE REDUCES CLIMATE CHANGE**

Reducing waste, and increasing both recycling and composting, is an effective strategy to mitigate climate change. Decomposing waste in landfills releases methane, a potent greenhouse gas with a 100-year global warming potential 28-34 times that of CO<sub>2</sub>. In most cases, recycling avoids large amount of energy consumption to produce a new product from raw materials.

#### PROMOTE RECYCLING OF UNUSED MVTA EQUIPMENT (Short Time Horizon)

Agency materials, equipment and furniture have built up over the years into a storage of unused goods. MVTA is committed to honoring the energy and resources required to make these products. MVTA will support a circular economy through donation or recycling of excess goods.

- - year

#### ENHANCE PUBLIC EDUCATION AND OUTREACH (Medium Time Horizon)

There were over X number of unlinked passenger trips on MVTA's transit system in 2022, with many riders utilizing the service multiple times per week. This repetitive exposure to thousands of riders each year gives MVTA an significant opportunity to educate through clear and consistent messaging on recycling goals.

sustainable on waste recycling habits

ECY,

#### **ENHANCE STAFF EDUCATION AND OUTREACH**

(Medium Time Horizon)

MVTA can develop a work culture which supports waste efficiency through education, as well as policy and practice incentives.

- expectations for internal staff

#### 1. Action: Implement a recycling program for the reduction of surplus equipment currently stored in MVTA facilities

• Metric: Reduce existing quantities of surplus items by 5% each

#### 1. Action: Develop public awareness campaigns for MVTA's recycling priorities and goals, nudging transit users to adopt

• Metric: Complete one or more education campaigns each year

#### 1. Action: Develop an official policy on agency recycling

• Metric: Complete one or more education campaigns each year

## GOAL **ENVIRONMENT**



**Eliminate Greenhouse** Gas (GHG) emissions from the agency's Scope 1 and 2 portfolios by 2050

Climate Science Basics: Greenhouse Gas (GHG) emissions in our atmosphere trap heat and warm our plant. Greenhouse gases include Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O) and fluorinated gases like refrigerants used in air conditioning. CO, is the primary GHG emitted by human actions and GHG emissions are often measured and reported in Carbon Dioxide Equivalent (CO<sub>2</sub>e). The conversion of a specific greenhouse gas into its CO<sub>2</sub> equivalent uses its unique global warming potential compared to CO, warming potential. Reporting in CO<sub>2</sub>e simplifies comparisons by using a unified metric of Metric Tons of CO<sub>2</sub>e.

three main steps:

- charging

Globally, the building industry accounts for roughly 40% of global emissions. Through energy conservation, beneficial electrification, and renewable energy, MVTA's goal is to minimize our facility GHG emissions footprint over the coming decades. In alignment with the global building industry commitments, MVTA set a goal of facility operation carbon neutrality by 2050.

Overall, MVTA GHG emissions are dominated by fleet emissions, ranging from 79-86% of total emissions between 2018-2021. Changes in fleet and facility operations are noticeable in the reduced GHG emissions during 2020 to 2022, as a result of the COVID-19 pandemic.

In 2020, the United States transportation sector contributed 27% of annual GHG emissions. MVTA recognizes the positive contribution the public transit industry provides to regional transportation emission reduction goals. MVTA supports regional transportation **GHG** emission reductions through

• Improving our fleet emissions in alignment with internal agency, regional and statewide transportation emission goals

• Increasing access to community-based EV

• Increasing mass transit ridership



Between 2021 and 2022, MVTA retired 28 older diesel buses. New buses are now more efficient with increased Miles Per Gallon (MPG) and improved exhaust filters. As the exhaust gases pass through this filter, particulate matter (PM), carbon monoxide (CO), and hydrocarbons (HC) are trapped in the filter, reducing our emissions by more than 90%, improving the air we breathe.







#### **GREENING OF THE ELECTRIC GRID**

#### Four main electric utilities providing MVTA's energy have GHG emission reductions:

- **Xcel Energy:** Carbon-free electricity by 2050
  - Burnsville Bus Garage
- Eagan Bus Garage
- Rosemount Transit Station

#### • Dakota Energy Association: 80% carbon-free electricity by 2023

- Apple Valley Transit Station/Apple Valley Layover
- Eagan Transit Station
- Apple Valley Gaslight
- Blackhawk Park and Ride
- Palomino Hills Park and Ride
- Lakeville Cedar Park and Ride
- 157th St
- Shakopee Public Utilities: Business Clean Energy Choice provides 100% renewable energy for \$.002/kWh above retail rate
  - Eagle Creek Park and Ride
  - Southbridge Crossings Park and Ride
- MN Valley Electric Coop: Renewable RECs available



Tons CO<sub>2</sub>e

GHG emission reduction starts with understanding historic emission data and trends. MVTA created a baseline of fleet and facilities GHG emissions.

#### 1. Action: Maintain and review monthly energy and emissions benchmarking for all buildings and fleet assets in Energy Star

• Metric: Report total facility and fleet monthly GHG emissions in Metric



#### **REDUCE FLEET GHG EMISSIONS**

(Short Time Horizon)

To maximize impact, MVTA will prioritize the largest source of emissions within our control: our fleet. MVTA pledges to effectively and continuously move toward more sustainable operations though the implementation of our Zero Emission Bus Plan, with Phase One completed in 2022, and Phase Two slated for 2023.

- 1. Action: Encourage funding opportunities for fleet electrification, facility charging upgrades, and workforce development
  - Metric: Submit 1 funding request for fleet electrification aligning with MVTA GHG emission goals



#### SUPPORT COMMUNITY ELECTRIC VEHICLE (EV) TRANSITIONS

#### (Medium Time Horizon)

National and local Electric Vehicle (EV) markets are expanding among policy incentives and infrastructure investments. MVTA and its service area cities are committed to expanding community networks of EV charging stations. Based on community needs and ridership interest, MVTA commits to installing charging stations for our riders and the public use

#### 1. Action: Install electric vehicle charging stations for public use at transit facilities

• Metric: Install EV charging stations at one facility





#### **REDUCE FACILITY OPERATION GHG EMISSIONS** (Long Time Horizon)

Beyond energy conservation, MVTA commits to increasing our renewable energy use and reducing facility emissions by capitalizing on our local utility carbon neutrality goals through beneficial electrification of MVTA's facility systems.

#### 1. Action: Increase renewable energy within energy portfolio

- consumption from a 2018 baseline
- Investment
  - energy by 2045



• Metric: 10% annual increase of Zero Emission energy to total energy

#### 2. Action: Upon end of useful life, replace natural gas heating systems with electric alternatives, given a positive Return On

• Metric: All natural gas facility systems are converted to zero emission





Increase sustainable green spaces within MVTA properties



Green space is defined as land covered with natural vegetation, that improves environmental conditions, and protects biodiversity. Sustainable green spaces generate these benefits without compromising MVTA's triple bottom line goals.

Access to green space provides multiple benefits such as **improved mental health**, **improved air quality**, **supporting biodiversity** and **reducing urban heat island effect**.



Studies show that connection to nature improves an individual's mental health by reduced anxiety, stress and depression. Vegetation naturally absorbs many air pollutants, leaving our communities less exposed to health risks like asthma. In addition, green spaces also create buffers from noise pollution. Time spent at MVTA properties can feel restorative when exposed to a natural landscape.

Urban areas can experience higher temperatures than rural areas due to land use and human activities. Hard landscaped spaces like buildings and roads tend to absorb more heat than green spaces. In contrast, air is cooled by trees, grasses and other vegetation. Green spaces are a nature-based solution to climate change mitigation through increased carbon dioxide absorption.





OBJECT

#### **INCREASE NATIVE LANDSCAPING**

#### (Short Time Horizon)

Once established, native plant landscapes provide multiple benefits and reduce several maintenance demands. Benefits include increased biodiversity through pollen and nectar production, and deep roots that hold and preserve soil moisture and prevent erosion. Maintenance benefits include reduced or eliminated irrigation, mowing, and mulching demands.

- 1. Action: Each year, MVTA will replace 2% of existing manicured lawn area with native plantings to increase biodiversity and improve water efficiency
  - Metric: 2% reduction in facility irrigation gallons/month demand (after 1 year establishment period)

#### **EXPAND TREE CANOPY COVERAGE**

(Medium Time Horizon)

Where water is conserved from reduced lawn irrigation, MVTA has committed to investing water resources to more shade trees on our properties. Riders responded to MVTA's Sustainability Plan questionnaire with the request for more shade at transit stations and park and ride locations. MVTA is committed to increasing our property shade and climate change mitigation through planting and maintaining trees.

#### 1. Action: Develop long-term plan to increase shade trees on property

• Metric: 1 additional shade tree planted annual on each property, to a 30% maximum shaded property

OBJECTIL BJECTIL

#### **INCREASE ACCESS TO NATURE FOR STAFF**

#### (Medium Time Horizon)

Access to nature supports staff wellbeing and productivity. Incorporate natural views from meeting and break rooms into facility design requirements.

- 1. Action: Require all interior design projects over 20,000 sf to include biophilia and healthy material standards
  - Metric: Interior renovation projects specify at least 10 materials meet Declare Label Declaration Status of LBC Red List Free
  - Metric: 25% of visible or exposed interior materials are based per ASTM D6866.

## **GOAL** ENVIRONMENT



Assess adverse events and plan mitigations within future infrastructure investment projects

RESILIEN.

Climate change has been often presented as a future threat, but our global and local communities have already begun to feel the impact of global climate change. Minnesota's historic climate norms already include extreme swings in precipitation and temperature. During the past decade, Minnesotan communities experienced increasing rain volume and intensity, as well as expanding drought conditions. In addition, temperatures maximums expanded to include higher heat and humidity. Minnesotans feel the impact of climate change today.

As global GHG emissions rise, international science consensus agrees that, in order to avoid the worst impacts of global climate change, humanity should limit global warming to 1.5°C above pre-industrial average temperatures and no more than 2°C. As of 2022, global warming is estimated to be an average of 1.2°C. MVTA is dedicated to increasing our climate change mitigation actions, as identified in this Sustainability Plan.

At the same time, it is prudent to plan and prepare for climate extremes as they may impact agency operations and MVTA's vital public transportation service. As defined in the National Academy of Sciences report Disaster Resilience: A National Imperative, **resilience** is "the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events or threats." MVTA cannot guarantee the mitigation of all future environmental risk, but using current trends and projected changes, we can invest now in infrastructure that can better withstand tomorrow's challenges.





#### **INCREASE FLOOD RESILIENCE**

#### (Medium Time Horizon)

The Federal Emergency Management Agency (FEMA) provides historic 100-year storm data for infrastructure risk management, but this data is proving to be outdated. The State of Minnesota has several research projects that provide guidance to infrastructure owners and designers on recent changes to storm intensity and flooding risk. MVTA commits to using a range of historic and projected flood analysis tools to assess risk in our current and future facilities and transit routes.

- 1. Action: Complete flood risk assessment, and create a flood mitigation and recovery plan for facilities within 500-year flood risk zone
  - Metric: Each property within a 500-year floor risk zone has a completed flood risk assessment and action plan



#### **INCREASE EXTREME TEMPERATURE RESILIENCE** (Medium Time Horizon)

Minnesota's winters are warming faster than most of the United States. In terms of MVTA's facilities, fleets and utility bills, warming winters do not pose a risk. However, Minnesota's increasing temperature and humidity during the summer seasons pose risk to human health.

- exposure
- 2. Action: Educate riders and staff on heat stress risk and encourage safety behaviors which reduce risk



#### **INCREASE POWER RESILIENCE** (Long Time Horizon)

As both transportation and building industries move toward electrification, we must acknowledge that local utilities may not have enough capacity to accommodate the increased demands. In addition, as climate extremes continue to drive increased cooling loads, grids may become stressed. MVTA recognizes the risk to future utility reliance and will investigate power storage or backup.

#### 1. Action: Document critical asset power needs to ensure continuity of operations and emergency preparedness

- events
- 2. Action: Evaluate renewable power and battery storage system feasibility for facilities
  - Metric: Each year, one more renewable power and battery storage feasibility study is completed for a facility

1. Action: Develop a workforce heat stress policy in compliance with OSHA and Minnesota's specific laws governing occupational heat

• Metric: Workforce heat stress policy is approved and in use

• Metric: Complete one or more education campaigns each year

• Metric: 100% critical facility operations continuity during adverse



SC

Safety





### **SOCIAL & COMMUNITY**

Diversity, Equity, Inclusion, & Belonging (DEIB)

**Healthy Communities** 

GOALS & METRICS - SOCIAL & COMMUNITY

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# **GOAL** SOCIAL & COMMUNITY



Support continuous expansion of agency DEIB initiatives



Throughout history, there have been countless examples of negative environmental and social impacts to disadvantaged communities when business decisions have been made without diverse representation of voices from all stakeholders. When we seek out a diversity of views, backgrounds and experiences in our decision making, our operations and services are more environmentally sustainable, fostering a thriving transit agency and strengthens communities.

**DEIB** is foundational to the values of MVTA's triple bottom line. At MVTA, diversity means that our workforce, our ridership, and the communities we serve are represented and celebrated for all our contributions. We believe equity means taking into account the needs of all community members and removing unnecessary barriers to the community's transportation needs, MVTA's workforce development, and to more sustainable infrastructure. And for us, inclusion means all stakeholders have a strong voice in decision making.



MVTA's goal is to include input from those we serve. We are committed to assessing community needs to distribute resources more fairly. Honoring the Civil Rights Act of 1964 and Federal Transit Authority Title VI, we strive to diversify our workforce and promote a safe and welcoming environment for all staff regardless of race, ethnicity, sexual orientation, gender identification, educational background, age, and physical ability. Diversity, equity, inclusion, and belonging is centered in all our internal and public facing work.

#### **ENHANCE PUBLIC ENGAGEMENT BEST PRACTICES** (Medium Time Horizon)

The variety of public engagement communication styles and languages used within this Sustainability Plan development exposed MVTA to new opportunities to explore for future public engagement. Using both in-person and online feedback expanded MVTA's reach to a larger geographic community than our ridership alone. The online survey provided users the opportunity to translate to any one of dozens of languages, further expanding potential engagement. MVTA is committed to exploring new engagement and communication methods in order to remove unnecessary barriers to community consideration and input on future agency service decisions.

- 1. Action: Diversify public engagement through innovative technology and methodologies to increase response rates
  - Metric: 10% annual increase of targeted public engagement with under represented populations

#### ASSESS ENVIRONMENTAL JUSTICE IN PLANNING (Short Time Horizon)

The Environmental Protection Agency (EPA) maintains a census-based environmental justice mapping and screening tool called EJScreen. This free tool allows users to visualize environmental and demographic data within the United States for any given address or community. MVTA has committed to assessing social and environmental justice data to maximize equity in infrastructure investments and operational changes.

- regulation requirements
  - Environmental Justice lens.



Source: Environmental Protection Agency - EJ Screen - www.epa.gov/ejscreen

#### 1. Action: Employ comprehensive, forward-thinking approach to service equity analyses, moving beyond minimum federal Title VI

• Metric: 100% of proposed system changes are assessed through an



#### **INCREASE DIVERSITY WITHIN WORKFORCE** (Short Time Horizon)

MVTA will benchmark our current workforce demographics through selfreporting or self-identifying surveys on race, ethnicity, sexual orientation, gender identification, educational background, age, and physical ability. Once the first year of benchmarking is completed, any new staff will be requested to complete the same survey.

- 1. Action: Develop self-identifying survey and track workplace demographics
  - Metric: 90% of staff respond to self-identifying survey
- 2. Action: Formalize workplace policy on diversity, equity, inclusion, and belonging (DEIB) within employee handbook as a supplement to existing Equal Employment Opportunity Policies
  - Metric: DEIB policy is approved and in use

# GOAL SOCIAL & COMMUNITY





#### Foster healthy communities for workforce and riders



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For the purpose of this Sustainability Plan, MVTA's communities can be categorized as both internal and external. Internal communities are those within MVTA including employees, contractors and designated agency representatives. External communities include MVTA's ridership, community members, cities, counties, as well as appointed and elected representatives.

The maintained or improved health of a community is a key driver for sustainability

PARKS AND

RECREATION

commitments and may be measured in physical, mental or economic aspects. MVTA wishes to support health in all three aspects, within both internal and external communities. We believe that our agency vision, actions and communication can create positive benefits for the people who work, play and live in our communities. We strive to make beneficial impacts to the health of our communities because MVTA is owned, operated and used by our communities. There is a direct relationship between the health of our internal and external communities and the health of our agency.





DESIGN

Image Credit: Adobe Stock



ENVIRONMENTAL QUALITY

SAFETY

#### **Physical Health**

- Physical movement and stretching throughout the day
- Access to daylight improve circadian rhythms and restful sleep
- Hydration
- Eats nutritious food
- Safety from physical harm

#### Mental Health

- Maintains work-life balance
- Strong community relationships
- Engage in spiritual or regenerative practices
- Access to mental health services
- Access to nature
- Safety from emotional harm

#### **Economic Health**

- Resources to care for themselves
- Can afford self-care
- Manages a steady balance between spending on today's needs and saving for tomorrow
- Has meaningful work
- Thrives with within a prosperous economy



#### **EVALUATE STAFF HEALTH AND SAFETY SATISFACTION** (Medium Time Horizon)

Studies have shown that a healthy workforce is an engaged workforce. When staff are healthy and happy, they are less distracted with stress, are more productive with less sick days and feel more valued when their place of employment meets basic mental, physical and financial needs. MVTA commits to assessing internal health and safety satisfaction and working toward annual improvement with annual improvements.

- safety satisfaction
  - safety



1. Action: Develop a standard annual staff survey on health and

• Metric: 90% of staff respond to the annual survey on health and



#### **ENHANCE STAFF WELLNESS OPPORTUNITIES**

#### (Short Time Horizon)

Full-time careers and associated commutes can leave personal time for healthy activities and hobbies. MVTA supports employee wellness through investment in workplace health and safety.

- 1. Action: Create exterior and internal workspaces that provide connection with nature and promote healthy breaks and social interaction
  - Metric: 100% of facilities with full time staff provide break or meeting space connection with nature
- 2. Action: Make healthier foods convenient for staff
  - Metric: Include healthy snacks and food options within the workplace
- 3. Action: Support a work culture which encourages opportunity for physical movement, health, and social engagement
  - Metric: Implement a new healthy program with annual initiatives







#### ENHANCE COMMUNITY AND RIDER WELLNESS (Long Time Horizon)

Economic, safe and high-frequency public transit can provide reliable access to basic needs such as work, education, shopping, healthcare, and entertainment . Because MVTA's transit services can support healthy communities through access to basic needs, we recognize our opportunities to directly impact the well-being and health of our communities. MVTA commits to investing in equitable distribution of services and dedicated efforts to improving transportation access to basic community needs.

#### 1. Action: Assess existing service and support access to essential community needs

completed and used for annual service reviews





• Metric: Community health needs assessment for each service city is

Source: Environmental Protection Agency - EJ Screen - <u>www.epa.gov/ejscreen</u>

# **GOAL** SOCIAL & COMMUNITY



Maintain safety of MVTA employees, riders, and community

Following the concepts outlined in the previous healthy communities goals, MVTA extends our internal and external community goals from developing and supporting health to protecting health through risk mitigation and intentional investment in occupant and property safety.





Organizations can improve safety through identification and proactive mitigation of risks. **Risk management** considers a wide range of risk spectrums from low impact to high impact and low probability to high probability. A risk probability and impact categorization, like the image below, helps to define and allocate the likelihood that a potential threat will occur, the effect it will have on the organization, and its ability to recover from the incident. This practice also provides an assessment of each risk category, enabling prioritization as to which threats are most important. Risk tolerance is defined as the amount of risk an organization or community is willing to accept from adverse events.

**Safety Management** is a systematic approach to proactively manage safety risks before accidents happen. This approach includes three main steps: leadership identifies risks and develops procedures to manage risk, communication of safety management expectations, and continuous evaluation and adjustment of safety management for optimal effectiveness.



MVTA recognizes that not every risk can be avoided and not all risks are within MVTA's power to manage. However, MVTA desires to invest in protecting the agency and its communities where we feel we can provide beneficial outcomes in safe transit systems and facility operations. Through MVTA's internal sustainability workshop, several risks were identified, and the following objectives were developed to actively reduce or recover from safety risks faced by our agency and communities.



The goal of applied CPTED principles is to prevent crime by designing a physical environment that positively influences human behavior. This crime prevention theory focuses on four principles: access control, surveillance, clear boundaries, and maintenance.

- renovations and major construction projects
  - Metric: CPTED policy is approved and in use



Crime Prevention Through Environmental Design

#### TERRITORIAL REINFORCEMENT

2023 | MVTA Sustainability Plan

#### MAXIMIZE CRIME PREVENTION THROUGH ENVIRONMENTAL

#### 1. Action: Develop CPTED policy and design criteria for future

#### **NATURAL ACCESS** CONTROL

#### CPTED

#### MAINTENANCE

SOCIAL & COMMUNITY 1 & METRICS GOALS

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#### **REDUCE WORKPLACE HAZARDS**

#### (Medium Time Horizon)

Considering employee salaries, benefits and dedicated facility equipment and amenities, employee costs rank highest in operating expenses. This means that employees are MVTA's highest investment. Beyond MVTA's core goal of creating a healthy internal community, improving employee safety provides many co-benefits to MVTA. Proactive safety assessments, policies and management procedures in the workplace reduce safety incidents, improve employee satisfaction, and mitigate expensive insurance costs.

- 1. Action: Evaluate workplace hazard probabilities and impacts, prioritize workplace safety and risk mitigation, and ensure accurate reporting
  - Metric: 2% reduction in annual workplace safety events



#### **ENHANCE COMMUNITY AND RIDER SAFETY** (Medium Time Horizon)

MVTA's transportation services are not intended to provide community services outside the boundaries of our knowledge, investment and resources. However, MVTA recognizes increased use of our fleets and facilities by community members in need of shelter or housing. To enhance the safety of our internal and external community members, MVTA is committed to collaborating with local and appropriate service providers to support at-risk or vulnerable customers and community visitors with respect and dignity. Community service providers may include law enforcement, social service agencies, local hospitals, mental health experts, and community advocates.

- service providers
  - Metric: A Risk & Action Plan is published and in use





#### 2023 | MVTA Sustainability Plan

# & METRICS - SOCIAL & COMMUNITY GOALS

#### 1. Action: Develop a Risk & Action Plan to support riders facing vulnerabilities, in collaboration with appropriate local community



& ONOMIC











# GOALS & METRICS

**VMT Reduction** 

Procurement

Transit-Oriented Development

Sustainability Management

GOALS & METRICS - ECONOMIC

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Affordable, safe and reliable transportation is a basic need that supports economic prosperity and social benefits like access to employment, basic necessities, leisure and community connections. At the same time, today's reliance on single vehicle modes of transportation creates compounding negative community impacts. Harmful impacts include water, air and ground pollution, noise, wildlife mortality and carbon emissions. Public transportation offers alternatives to single-occupancy vehicles and, therefore, reduces total vehicle miles traveled (VMT).

Public transportation, like MVTA's services within the Minneapolis/St. Paul metropolitan region, is critical to achieving Minnesota's statewide goal of 20% less VMT by 2050. During 2020, state-wide VMT dropped significantly. However, as the public emerges from the global pandemic, VMT is rebounding to pre-pandemic levels. In addition, population growth is anticipated to drive an increase in the Twin Cities VMT. MVTA's goal to increase ridership supports annual VMT reduction within Dakota, Hennepin, Ramsey and Scott counties.

![](_page_39_Figure_0.jpeg)

Transportation is the primary source of Minnesota's GHG emissions and MVTA's support of VMT reduction serves as a critical investment toward meaningful climate action. Use of mass transit reduces overall VMT and associated GHG emissions. VMT reduction through mass transit provides GHG emission reductions.

![](_page_39_Picture_2.jpeg)

One person with a 20-mile round trip commute who switches from driving to bus transit can reduce his or her daily carbon emissions by about 10 pounds, or more than 2,400 pounds in a year. This is equivalent to the carbon sequestration of roughly 18 tree seedlings grown for 10 years.

MVTA is committed to maintaining and expanding our sustainable and accessible transportation network in our communities through continued innovation, investment, collaboration, and outreach. MVTA strives MVTA is committed to maintaining and expanding our sustainable and accessible transportation network in our communities through continued innovation, investment, collaboration, and outreach. MVTA strives to expand our ridership in support of community sustainability and state-wide VMT reduction goals.

![](_page_39_Picture_5.jpeg)

#### **GROW SYSTEM RIDERSHIP** (Short Time Horizon)

Increasing ridership equals reduced single-occupied vehicles on the road, reducing congestion and negative environmental impacts.

#### 1. Action: Identify and implement opportunities for service efficiencies to maximize ridership per platform mile

![](_page_39_Picture_10.jpeg)

#### **DECREASE MVTA STAFF VMT** (Short Time Horizon)

A 20% VMT per capital reduction can be achieved by each person working from home one day per week.

• Metric: 2% increase in annual ridership per platform mile

1. Action: Prioritize mass transit or car pooling to business events

• Metric: Mass transit and car pooling policy is developed and in use

**GOALS & METRICS - ECONOMIC** 

![](_page_40_Figure_0.jpeg)

Products we consume have a carbon footprint life before and after our use. Commonly, products have a linear life which start with mining or harvesting of a natural resource, travels through manufacturing and transportation, use, and then ends with transportation to a landfill. A circular economy makes the most of material resources by reducing, reusing and recycling. Businesses have unique powers of market influence through procurement. MVTA aims to support circular economy through our contracts and procurement. In this way, the life cycle of products is extended, waste is used and a more efficient and sustainable production model is established over time.

GOALS & METRICS - ECONOMIC

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![](_page_41_Figure_0.jpeg)

As a cascading result of large corporate Environmental, Social and Governance (ESG) commitments, large and small product manufacturing and distribution companies are incentivized to provide product declarations in order to maintain our contracts. In this process, many more Environmental Product Declarations (EPD) sheets are available than ever before. EPDs provide consistent and transparent measurements to sustainability in product life cycles. MVTA commits to requesting EPDs on procured equipment and products and opting to the most sustainable option that is justifiable by a triple bottom line assessment.

BJEC >,

#### ASSESS SUPPLY CHAIN ENVIRONMENTAL PRODUCT **DECLARATIONS (EPDS)** (Medium Time Horizon)

MVTA's procured products range from commercial office to industrial materials. As contracts are renewed or initiated, products will be assessed for sustainability metrics via EPDs.

- contracts of products and materials

![](_page_41_Picture_7.jpeg)

#### PRIORITIZE PROCUREMENT OF LOCALLY PRODUCED **PRODUCTS OR MATERIALS** (Long Time Horizon)

To support local business and minimize transportation GHG emissions, MVTA will prioritize locally sourced, manufactured or distributed products and materials.

- 1. Action: Prioritize contract negotiations and purchase orders that include products and materials which are sourced, manufactured, or distributed within 500 miles
  - Metric: 2% annual increase in locally sourced contracts, assessed by purchasing costs

#### 1. Action: Evaluate EPDs for purchase agreements and vendor

• Metric: 2% annual increase in EPD product reviews

![](_page_41_Figure_15.jpeg)

# GOALS & METRICS - ECONOMIC

![](_page_42_Picture_0.jpeg)

#### PROMOTE CIRCULAR ECONOMY (CE) WITHIN VENDOR CONTRACTS

(Long Time Horizon)

To support the global circular economy transition, MVTA will strive to prioritize circular economy within our procurement.

- 1. Action: Complete assessment of existing procurement contracts for circular economy alternatives
  - Metric: 2% annual increase in CE procurement contracts, assessed by purchasing costs

![](_page_42_Picture_6.jpeg)

![](_page_42_Picture_7.jpeg)

# **GOAL** ECONOMIC

Transit-oriented development (TOD) prioritizes compact and mixeduse community design, where residents and visitors can easily travel between homes, jobs, stores and entertainment without personal vehicles.

Support increased local transit-oriented development throughout MVTA service area

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GOALS & METRICS - ECONOMIC

Typically, a transit-oriented development includes housing, commerce, and entertainment all within close proximity. The design of the community discourages private vehicles either through street design or parking accommodation. Instead, the development promotes alternative modes of transportation, such as walking, biking, ride-hailing or taxi services, and mass transit services like MVTA.

As a community service, TOD reduces transportation expenses for residents by eliminating the need for personal vehicles and maintenance expenses. MVTA understands that we can expand our ridership and services through local TOD communities, where increased density will rely on safe, efficient, and affordable mass transit services. TOD

![](_page_43_Picture_2.jpeg)

#### PUBLIC HEALTH

BJEC >,

- Increases community interaction and socializing
- Decreases vehicle accidents
- Encourages physical activity such as walking and biking

#### **SUSTAINABILITY**

- Decreases transportation emissions and pollution
- Conserves native landscapes and animal habitat through minimized sprawl
- Shared building systems can improve energy efficiency and associated GHG emissions
- ECONOMIC
- Removes access barriers to work, care and entertainment
- Saves monthly costs for personal vehicles, maintenance, insurance,
- and parking Vibrant and visible economic activity attracts consumers and investors

#### SUPPORT TOD IN COMMUNITY MASTER PLANNING

#### (Medium Time Horizon)

Because MVTA's transportation services can support healthy communities through access to basic needs, we recognize our opportunities to directly impact the wellbeing and health of our communities. MVTA commits to investing in equitable distribution of services and dedicated efforts to improving transportation access to basic community needs.

- 1. Action: Assess and support increased TOD within service area through collaborative master planning between agency and member cities
  - Metric: One TOD planning session each year
  - Metric: One or more community TOD projects successfully include MVTA's service

![](_page_43_Picture_21.jpeg)

#### **CAPITALIZE ON AVAILABLE TOD FINANCING OPPORTUNITIES**

(Long Time Horizon)

Financing with the Build America Bureau can save public project sponsors and private sector partners between 20 and 40 percent in financing costs over the life of a loan. The loans are long term (35 years and more) and authorize up to 49% of total eligible costs.

- - Metric: One TIFIA 49 application each year

![](_page_43_Picture_27.jpeg)

#### ENHANCE TRANSIT SERVICE IN LOW-INCOME HOUSING **DEVELOPMENT PLANS** (Long Time Horizon)

While the majority of MVTA's riders use mass transit for work commute, this sustainability plan's public engagement received community requests for increased public transit options to and from basic necessities such as food and healthcare. Developing affordable mass transit services between low-income residential areas and commercial services is an equitable community investment that MVTA supports.

#### 1. Action: Support and enhance transit access in low-income housing developments via collaboration with member cities

#### 1. Action: Evaluate feasibility of TIFIA financing for collaboration surrounding local TOD planning and infrastructure investments

• Metric: 100% new low-income housing developments within MVTA's services area includes MVTA review of service needs

# **GOAL** ECONOMIC

![](_page_44_Picture_1.jpeg)

Enhance MVTA resources and foster continual expansion of the management of sustainability initiatives and programs

![](_page_44_Picture_3.jpeg)

Founded in the 1990s, MVTA's business has thrived for over 30 years through wise investment and management. We believe that our continued business service and growth supports the environment and social welfare of its communities. Recognizing that resources are finite, our expanding services must maximize co-benefits in a long-term and triple bottom line return on investment priorities.

To succeed, businesses need to balance investments with available capital. Like all businesses, we rely on a return-on-investment (ROI) analysis to determine the best choice for our capital investment between competing scenarios. To reduce analysis time and costs, a short-term payback analysis can be used but it often excludes long term benefits or costs such as long-term business growth, operation and maintenance costs or savings, future replacement, and disposal costs, etc. Wherever possible, MVTA will use a long-term ROI analysis to adequately address benefits and costs to the environment, social and community, as well as business economics. Traditionally, business investment analysis has not included the social or environmental benefits or costs because it can be challenging to set a standard value to these metrics. Currently, there is no industry standard value to social or environmental benefits or losses. There are, however, several guidance documents or recommended values for social and environmental costs such as negative public health, biodiversity loss, agriculture productivity loss and increased property damage due to climate change.

**Sustainability Management** is a focused application of sustainability plans into standard business practices, prioritizing a triple bottom line of environment, social and community, as well as business economics. Using this Sustainability Plan as a roadmap, MVTA understands that sustainability management will foster and maintain a thriving and sustainable community business.

![](_page_45_Picture_2.jpeg)

![](_page_45_Picture_3.jpeg)

#### **INCREASE INTERNAL AND EXTERNAL BUY-IN TO** SUSTAINABILITY VALUES AND PRACTICES (Short Time Horizon)

Business decisions need internal and external community support to be sustained. In organizations or communities, written policies do not change culture by themselves. MVTA commits to increasing internal and external support for this sustainability plan through continuous outreach and education on its importance and benefits, leading by example and communicating progress

- to agency workforce and community members
  - campaigns each year

#### 1. Action: Communicate identified sustainability vision and values

• Metric: Complete one or more sustainability communication

#### **MVTA Sustainability Plan Goal Summary\***

Goal	Objectives Actions		Metric 1	Metric 2	Time Horizon	Responsible Department	
			ENVIRONMENT				
		Maximize Fleet Mileage Efficiency	Improve fleet Miles per Gallon (MPG)	Report on annual total fleet mileage divided by total purchased gallons of diesel		Short	Transportation
		Track Annual Energy Consumption	Maintain and review monthly energy consumption and cost benchmarking for all buildings in Energy Star Portfolio Manager	Report each facility's monthly energy consumption in kBtu and energy cost in \$USD		Short	Transportation
2			Track monthly fleet diesel purchased and fleet milege	Report fleet's monthly diesel purchased in gallons and total mileage		Short	Transportation
y Efficieno	Cut existing annual building energy consumption in half by 2030, based on a 2018	Reduce Facility Energy Use	Require triple bottom line NZEB assessments within design and construction contracts	New construction projects achieve NZEB status by 2030, when triple bottom line return on investment is beneficial and approved		Medium	Transportation
Energ	baseline	Improve Facility System Efficiencies	Develop an asset management plan that itemizes major building systems, age, anticipated replacement schedule, replacement budget, and increased efficiency criteria for system replacement	Asset Management Plan is approved and in use		Medium	Transportation
		Reduce Information Technology Footprint	Streamline IT department processes to minimize overall energy use, as applicable	Conduct annual review of IT department processes		Short	Information Technology
		Maximize Energy ROI	Install new air curtains at bus garage bays to minimize heat loss	10% reduction in annual bus garage energy use at half of operating and maintenance facilities		Short	Transportation
'n		Track Annual Water Consumption	Maintain and review monthly water consumption and cost benchmarking for all buildings in Energy Star Portfolio Manager	Report each facility's monthly water consumption in gallons		Short	Transportation
ifficienc	Reduce water consumption by	Upgrade Plumbing	Identify all existing 1.6 gallons per flush toilets and replace with dual flow alternative	2% reduction in annual facility domestic water consumption		Medium	Transportation
Water F	2% each year	Fixtures	Identify all existing hand washing faucets over 0.5 gallons per minute and adjust flow or replace with more efficient faucets	2% reduction in annual facility domestic water consumption		Medium	Transportation
		Reduce Irrigation Demands	Invest in high performance irrigation practices such as drip irrigation and rainwater reuse	2% reduction in facility irrigation gallons/month demand		Medium	Transportation
		Track Annual Facility Waste and Recycling Collection	Maintain and review monthly waste and recycling rates for all buildings in Energy Star Portfolio Manager	Report each facility's monthly waste and recyling in tons		Short	Transportation
îciency	Match Minnesota's statewide recycling rate averages	Promote recycling and reuse of IT equipment	Maintain and enhance participation in electronics recycling program	Divert 25% of surplus equipment quantities to recycling program year-over-year		Short	Information Technology
Waste Ef		Enhance Public Education and Outreach	Develop public awareness campaigns for MVTA's recycling priorities and goals, nudging transit users to adopt sustainable on waste recycling habits	Complete one or more education campaigns each year		Medium	Communications
		Enhance Staff Education and Outreach	Develop an official policy on agency recycling expectations for internal staff	Complete one or more education campaigns each year		Medium	Administration
suo		Track Annual GHG Emissions	Maintain and review monthly energy and emissions benchmarking for all buildings and fleet assets in Energy Star Portfolio Manager	Report total facility and fleet monthly GHG emissions in Metric Tons CO <sub>2</sub> e		Short	Transportation
Emissi	Eliminate Greenhouse Gas	Reduce Fleet GHG Emissions	Encourage funding opportunities for fleet electrification, facility charging upgrades, and workforce development	Submit 1 funding request for fleet electrification aligning with MVTA GHG emission goals		Short	Adminstration, Transportation
se Gas	(GHG) emissions from the agency's Scope 1 and 2	Support Community Electric Vehicle (EV) Transitions	Install electric vehicle charging stations for public use at transit facilities	Install EV charging stations at one facility.		Medium	Adminstration, Transportation
eenhou	portionos by 2030	Reduce Facility Operation	Increase renewable energy within energy portfolio	10% annual increase of Zero Emission energy to total energy consumption. from a 2018 baseline		Long	Adminstration, Transportation
Ğ		GHG Emissions	Upon end of useful life, replace natural gas heating systems with electric alternatives, given a positive Return On Investment	All natural gas facility systems are converted to zero emission energy by 2045		Long	Transportation
۵		Increase Native Landscaping	Each year, MVTA will replace 2% of existing manicured lawn area with native plantings to increase biodiversity and improve water efficiency	2% reduction in facility irrigation gallons/month demand (after 1 year establishment period)		Short	Transportation
en Spac	Increase sustainable green spaces within MVTA properties	Expand Tree Canopy Coverage	Develop long-term plan to increase shade trees on property	1 additional shade tree planted annual on each property, to a 30% maximum shaded property		Medium	Transportation
G	properties	Increase Access to Nature for Staff	Require all interior design projects over 20,000 sf to include biophilia and healthy material standards	Interior renovation projects specify at least 10 materials meeting Label Declaration Status of LBC Red List Free	25% of visible or exposed interior materials are bio- based per ASTM D6866.	Medium	Adminstration, Transportation
		Increase Flood Resilience	Complete flood risk assesment, and create a flood mitigation and recovery plan for facilities within 500-year flood risk zone	Each property within a 500-year floor risk zone has a completed flood risk assessment and action plan		Medium	Transportation
9	Assess adverse events and	Increase Extreme	Develop a workforce heat stress policy in compliance with OSHA and Minnesota's specific laws governing occupational heat exposure	Workforce heat stress policy is approved and in use		Medium	Administration
Resiliend	plan mitigations within future infrastructure investment projects	Temperature Resilience	Educate riders and staff on heat stress risk and encourage safety behaviors which reduce risk	Complete one or more education campaigns each year		Medium	Communications
		Increase Power Resilience	Document critical asset power needs to ensure continuity of operations and emergency preparedness	100% critical facility operations continuity during adverse events		Long	Transportation
			Evaluate renewable power and battery storage system feasibility for facilities	Each year, one more renewable power and battery storage feasibility study is completed for a facility		Long	Transportation

\*All identified actions and metrics are subject to MVTA budget and resource constraints

Time Horizons Short = Ongoing or 1 year Medium = 2-5 years Long = 5+ years

Goal	Object	tives	Actions	Metric 1	Metric 2	Time Horizon	Responsible Department
			SOCIAL & COMMUNI	ТҮ			
, no		Enhance Public Engagement Best Practices	Diversify public engagement through innovative technology and methodologies to increase response rates	10% annual increase of targeted public engagement with under represented populations		Medium	Communications, Planning
ging	Assess Environmental Justice in Planning	Employ comprehensive, forward-thinking approach to service equity analyses, moving beyond minimum federal Title VI regulation requirements	100% of proposed system changes are assessed through an Environmental Justice lens		Short	Planning	
Equity Belor	expansion of agency DEIB initiatives		Develop self-identifying survey and track workplace demographics	90% of staff respond to self-identifying survey		Short	Administration
Diversity, and		Increase Diversity Within Workforce	Formalize workplace policy on diversity, equity, inclusion, and belonging (DEIB) within employee handbook as a supplement to existing Equal Employment Opportunity Policies	DEIB policy is approved and in use		Short	Administration
		Evaluate Staff Health and	Develop a standard annual staff survey	90% of staff respond to the annual survey on		Medium	Administration
unities		Safety Satisfication	Create exterior and internal workspaces that provide connection with nature and promote healthy breaks and social interaction	100% of facilities with full time staff provide break or meeting space connection with nature		Medium	Administration, Transportation
E E	Foster healthy communities for	Enhance Staff Wellness Opportunities	Make healthier foods convenient for staff	Include healthy snacks and food options within the workplace		Medium	Administration
ealthy C	workforce and riders		Support a work culture which encourages opportunity for physical movement, health, and social engagement	Implement a new healthy program with annual initiatives		Medium	Administration
Ť		Enhance Community and Rider Wellness	Assess existing service and support access to essential community needs	Community health needs assessment for each service city is completed and used for annual service reviews		Long	Planning
	Max Th		Develop CPTED policy and design criteria for future renovations and major construction projects	CPTED policy is approved and in use		Medium	Transportation
Safety	Maintain safety of MVTA employees, riders, and community	Reduce Workplace Hazards	Evaluate workplace hazard probabilities and impacts, prioritize workplace safety and risk mitigation, and ensure accurate reporting	2% reduction in annual workplace safety events		Medium	Administration, Transportation
	En		Develop a Risk & Action Plan to support riders facing vulnerabilities, in collaboration with appropriate local community service providers	A Risk & Action Plan is published and in use		Medium	Administration, Transportation
			ECONOMIC				
duction	Support state-wide goal	Grow System Ridership	Identify and implement opportunities for service efficiencies to maximize ridership per platform mile	2% increase in annual ridership per platform mile		Short	Planning
VMTRec	of 20% VMT reduction by 2050	Decrease MVTA Staff VMT	Prioritize mass transit or car pooling to business events	Mass transit and car pooling policy is developed and in use		Short	Administration
	Assess Supply Chain Environmental Product Declarations (EPDS)		Evaluate EPDs for purchase agreements and vendor contracts of products and materials	2% annual increase in EPD product reviews		Medium	Administration
ocuremen	Increase sustainable procurement by 2% each year (from the previous year)	Prioritize Procurement of Locally Produced Products or Materials	Prioritize contract negotiations and purchase orders that include products and materials which are sourced, manufactured, or distributed within 500 miles	2% annual increase in locally sourced contracts, assessed by purchasing costs		Short	Administration
٩		Promote Circular Economy (CE) Within Vendor Contracts	Complete assessment of existing procurement contracts for circular economy alternatives	2% annual increase in CE procurement contracts, assessed by purchasing costs		Long	Administration
Development )	Support increased local transit-	Support TOD In Community Master Planning	Assess and support increased TOD within service area through collaborative master planning between agency and member cities	One TOD planning session each year	One or more community TOD projects successfully include MVTA's service	Medium	Administration, Transportation, Planning
riented I (TOD	oriented development throughout MVTA service area	Capitalize On Available TOD Financing Opportunities	Evaluate feasibility of TIFIA financing for collaboration surrounding local TOD planning and infrastructure investments	One TIFIA 49 application each year		Long	Administration, Transportation
Transit O		Enhance Transit Service in Low-Income Housing Development Plans	Support and enhance transit access in low-income housing developments via collaboration with member cities	100% new low-income housing developments within MVTA's services area includes MVTA review of service needs		Medium	Planning
nab ility jement	Enhance MVTA resources and foster continual expansion of the management of	Foster Growth in Sustainability Management	Grow MVTA workforce to include a designated sustainability professional, responsible for managing implementation and reporting of identified sustainability initatives	One full or part time Sustainability Management position is included in the annual budget		Short	Administration
Sustai Manaç	sustainability initiatives and programs	Increase Internal and External Buy-In To Sustainability Values and Practices	Communicate identified sustainability vision and values to agency workforce and community members	Complete one or more sustainability communication campaigns each year		Short	Communications

\*All identified actions and metrics are subject to MVTA budget and resource constraints

Time Horizons Short = Ongoing or 1 year Medium = 2-5 years Long = 5+ years

![](_page_47_Picture_0.jpeg)

MVTA Facility Energy Summary								
	Total Electricity Energy Total NG Energy Total Electricity GHG Total NG GH							
Year	(kBtu)	(kBtu) (kBtu) (Metric Tons Co		(Metric Tons CO <sub>2</sub> e)				
2018	9,794,456	23,791,997	1,343	1,190				
2019	9,957,286	31,093,334	1,365	1,555				
2020*	3,032,755	12,726,067	416	636				
2021*	3,239,810	19,168,056	444	958				

\*Incomplete 2020, 2021 Facility Data

![](_page_47_Picture_3.jpeg)

#### **MVTA Facilities Energy Consumption**

	Property Major	Property	Facility Size
MVTA Property	Utilization Type	Ownership	(square feet)
157th St. Station	Station	Owned	1,100
Apple Valley Gaslight	Station	Owned	1,700
Apple Valley Transit Station	Station	Owned	15,200
Apple Valley Layover	Layover Facility	Owned	500
Burnsville Transit Station	Station	Owned	5,700
Eagan Transit Station	Station	Owned	4,600
Rosemount Transit Station	Station	Owned	500
Blackhawk Park & Ride	Park and Ride	Leased	-
Eagle Creek Park & Ride	Park and Ride	Leased	-
Lakeville Cedar Park & Ride	Park and Ride	Leased	-
Palomino Hills Park & Ride	Park and Ride	Owned	-
Savage Park & Ride	Park and Ride	Owned	-
Southbridge Crossings Park & Ride	Park and Ride	Leased	-
Burnsville Bus Garage*	Bus Garage	Owned	74,301
Eagan Bus Garage*	Bus Garage	Owned	109,814

\*Incomplete 2020, 2021 Facility Data

	2018						
	Annual Electricity	Annual Natural Gas (NG)	Total Annual Energy	Energy Use Intensity	Energy Use Intensity (kBtu/sf/Space)		
157th St. Station	(KDIG) 82 786	270 255	362.041	(KB(d/31/91) 320	(KDtu/SI/Space)		
Apple Valley Gaslight	48 205	107 780	175 087	104	1,440 E22		
Apple Valley Transit Station	2 298 760	1 077 770	175,707	281	5 702		
Apple Valley Lavover	NA	NA	4,270,337 NA	NA			
Burnsville Transit Station	834,796	582,424	1,417,220	249	1,090		
Eagan Transit Station	248	288,047	288,295	63	384		
Rosemount Transit Station	50,361	85,841	136,202	272	681		
Blackhawk Park & Ride	33,306	-	33,306	-	118		
Eagle Creek Park & Ride	115,239	-	115,239	-	205		
Lakeville Cedar Park & Ride	65,149	-	65,149	-	341		
Palomino Hills Park & Ride	76,788	-	76,788	-	253		
Savage Park & Ride	40,378	-	40,378	-	207		
Southbridge Crossings Park & Ride	149,127	-	149,127	-	298		
Burnsville Bus Garage*	1,620,456	12,131,369	13,751,825	185	-		
Eagan Bus Garage *	4,709,202	8,319,500	13,028,702	119	-		
ΤΟΤΑΙ	10,124,801	23,791,997	33,916,798	-	-		

\*Incomplete 2020, 2021 Facility Data

#### TOTAL

213,415

#### MVTA Facilities Energy Consumption (Cont'd)

	2019						
MVTA Property	Annual Electricity (kBtu)	Annual Natural Gas (NG) (kBtu)	Total Annual Energy (kBtu)	Energy Use Intensity (kBtu/sf/yr)	Energy Use Intensity (kBtu/sf/Space)		
157th St. Station	99,913	325,100	425,013	386	1,700		
Apple Valley Gaslight	183,932	407,457	591,389	348	1,792		
Apple Valley Transit Station	2,168,394	2,013,240	4,181,634	275	5,576		
Apple Valley Layover	NA	NA	NA	NA	NA		
Burnsville Transit Station	971,068	459,972	1,431,040	251	1,101		
Eagan Transit Station	219	387,591	387,810	84	517		
Rosemount Transit Station	47,398	55,883	103,281	207	516		
Blackhawk Park & Ride	87,790	-	87,790	-	310		
Eagle Creek Park & Ride	115,420	-	115,420	-	205		
Lakeville Cedar Park & Ride	68,024	-	68,024	-	356		
Palomino Hills Park & Ride	72,898		72,898	-	240		
Savage Park & Ride	39,061	-	39,061	-	200		
Southbridge Crossings Park & Ride	150,237	-	150,237	-	300		
Burnsville Bus Garage *	1,850,258	16,398,791	18,249,049	246	-		
Eagan Bus Garage 🐇	4,431,799	11,045,300	15,477,099	141	-		

31,093,334

41,379,745

-

-

-

TOTAL

\*Incomplete 2020, 2021 Facility Data

10,286,411

	2021					
	Annual Electricity	Annual Natural Gas (NG)	Total Annual Energy	Energy Use Intensity	Energy Use Intensity	
MVIA Property	(KBtu)	(KBtu)	(KBTU)	(KBtu/st/yr)	(KBtu/st/Space)	
157th St. Station	124,627	189,264	313,891	285	1,256	
Apple Valley Gaslight	199,875	278,518	478,393	281	1,450	
Apple Valley Transit Station	1,917,490	1,587,470	3,504,960	231	4,673	
Apple Valley Layover	NA	NA	NA	NA	NA	
Burnsville Transit Station	908,858	341,053	1,249,911	219	961	
Eagan Transit Station	212	293,400	293,612	64	391	
Rosemount Transit Station	49,917	63,700	113,617	227	568	
Blackhawk Park & Ride	37,869	-	37,869	-	134	
Eagle Creek Park & Ride	NA	NA	NA	NA	NA	
Lakeville Cedar Park & Ride	71,648	-	71,648	-	375	
Palomino Hills Park & Ride	56,403	-	56,403	-	186	
Savage Park & Ride	29,727		29,727	-	152	
Southbridge Crossings Park & Ride	125,016	-	125,016	-	250	
Burnsville Bus Garage *	NA	NA	NA	NA	NA	
Eagan Bus Garage *	NA	NA	NA	NA	NA	

TOTAL 3,521,642

![](_page_48_Picture_7.jpeg)

	2020						
MVTA Property	Annual Electricity (kBtu)	Annual Natural Gas (NG) (kBtu)	Total Annual Energy (kBtu)	Energy Use Intensity (kBtu/sf/yr)	Energy Use Intensity (kBtu/sf/Space)		
157th St. Station	118,335	146,482	264,817	241	1,059		
Apple Valley Gaslight	109,253	218,142	327,395	193	992		
Apple Valley Transit Station	1,769,436	1,563,112	3,332,548	219	4,443		
Apple Valley Layover	NA	NA	NA	NA	NA		
Burnsville Transit Station	868,762	407,780	1,276,542	224	982		
Eagan Transit Station	243	229,162	229,405	50	306		
Rosemount Transit Station	39,708	49,900	89,608	179	448		
Blackhawk Park & Ride	51,116	-	51,116	-	181		
Eagle Creek Park & Ride	89,908	-	89,908	-	160		
Lakeville Cedar Park & Ride	71,206	-	71,206	-	373		
Palomino Hills Park & Ride	66,647	-	66,647	-	219		
Savage Park & Ride	33,649	-	33,649	-	173		
Southbridge Crossings Park & Ride	134,265	-	134,265	-	269		
Burnsville Bus Garage*	NA	NA	NA	NA	NA		
Eagan Bus Garage*	NA	NA	NA	NA	NA		

TOTAL

2,614,578 3,352,528 5,967,106

\*Incomplete 2020, 2021 Facility Data

![](_page_48_Picture_12.jpeg)

2,753,405	6,275,047	-	-

\*Incomplete 2020, 2021 Facility Data

![](_page_49_Figure_0.jpeg)

![](_page_49_Figure_1.jpeg)

![](_page_49_Figure_2.jpeg)

![](_page_50_Figure_0.jpeg)

![](_page_50_Figure_1.jpeg)

![](_page_50_Figure_2.jpeg)

![](_page_50_Figure_3.jpeg)

![](_page_51_Figure_0.jpeg)

![](_page_51_Picture_1.jpeg)

MVTA Water Consumption (Gallons)								
	Transit	it Stations Park and Rides Bus		Bus G	arages	Agency		
Year	Indoor	Irrigation	Irrigation	Indoor	Irrigation	Total		
2018	549	1,939	706	1,787	232	5,213		
2019	557	1,871	709	2,456	331	5,924		
2020	411	3,952	894	3,828	352	9,437		

![](_page_51_Figure_3.jpeg)

![](_page_51_Figure_4.jpeg)

![](_page_51_Figure_5.jpeg)

![](_page_52_Picture_0.jpeg)

MVTA Total Site Waste and Diverted Waste (Recycled)								
		2018		2019				
	Total Waste	Total Diverted Waste	Total Waste	Total Diverted Waste				
MVTA Property	(Tons)	(Tons)	(Tons)	(Tons)				
157th St. Station	2.4	0.4	2.3	0.4				
Apple Valley Gaslight	NA	NA	NA	NA				
Apple Valley Transit Station	5.9	NA	6.0	NA				
Apple Valley Layover		Combined with Apple	Valley Transit St	tation				
Blackhawk Park & Ride	NA	NA	NA	NA				
Burnsville Bus Garage	NA	NA	NA	NA				
Burnsville Transit Station	2.8	0.8	2.8	0.8				
Eagan Bus Garage	NA	NA	NA	NA				
Eagan Transit Station	4.6	0.4	2.4	0.4				
Eagle Creek Park & Ride	NA	NA	NA	NA				
Lakeville Cedar Park & Ride	2.3	0.4	2.4	0.4				
Palomino Hills Park & Ride	NA	NA	NA	NA				
Rosemount Transit Station	2.3	0.4	2.4	0.4				
Savage Park & Ride	2.3	0.4	2.4	0.4				
Southbridge Crossings Park & Ride	NA	NA	NA	NA				

![](_page_52_Picture_2.jpeg)

	MVTA Diesel GHG Summary								
Year	Diesel (Gallons)	Bus (miles)	Diesel CO2 (kg CO2)	Diesel CH₄ GHG (kg CO2e)	Diesel N₂O GHG (kg CO2e)	Total Diesel GHG (kg CO2e)	Total Diesel GHG (Metric Tons CO2e)		
2018	1,160,507	6,439,533	11,760,578	1,529	82,708	11,844,815	11,844.8		
2019	1,079,857	6,235,687	11,025,340	1,481	80,090	11,106,911	11,107		
2020	601,538	3,725,264	6,141,703	885	47,847	6,190,434	6,190		
2021	731,798	4,631,735	7,471,658	1,100	59,489	7,532,247	7,532		

MVTA GHG Emissions Summary							
	Fleet Diesel	Natural Gas					
Year	MT CO <sub>2</sub> e	MT CO <sub>2</sub> e	MT CO <sub>2</sub> e				
2018	11,845	1,343	1,190				
2019	11,107	1,365	1,555				
2020	6,190	416	636				
2021	7,532	444	958				

MVTA Total Site Waste and Diverted Waste (Recycled)								
		2020		2021				
	Total Waste	Total Diverted Waste	Total Waste	Total Diverted Waste				
MVTA Property	(Tons)	(Tons)	(Tons)	(Tons)				
157th St. Station	2.3	0.4	2.3	0.4				
Apple Valley Gaslight	NA	NA	NA	NA				
Apple Valley Transit Station	5.9	NA	6.0	NA				
Apple Valley Layover		Combined with Apple	e Valley Transit Statio	on				
Blackhawk Park & Ride	NA	NA	NA	NA				
Burnsville Bus Garage	NA	NA	NA	NA				
Burnsville Transit Station	2.8	0.8	2.8	0.8				
Eagan Bus Garage	NA	NA	NA	NA				
Eagan Transit Station	4.6	0.4	4.8	0.4				
Eagle Creek Park & Ride	NA	NA	NA	NA				
Lakeville Cedar Park & Ride	2.3	0.4	2.4	0.4				
Palomino Hills Park & Ride	NA	NA	NA	NA				
Rosemount Transit Station	2.3	0.4	2.4	0.4				
Savage Park & Ride	2.3	0.4	2.4	0.4				
Southbridge Crossings Park & Ride	NA	NA	NA	NA				

![](_page_52_Picture_6.jpeg)