Application

19831 - 2024 Unique Projects
20415 - Minnesota Export Transportation Equity Project
Regional Solicitation - Unique Projects

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Primary Contact

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What Grant Programs are you most interested in? — Regional Solicitation - Unique Projects

Organization Information

Name:	Global Wellness Connections
Jurisdictional Agency (if different):	
Organization Type:	In-State not for profit
Organization Website:	https://globalwellnessconnections.org/
Address:	c/o Hovland Rasmus
	Southdale Office Center
	6800 France Avenue S. Suite 190

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	City	State/Province	Postal Code/Zip

County:	Hennepin
Phone:*	763-300-7391
	Ext.

Fax:

PeopleSoft Vendor Number

Project Information

Project Name	Minnesota Export Transportation Equity Project
Primary County where the Project is Located	Hennepin
Cities or Townships where the Project is Located:	This project will focus on the 7-county Twin Cities metro area.
Jurisdictional Agency (If Different than the Applicant):	
Brief Project Description (Include location, road name/functional class, type of improvement, etc.)	

Freight traffic disproportionately affects disadvantaged communities by compromising safety, increasing

congestion, and exposing residents to pollution and noise. Two decades ago, upper body airfreight was

discontinued in the Twin Cities and Minnesota, forcing local exporters to rely on trucking to Chicago for transit

to Europe. This study examines how the lack of dedicated airfreight impacts the environment and marginalized

communities, particularly in terms of low-income and minority populations, as highlighted in Executive Order

12898 on Environmental Justice. Historic zoning practices have often placed communities of color near major

highways, exacerbating environmental injustices. Diesel trucks, though a small part of traffic, significantly

contribute to pollutants like NO_2. Reducing heavy trucking can lead to a 60% decrease in weekend truck traffic

and a subsequent 40% reduction in pollution inequality.

Approach: The project employs a multi-disciplinary approach, combining environmental science, public health

research, and logistics analysis. It begins with comprehensive data collection to understand the volume and

routes of trucking, followed by an assessment of pollution levels in affected communities. The project also

includes robust community engagement to ensure that the voices and concerns of the most impacted residents

are heard and addressed.

Collaborations: A cornerstone of this initiative is building partnerships across various sectors. Collaborations

with local communities, environmental groups, government agencies, the freight industry, academic

institutions, and technology companies are integral to the project's success. These partnerships aim to provide diverse perspectives, expertise, and resources.

Outcomes: The expected outcomes include detailed insights into the environmental impacts of current freight

practices, identification of key areas for intervention, and actionable recommendations for policymakers and

industry stakeholders leading to reduced pollution, improved health outcomes, greater environmental justice,

and improved competitiveness.

Impact: This project is positioned to not only address a regional challenge but also set a precedent for how

urban centers can tackle transportation-related environmental injustice. It aims to create a more sustainable,

efficient, and equitable freight transportation system, ultimately contributing to healthier, more livable Minnesota communities.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.

This project will investigate the environmental impact of trucking Minnesota exports to Chicago for airfreight to Europe on a low-income and minority communities (two socioeconomic factors that were explicitly named in Executive Order 12898.

Include both the CSAH/MSAS/TH references and their corresponding street names in the TIP Description (see Resources link on Regional Solicitation webpage for examples).

Project Length (Miles)

0

to the nearest one-tenth of a mile

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?

No

If yes, please identify the source(s)

Federal Amount

$480,000.00

Match Amount

$120,000.00

Minimum of 20% of project total

Project Total

$600,000.00

For transit projects, the total cost for the application is total cost minus fare revenues.

Match Percentage

20.0%

Minimum of 20%
Compute the match percentage by dividing the match amount by the project total

Source of Match Funds

To be determined in the very near future. Conversation regarding this topic is currently on-going.

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one:

2026

Select 2026 or 2027 for TDM and Unique projects only. For all other applications, select 2028 or 2029.

Additional Program Years:

2025

Select all years that are feasible if funding in an earlier year becomes available.

For All Projects

County, City, or Lead Agency

Global Wellness Connections, (GWC), a non-profit focused on connecting the Upper Midwest's Wellness Corridor to the World, through improving economic development, equity and environmental factors for the Region's population.

Zip Code where Majority of Work is Being Performed

55442

For Construction Projects Only

(Approximate) Begin Construction Date

(Approximate) End Construction Date

TERMINI: (Termini listed must be within 0.3 miles of any work)

From:
(Intersection or Address)

To:
(Intersection or Address)

DO NOT INCLUDE LEGAL DESCRIPTION

Requirements - All Projects

All Projects

1. The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement.

Yes

2. The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Briefly list the goals, objectives, strategies, and associated pages:

Freight traffic disproportionately affects disadvantaged communities by compromising safety, increasing congestion, and exposing residents to pollution and noise. Two decades ago, upper body airfreight was discontinued in the Twin Cities and Minnesota, forcing local exporters to rely on trucking to Chicago for transit to Europe. This study examines how the lack of dedicated airfreight impacts the environment and marginalized communities, particularly in terms of low-income and minority populations, as highlighted in Executive Order 12898 on Environmental Justice and Justice 40 Initiative. Historic zoning practices have often placed communities of color near major highways, exacerbating environmental injustices. Diesel trucks, though a small part of traffic, significantly contribute to pollutants like NO2. Reducing heavy trucking can lead to a 60% decrease in weekend truck traffic and a subsequent 40% reduction in pollution inequality.

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Impact: This project is positioned to not only address a regional challenge but also set a precedent for how urban centers can tackle transportation-related environmental injustice. It aims to create a more sustainable, efficient, and equitable freight transportation system, ultimately contributing to healthier, more livable Minnesota communities.

Limit 2,800 characters, approximately 400 words

3. The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages: Unique projects are exempt from this qualifying requirement because of their innovative nature.   This project is being submitted as a Unique Project.

Limit 2,800 characters, approximately 400 words

4. The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible. Unique project costs are limited to those that are federally eligible.

Check the box to indicate that the project meets this requirement.   Yes

5. Applicant is a public agency (e.g., county, city, tribal government, transit provider, etc.) or non-profit organization (TDM and Unique Projects applicants only). Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement.   Yes

6. Applicants must not submit an application for the same project elements in more than one funding application category.

Check the box to indicate that the project meets this requirement.   Yes

7. *The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below in Table 1. For unique projects, the minimum award is $500,000 and the maximum award is the total amount available each funding cycle (approximately $4,000,000 for the 2024 funding cycle).*

Check the box to indicate that the project meets this requirement.   Yes

8. *The project must comply with the Americans with Disabilities Act (ADA).*

Check the box to indicate that the project meets this requirement.   Yes

9. *In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.*

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation.

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

(TDM and Unique Project Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.   Yes

Date plan completed:

Link to plan: This is a Unique Project proposal.

Date self-evaluation completed:

Link to plan: This is a Unique Project proposal.

Upload plan or self-evaluation if there is no link

Upload as PDF

10. *The project must be accessible and open to the general public.*

Check the box to indicate that the project meets this requirement.   Yes

11. *The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017. Unique projects are exempt from this qualifying requirement.*

Check the box to indicate that the project meets this requirement.   Yes

12. *The project must represent a permanent improvement with independent utility. The term ?independent utility? means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match. Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.*

Check the box to indicate that the project meets this requirement.   Yes

13. *The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.*

Check the box to indicate that the project meets this requirement.   Yes

14. *The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.*

Check the box to indicate that the project meets this requirement.   Yes

Measure 1: Significance

A. Describe the regional impact of the project. In the response, consider the following:

- *How many people does the project directly impact?*
- *What percent of the people (in a given community/area) are directly impacted?*
- *What is the project?s geographic reach?*

Response:

The regional impact of the project in the Minneapolis-St. Paul metro area is substantial, given the area's dense population and the concentration of low-income and minority communities in proximity to major transportation routes (please see appendix). Here's an overview of the project's impact:

Direct Impact on Population:

The Twin Cities metro area, encompassing Minneapolis, St. Paul, and their suburbs, has a population of over 3 million people.

The project specifically targets low-income and minority communities that are most affected by trucking emissions. According to demographic data (see appendix), these groups constitute a nearly half a million people in the metro area's population.

If we consider the areas immediately adjacent to major trucking routes and industrial zones, the project could directly impact several hundred thousand residents. This includes people living in neighborhoods with higher exposure to pollutants from trucking traffic.

Percentage of Impacted Population:

The exact percentage of the population directly impacted varies by community and proximity to trucking routes. However, in some neighborhoods, particularly those historically subjected to environmental injustice, a significant majority of residents could be directly impacted.

For instance, in certain areas, the percentage of affected residents could be upwards of 50-60%, especially in neighborhoods predominantly inhabited by low-income and BIPOC communities.

Geographic Reach:

The project's geographic reach primarily encompasses the 7-county Twin Cities metro area. This includes Hennepin, Ramsey, Dakota, Anoka, Washington, Scott, and Carver counties.

Within this region, the focus will likely be on neighborhoods and communities situated along major trucking routes and near industrial zones where freight is frequently transported.

The reach extends to both urban centers (Minneapolis and St. Paul) and surrounding suburban areas, reflecting the diverse socio-economic and racial composition of the metro area.

In summary, the project's regional impact in the Minneapolis-St. Paul metro area is considerable, with a direct focus on hundreds of thousands of residents, particularly those in low-income and minority communities. The geographic reach covers a broad spectrum of the metro area, aligning with the major transportation routes and zones of high trucking activity. The project aims to bring substantial improvements in air quality and health outcomes for a significant portion of the metro's population.

(Limit 2,800 characters; approximately 400 words)

B. Describe the expandability of the project. If the project requires an adequate private market response, describe the characteristics of the market it could serve beyond the initial project. In the response, consider the following:

- *How can the idea be used regionwide?*
- *If not regionwide, is it a replicable project (i.e., could it be adapted elsewhere)? Describe the extent of the potential locations.*

Response:

The "Minnesota Export Transportation Equity Project" possesses considerable potential for expansion and replication beyond its initial focus in the Minneapolis-St. Paul metro area. Its adaptability and applicability to a broader market are key strengths.

Expandability Regionwide

Applicability Across the Midwest: The core concepts and methodologies of this project can be adapted to other major metropolitan areas in the Midwest, which face similar challenges related to freight transportation and environmental justice.

Scalable Data Analysis and Methodologies: The data analysis techniques and environmental impact assessment methods used in the Twin Cities can be scaled and modified to suit other urban areas with different demographics and transportation infrastructures.

Collaboration Models: The project's approach to building partnerships with local communities, government bodies, and industry stakeholders can serve as a model for similar initiatives across the region.

Replicability in Other Locations

Urban Areas with Freight Transportation Challenges: Cities with significant freight traffic, especially those relying heavily on trucking, are potential locations for replicating this project. These could include major logistics hubs or urban areas near ports, railways, or highways.

Diverse Socioeconomic Settings: The project?s focus on environmental justice makes it particularly relevant to diverse urban settings where low-income and minority communities are disproportionately affected by transportation-related pollution.

Policy-Driven Environments: Locations with a policy framework that supports environmental justice and sustainable transportation initiatives would be ideal for replicating this project. Areas where there is already an awareness and commitment to addressing environmental disparities would benefit greatly.

Market Characteristics Beyond Initial Project

Sustainable Transportation Market: The project aligns with the growing market for sustainable transportation solutions, including electric trucks, alternative fuel vehicles, and efficient logistics technologies.

Environmental Monitoring and Tech Solutions: Markets that focus on environmental monitoring, pollution control technology, and data analysis tools for sustainable urban planning would find the project?s outputs and methodologies valuable.

Public Health and Urban Planning Sectors: The project?s findings would be beneficial for markets focusing on public health, urban planning, and community development, especially those prioritizing environmental health and equity.

(Limit 2,800 characters; approximately 400 words)

Response:

C. Describe the new approach of the project to address existing and/or emerging challenge(s). Identify the challenge(s) that the approach is trying to address and discuss how the approach was developed (e.g., replicated from another region, created a new technology/idea). Also briefly describe the risk assessment of the new approach any mitigation strategies to manage risks, and who will mitigate the risk, if needed.

Examples of challenges include:

- *Problems that have been a long-term issue where progress has been limited*
- *Lack of opportunity for an emerging technology or innovation to penetrate the Twin Cities market*
- *Leveraging connected and automated (CAV) vehicle technology and infrastructure*
- *Outdated function or effectiveness of existing infrastructure*

Response:

The "Minnesota Export Transportation Equity Project" adopts a novel approach to address the challenge of environmental injustice caused by freight transportation emissions in low-income and minority communities. This project stands out in its comprehensive integration of environmental science, public health research, logistics analysis, and community engagement.

Challenges Addressed

Environmental Injustice: The project targets the disproportionate impact of freight transportation pollution on marginalized communities, a longstanding issue often overlooked in urban planning and transportation logistics.

Lack of Direct Freight Options: The absence of direct airfreight from Minnesota, forcing exports to be trucked to Chicago, creates excess emissions. This logistical inefficiency is a key challenge.

Community Health Concerns: Increased exposure to pollutants like NO_2 and particulate matter in certain communities leads to health disparities, a critical public health challenge.

Development of the Approach

Integration of Diverse Disciplines: The approach was developed by synthesizing methods from environmental studies, public health, and logistics, providing a holistic view of the issue.

Community-Centric Focus: Inspired by environmental justice movements and successful community engagement models in other regions, this project places significant emphasis on involving affected communities in the planning and decision-making process.

Leveraging Technology and Data Analysis: The project incorporates advanced data analysis and environmental monitoring techniques, some of which have been successfully used in other urban settings.

Risk Assessment and Mitigation Strategies

Risk of Inadequate Data: To mitigate this, partnerships with academic institutions and government agencies will be formed to ensure access to comprehensive and accurate data.

Technology Adoption Risks: There's a risk that proposed technological solutions may not be readily adopted. This will be mitigated by engaging with industry stakeholders early in the project to align solutions with industry capabilities and needs.

Community Engagement Risks: The risk of insufficient community buy-in will be mitigated by involving community leaders and representatives throughout the project to ensure their needs and concerns are addressed.

Policy Implementation Risks: The project might face challenges in influencing policy changes. This will be mitigated by continuous engagement with policymakers and providing them with compelling data and community-backed recommendations.

Responsibility for Risk Mitigation

Data and Technology Risks: Managed by the project team in collaboration with academic and technology partners.

Community Engagement Risks: Addressed by a dedicated community liaison team within the project.

Policy Risks: Handled by the project?s policy and stakeholder engagement units.

In summary, this project?s innovative approach lies in its interdisciplinary methodology, community-centric focus, and data-driven strategies, aiming to tackle significant environmental and health challenges. It incorporates lessons from other regions and utilizes advanced technologies, while actively engaging with stakeholders to manage and mitigate potential risks.

(Limit 4,200 characters; approximately 600 words)

Measure 2: Environmental Impact

A. Describe how the project will improve regional air quality.

Applicants must describe their methodology for determining the project impact. Also, provide a description of the people/groups that will receive either direct or indirect benefits from the project. Examples of benefits include:

- *Reduction of single-occupant vehicle (SOV) trips*
- *Access to electric vehicle charging stations*
- *Reduction of peak-hour auto trips*
- *Increase in non-motorized trips*
- *Increase in multiple-occupant vehicle trips*

Response:

The primary mechanism for this improvement is the reduction of pollutants, such as NO2 and diesel particulate matter, which are major byproducts of diesel truck emissions. We will focus on two outcomes:

1. Reduction of heavy trucks (transporting manufactured products from Minnesota to Chicago due to lack of direct air freight)

2. Improvement in Air Quality (specifically Diesel Particulate, also measured by EPA)

Methodology for Determining Project Impact

Emissions Data Collection: Gather or estimate comprehensive data on current trucking volumes, routes, and schedules for transporting goods from Minnesota to Chicago. This includes specifics on the number of trucks, types of cargo, and frequency of trips. We will rely on the truck transport volume study that the Metropolitan Airports Commission is undertaking as input.

Air Quality Monitoring: Use available air quality monitoring in identified high-impact areas (EPA has basic data set). This involves including in our analysis levels of key pollutants. Reductions of about 60% are seen in metro areas like Los Angeles where weekend levels of heavy truck emissions drop by 60% versus weekday.

Comparative Analysis: Model projections of the difference in air quality between baseline (current scenario) and post-intervention scenarios. This will provide a clear picture of the project's impact on reducing harmful emissions.

Health Impact Assessment: Do a meta-analysis public health data and based on that project likely changes in air quality and consequently health outcomes in the affected communities.

Traffic Pattern Analysis: Post-intervention, analyze changes in traffic patterns, specifically the reduction in heavy truck traffic, and correlate these changes with improvements in air quality, congestion reduction, road safety improvements, etc.

Beneficiaries of the Project

Residents of Impacted Communities: The primary beneficiaries are residents of low-income and minority communities situated near major trucking routes. They will benefit from reduced exposure to diesel particulate matter and other pollutants, leading to potential improvements in respiratory health and overall quality of life.

Local Governments and Policymakers: Local authorities will benefit from the data and insights generated, which can inform future urban planning and transportation policies aimed at improving air quality.

Freight and Logistics Industry: Reduction in trucking may lead to exploring more efficient freight modalities, like rail or air, potentially offering cost savings and efficiency improvements.

(Limit 2,800 characters; approximately 400 words)

B. Describe how the project will contribute to climate change improvement. Explain how the project will reduce greenhouse gas emissions.

Response:

The project's primary contribution to climate change improvement lies in its targeted reduction of greenhouse gas (GHG) emissions, particularly those emanating from a portion of the heavy truck traffic in the Minneapolis-St. Paul metro area. By focusing on more sustainable transportation practices and reducing reliance on diesel-fueled trucks, the project directly addresses a source of carbon emissions.

Mechanisms for Reducing Greenhouse Gas Emissions

Reduction in Diesel Truck Usage: By advocating for alternative transportation modes (like rail or airfreight) or optimizing trucking routes and schedules, the project aims to reduce the number of diesel trucks on the road. Since diesel trucks are significant emitters of CO_2 and other GHGs, their reduction will have a direct impact on lowering greenhouse gas emissions.

Promotion of Cleaner Transportation Technologies: The project explores the feasibility of adopting cleaner, more sustainable transportation technologies. This includes electric trucks or those powered by alternative fuels that emit fewer GHGs compared to traditional diesel trucks. The state is also looking at alternative aviation fuels including airfreight. Move to clean transportation necessitates that one by one we remove or pollution sources or replace them with clean ones.

Improved Logistics Efficiency: By optimizing freight logistics, the project aims to reduce unnecessary trips, idling, and congestion. More efficient logistics mean less fuel consumption and, consequently, lower GHG emissions.

Encouraging Policy Change: The project's findings and recommendations could influence policy decisions that promote sustainable transportation, including incentives for low-emission vehicles, investment in green infrastructure, and stricter emissions standards for freight transportation.

Impact on Climate Change

Direct Impact: The immediate and most measurable impact will be the reduction in CO_2 and other GHG emissions in the project area due to decreased diesel truck usage and improved transportation efficiency.

Indirect Impact: By setting a precedent and creating a model for sustainable freight transportation, the project has the potential to influence broader regional and national approaches to freight logistics. This wider adoption can lead to substantial long-term reductions in GHG emissions.

In addressing the specific issue of freight transportation emissions, this project contributes to the broader goal of mitigating climate change by reducing greenhouse gas emissions. It not only focuses on direct interventions to lower emissions from trucks but also seeks to influence systemic change in transportation policies and practices, leading to a more sustainable and climate-resilient future.

Response:

(Limit 2,800 characters; approximately 400 words)

C. Describe how the project will improve surface or ground water quality and management. Examples of improvements include:

- *Reduction of stormwater runoff and improvements to on-site stormwater management*
- *Improvements to the resiliency of infrastructure in response to stormwater events*

Response:

The project, primarily focused on reducing air pollution from trucking in the Minneapolis-St. Paul metro area, also has implications for surface and ground water quality and management. While its direct interventions are targeted at air quality, the indirect benefits to water ecosystems are due to the interconnected nature of environmental pollutants. Here's how the project contributes to improving water quality and management:

Reduction of Pollutant Runoff: Heavy truck traffic contributes to non-point source pollution. Pollutants from exhaust, as well as material wear like tire particles, can accumulate on road surfaces. During rain, these pollutants are washed into waterways, impacting surface water quality. By reducing truck traffic, the project indirectly lessens the amount of pollutants entering water systems.

Improved Soil Health: Decreased air pollution also means less deposition of harmful substances in the soil that can eventually leach into groundwater. Healthier soil can better filter and manage ground water.

Promotion of Sustainable Practices: The project may encourage the adoption of more environmentally friendly practices in the transportation industry. For instance, using cleaner fuels or electric trucks reduces the potential for harmful substances to enter the water cycle.

Summary

While the project's primary focus is on air quality, its strategies for reducing truck emissions and promoting sustainable transportation indirectly benefit water quality and management. By decreasing the amount of pollutants that can enter water systems through runoff and leaching, and by advocating for overall environmental responsibility, the project contributes to the health and sustainability of regional water resources.

(Limit 2,800 characters; approximately 400 words)

D. Describe how the project will make other environmental improvements. Examples of other environmental elements include:

- *Protection of or enhancement to wildlife habitat or movement*
- *Protection of or enhancement to natural vegetation, particularly native vegetation*
- *Reductions in or mitigation of noise or light pollution*

Response:

While primarily aimed at reducing the environmental impacts of trucking on air quality, extends its benefits to a broader spectrum of environmental improvements:

Noise Pollution Reduction: Heavy truck traffic is a significant source of noise pollution, which impacts both human health and wildlife. Reducing truck traffic, especially in residential areas, will lower noise levels, contributing to a quieter, more peaceful environment and potentially improving the health and well-being of local residents and wildlife.

Improved Traffic Flow and Reduced Congestion: By optimizing truck routes and possibly shifting some freight to other modes like rail or air, the project can contribute to smoother traffic flow. This not only reduces emissions but also minimizes the environmental impact of congestion, such as excessive fuel consumption and associated emissions from idling vehicles.

Reduced Wear and Tear on Roads: A decrease in heavy truck traffic can lead to less wear and tear on roads, reducing the need for frequent repairs and the associated environmental impact of construction activities, including emissions from construction vehicles and the use of asphalt and concrete.

Resource Efficiency in Logistics: Optimizing freight logistics not only reduces emissions but also promotes resource efficiency. This includes better fuel efficiency and a potential reduction in the overall use of resources associated with freight transportation.

Setting a Precedent for Sustainable Practices: By demonstrating the feasibility and benefits of reducing trucking-related pollution, the project sets a precedent for other cities and regions. This broader influence can lead to more widespread environmental improvements as more regions adopt similar strategies.

In conclusion, the project's approach to reducing trucking-related emissions in the Minneapolis-St. Paul metro area is expected to have multiple environmental benefits. These include reducing noise pollution, improving traffic flow, minimizing road wear, influencing sustainable urban planning, enhancing resource efficiency in logistics, and setting a precedent for sustainable practices in other regions.

(Limit 2,800 characters; approximately 400 words)

Measure 3: Racial Equity

A. Describe how the project will improve connectivity and access to places and opportunity for black, indigenous, and people of color (BIPOC) communities. Examples of improvements include:

- *Better connecting people to places, but also demonstrating an understanding of the places people want to go*
- *Connecting communities where known gaps exist (document why connection is needed and where that documentation was sourced from)*
- *Outreach to, and involvement from, BIPOC communities in project selection, development, or delivery*

Response:

The project's focus on reducing the environmental impacts of heavy trucking, particularly in low-income and minority areas in the Twin Cities metro area, has the potential to reduce exposure of BIPOC communities to heavy truck pollutants often travelling in freeways built through these communities. Here's how:

Enhanced Public Health and Quality of Life: By reducing air pollution from truck traffic, the project aims to improve the health of residents in BIPOC communities living adjacent to heavy truck transportation corridors.

Improved Local Transportation Networks: The project might indirectly influence local transportation planning, leading to better and more accessible public transportation options. Enhanced public transit connectivity is crucial for BIPOC communities, providing more reliable and affordable access to employment, education, healthcare, and other essential services.

Job Opportunities and Economic Development: We hope heavy trucks to Chicago will be replaced by airfreight from MSP to Europe. While trucking jobs will for this route will not be needed, new jobs will be developed at MSP to support airfreight. This can provide a pathway to economic mobility for individuals in BIPOC communities.

Community Engagement and Empowerment: Involvement of BIPOC communities in the project ensures their needs and voices are heard, leading to more equitable decision-making in transportation and urban planning. This empowerment can lead to greater advocacy for and realization of community needs and aspirations.

Influence on Future Urban and Regional Planning: Successful implementation of the project can set a precedent for inclusive and equitable urban planning. This can lead to more BIPOC-friendly urban spaces, where connectivity and access to opportunities are key considerations.

In summary, the project's impact on improving air quality and reducing truck traffic has far-reaching benefits for BIPOC communities, enhancing connectivity, access to opportunities, and overall quality of life. It sets the stage for more inclusive urban development where the needs of marginalized communities are prioritized and addressed.

(Limit 2,800 characters; approximately 400 words)

B. Describe how the project will remove or lessen barriers to movement, participation, or cultural recognition. Examples of improvements include:

- *Physical barriers being addressed (directly or indirectly)*
- *Cultural barriers being addressed (language, etc.)*
- *Engagement barrier being addressed (improving systemic outreach issues)*

Response:

The project, aimed at mitigating the environmental impacts of heavy trucking in the Twin Cities metro area, has the potential to address various barriers that affect movement, participation, and cultural recognition, especially in BIPOC communities. Here?s how it can address these barriers:

Physical Barriers

Reduction in Traffic Congestion: By reducing the volume of heavy trucks, the project can decrease traffic congestion. This improvement in traffic flow makes it easier for residents to move around, access services, and engage in community activities.

Safer Streets and Improved Mobility: Less truck traffic can lead to safer streets for pedestrians and cyclists in BIPOC communities. This improves mobility for all community members, including those who rely on walking or biking as their primary mode of transportation.

Enhanced Public Transit Options: Reduced road congestion can lead to more reliable and faster public transportation services heavily used by BIPOC communities.

Engagement Barriers

Systemic Outreach Improvements: The project aims to improve outreach by establishing consistent communication channels with BIPOC communities via listening sessions. This includes community meetings, collaboration with local leaders and organizations, and regular updates.

Empowering Community Voices: The project can serve as a platform for marginalized communities to voice their concerns and aspirations, thereby addressing systemic barriers to participation in transportation decisions. By facilitating involvement, the project helps to ensure that these communities have a say in local and regional planning.

In essence, the project not only aims to reduce environmental pollution from trucking but also to address physical, cultural, and engagement barriers that hinder movement, participation, and cultural recognition in BIPOC communities. By doing so, it contributes to creating more inclusive, accessible, and culturally respectful urban environments.

(Limit 2,800 characters; approximately 400 words)

C. Describe how the project will contribute to quality-of-life improvements for BIPOC communities. Examples of improvements include:

- *Placemaking or strengthening a sense of place*
- *A sense of safety or security*
- *Job creation, increased economic development*
- *Access to green space and recreation*
- *Improved public health (excluding environmental impacts discussed in criterion two)*

Response:

The project's focus on reducing the environmental impact of freight transportation has the potential to significantly contribute to quality-of-life improvements for BIPOC communities in the Minneapolis-St. Paul metro area. These improvements can be multifaceted, affecting various aspects of daily life:

Placemaking or Strengthening a Sense of Place

Enhanced Public Spaces: By reducing traffic congestion and pollution, the project can lead to the development of cleaner, more attractive public spaces. This improvement in the physical environment can foster a stronger sense of community and belonging, encouraging residents to take pride in and care for their neighborhoods.

Sense of Safety or Security

Reduced Traffic Dangers: Decreasing the number of heavy trucks on residential streets directly contributes to a safer environment for pedestrians and cyclists, particularly children and the elderly. This reduction in traffic hazards enhances the overall sense of safety within the community.

Improved Public Health: By lowering exposure to harmful pollutants, the project contributes to better overall health outcomes for residents. A healthier community where chronic diseases are less prevalent due to environmental factors can foster a greater sense of security and well-being.

Job Creation and Increased Economic Development

Job Opportunities: The shift towards sustainable transportation methods may open up new job opportunities in MSP if direct airfreight routes can be established diminishing the need to transport freight to Chicago. These jobs can provide new employment avenues, including those in BIPOC communities.

In essence, the project's efforts in improving environmental conditions, coupled with its focus on community engagement and sustainable development, will contribute to a heightened sense of place, safety, and economic opportunity in BIPOC communities. These improvements not only enhance the immediate quality of life but also lay the foundation for long-term community resilience and prosperity.

Response:

(Limit 2,800 characters; approximately 400 words)

Measure 4: Multimodal Communities

A. Describe how the project improves multiple non-single-occupant vehicle (SOV) modes within the system (e.g., transit, biking, walking, carpooling). Examples of improvements include:

- *Creating interconnectivity between modes*
- *Creating structures or facilities that serve multiple modes*
- *Improvements to multimodal trip planning or ease of use*

Response:

The project, while primarily focused on mitigating the environmental impacts of trucking, also presents opportunities to enhance and improve non-single-occupant vehicle (SOV) modes within the transportation system. These improvements can be realized through creating interconnectivity between modes, developing structures or facilities serving multiple modes, and enhancing multimodal trip planning. Here?s how:

Creating Interconnectivity Between Modes

Optimized Routes and Schedules: By analyzing and optimizing trucking routes, the project could indirectly influence the planning of public transit routes and schedules, leading to more efficient and user-friendly public transportation services that complement other modes like biking and walking.

Through these initiatives, the project can contribute to the improvement and integration of non-SOV modes, enhancing the overall efficiency, accessibility, and attractiveness of the transportation system. This holistic approach not only aligns with the project?s environmental goals but also promotes a more sustainable, inclusive, and interconnected urban mobility landscape.

(Limit 2,800 characters; approximately 400 words)

B. Describe the land use and development strategies that the project directly influences or supports that help create walkable, bikeable, and transit-friendly communities. Examples of strategies include:

- *Contributing to the growth of dense, mixed-use communities or neighborhoods*
- *Addressing the outcomes and goals in Thrive MSP 2040 and the 2040 TPP*
- *Reducing demand or need for automobile parking infrastructure (e.g., shared parking arrangements, parking management techniques)*

Response:

The project, while primarily focused on reducing the environmental impacts of trucking, also supports and influences land use and development strategies that contribute to creating transit-friendly communities. These strategies are essential for fostering sustainable urban environments. Here?s how the project aligns with and supports these strategies:

Promoting Dense, Mixed-Use Communities

Reducing Dependence on Trucking: By advocating for a reduction in truck traffic and exploring alternatives like rail or airfreight, the project indirectly supports the development of less car-dependent neighborhoods. This shift can free up land currently used for wide roads or trucking infrastructure, allowing for more pedestrian-friendly urban design.

Supporting Local Businesses: Decreased pollution and traffic congestion can make neighborhoods more attractive for local businesses and mixed-use and affordable housing developments popping up. This creates a vibrant, walkable environment where residents can access services, shopping, and recreation within a short distance of their homes.

Advocating for Policy Changes: The project can influence urban planning policies advocating for zoning laws minimizes truck transport through these neighborhoods.

Enhancing Walkability and Bikeability

Improving Street Design: The project can support the design of streets that prioritize pedestrians and cyclists. This includes wider sidewalks, protected bike lanes, and traffic-calming measures that make walking and biking safer and more enjoyable.

Supporting Transit-Friendly Communities

Integrated Transportation Planning: By contributing data and insights, the project can support integrated transportation planning that aligns freight transport needs with public transit development, ensuring that transit options are efficient, reliable, and meet community needs.

In summary, the project supports land use and development strategies that foster dense, mixed-use communities, enhance walkability and bikeability, and promote transit-friendly environments. These strategies are integral to creating sustainable, livable urban areas that prioritize the needs and well-being of residents.

(Limit 2,800 characters; approximately 400 words)

C. Describe how the project supports first- and last-mile solutions for people connecting to places they need to go. Describe the destinations the project will connect and their level of demand. Examples of strategies include.

- *Mobility hubs and centralized connections for multiple modes*
- *Increasing shared trips/shared mobility*
- *Access to job centers not located on fixed transit routes*

Response:

The project, through its focus on reducing the environmental impact of trucking and advocating for sustainable transportation practices, indirectly supports first- and last-mile solutions. These solutions are crucial for ensuring that people can efficiently and safely connect to key destinations such as work, education, healthcare, and other essential services. Here?s how the project contributes to this aspect:

Supporting First- and Last-Mile Solutions

Enhancing Non-Motorized Transport Infrastructure: By reducing truck traffic and improving air quality, the project creates a more conducive environment for walking and biking. Investments in safer and more comfortable pedestrian and bicycle infrastructure directly support first- and last-mile connectivity.

Destinations Connected and Level of Demand

Residential Areas: Particularly in BIPOC communities, improving transportation links from residential areas to essential services and other destinations is crucial. This improvement addresses the demand for equitable access to opportunities and services.

In essence, while the project?s primary focus is on reducing trucking emissions, its broader implications for urban planning and sustainable transportation directly support first- and last-mile solutions. By improving the overall transportation infrastructure and advocating for integrated mobility options, the project helps connect people to key destinations, addressing the high demand for efficient, safe, and accessible transportation in the Minneapolis-St. Paul metro area.

(Limit 2,800 characters; approximately 400 words)

Measure 6: Partnerships

A. Describe the number of stakeholder groups that have helped or will help develop the project and their role in the project?s delivery. In the response, consider the following:

- *How many partners will be involved in the project?*
- *Will there be public/private partnerships (or 4P; Public, Private, Philanthropic, and People)*
- *What percent or number of partners are small or minority-owned businesses (e.g., disadvantaged business enterprise [DBE], targeted group business [TGB], Met Council underutilized business [MCUB])*
- *Are businesses or partners locally owned or run?*

Response:

Response:

The project's success in reducing the environmental impact of trucking in the Twin Cities metro area is heavily reliant on establishing strong partnerships across various sectors. A diverse array of stakeholders has been involved in shaping our proposals intent through the International Commerce and Mobility Forum.

Number of Partners and Types of Partnerships (see list in appendix)

Public Partnerships: These include local and state government agencies, such as MNDOT and environmental departments, which provide regulatory support, access to data, and potential funding. Mayors of several cities in the area have been involved. University of Minnesota has also been engaged.

Private Partnerships: Engagement with private sector entities, particularly within the freight and logistics industry, is crucial. This includes trucking companies, logistics firms, and technology providers.

Involvement of Small, Minority-Owned, and Locally Run Businesses (see appendix)

Small and Minority-Owned Businesses: A targeted effort will be made to involve disadvantaged business enterprises (DBEs), targeted group businesses (TGBs), and Met Council underutilized businesses (MCUBs).

Locally Owned or Run Businesses: Prioritizing partnerships with locally owned or run businesses ensures that the project directly contributes to the local economy and is more aligned with community needs.

In total, the project anticipates engaging with a diverse range of partners across public, private, philanthropic, and community sectors. The exact number of partners will depend on the project's scope and specific needs as it evolves, but a broad and inclusive partnership strategy is central to its success. Emphasizing collaborations with small, minority-owned, and locally run businesses ensures that the project not only achieves its environmental and social objectives but also contributes to economic inclusivity and community empowerment.

(Limit 2,800 characters; approximately 400 words)

B. Identify the funding partners and amounts of local match provided.

Response:

A high level project plan including current and proposed partnerships that have been established through our International Commerce Mobility, (ICM), Forum efforts that include strategic thought leaders from the private, public and academic communities, is included in the appendix.

Primary Funding Source: MnDOT could serve as a primary funding source for the project, especially considering its relevance to transportation and environmental impact in Minnesota. The department often allocates funds for initiatives that align with its goals of improving transportation infrastructure, safety, and sustainability.

Grant Programs: MnDOT administers various grant programs that could be pertinent to the project. These may include grants focused on transportation improvements, environmental impact mitigation, or community development.

Currently, the Metropolitan Airports Commission, (MAC), has funded a preliminary study of the international high-value, (specifically med-device), air cargo tonnage that is trucked nightly between Chicago and MSP, for transit to Europe and other global markets. This study has been funded out of MAC budget funds and is in direct support of this proposed Unique Project effort.

Other funding sources could include the Minnesota Department of Economic Development, (MnDEED), and possibly private sources in this industry cluster that are very interested in the outcome of this analysis/project.

(Limit 2,800 characters; approximately 400 words)

Attachments

File Name	Description	File Size
2023 White Paper - Bridging Minnesota's Global Supply Chain Freight Gaps Ver1_0-GovAnalytica.pdf	"Bridge Minnesota's Export Supply Chain Transportation Gaps" is a strategic white paper developed in support of our International Commerce Mobility Forums, (four of them), held in 2023. This effort became the platform for developing this Unique Project effort.	1.2 MB
20415 UNI Global Wellness Intl Commerce Mobility budget.pdf	Project budget	121 KB
Unique Projects Submission - Environmental Justice Impact of Trucking Minnesota Exports V4.pdf	The Unique Project-Application of Interest File is a summary of this project, plus, key Appendix titled: "Preliminary Project Plan"; "Partnerships"; "Air Cargo Tonnage by Airport"; "Low-Income, Minority & Environmental Profiles"; supporting this project.	1.7 MB

Bridge Minnesota's Export Supply Chain Transportation Gaps
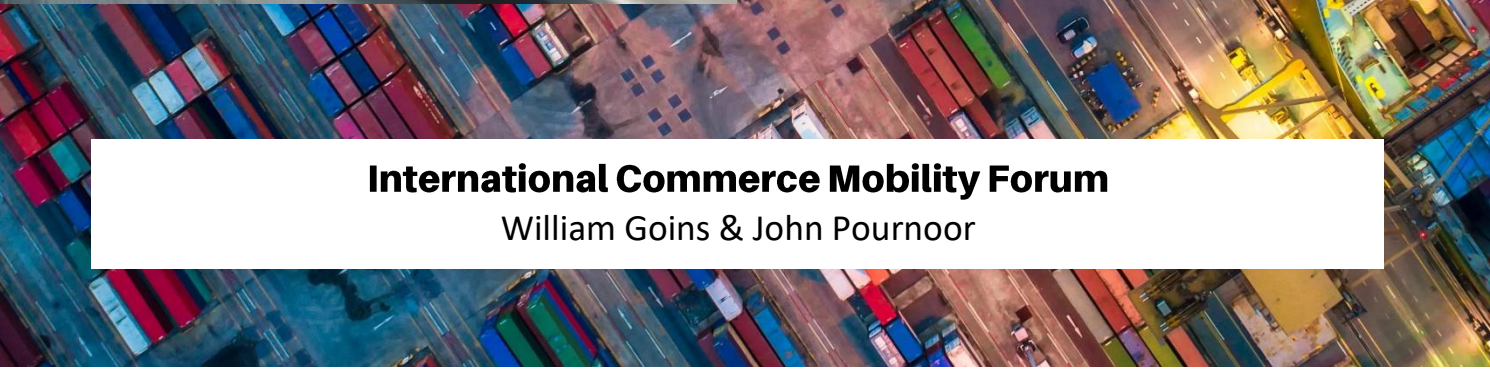
International Commerce Mobility Forum

William Goins & John Pournoor

Content

Minnesota and Global Supply Chains

The state of Minnesota's Gross State Product (GSP) was $412 billion in 2022. For our state to be successful, digital, and physical trading routes must be effective and efficient. Only then shall we be attractive to businesses to bring jobs to Minnesota as we compete to be the preferred destination for investments.

A part of our $412 billion in economic activity is due to consumption within our state, while some is due to Minnesota products finding their way to markets within the U.S., and the rest is exported to other countries worldwide. About $27.3 billion or 6.6% of State's GSP was exported beyond U.S. borders. Minnesota's major trading partners are Canada and Mexico thanks to USMCA trade agreement. Europe, Germany, Japan, and China rank high on the list.

The key strategic question for Minnesota is whether our state's logistics infrastructure is adequate and whether added investments are required. Traditionally, market forces have been allowed to organically transform supply chains. However, if additional infrastructure (roads, ports, air, rail, pipeline) is required, then state or federal government support is essential, as these types of infrastructure are built through purely public or public-private partnerships.

Identifying Minnesota's Logistics Needs

It is important to find and address bottlenecks in Minnesota supply chains. For instance, today Minnesota lacks direct air routes for exports. Minnesota's international exports must be taken by truck to an airport or seaport for transit to other countries. In the case of Europe, a key target market for Minnesota companies, air transport of high value goods our medical device manufacturers, must go to Chicago by truck to be palletized and loaded for air transport to Europe. The longer shipments are in transit, the longer it takes for customers to take delivery and pay Minnesota businesses. Shortening Minnesota's logistics and transportation routes reduces the amount of money a Minnesota business has tied up in inventory-in-transit and helps their bottom line. Investors in Minnesota take this critical element into account as they make decisions to locate operations in Minnesota.

Data-Driven Minnesota Infrastructure Investment

Tracking movement of goods and services are vital to deciding logistics bottlenecks. While for exports a company must file customs declarations and therefore there is a data trail to sort out exports by product class and by destination, for interstate and intra-state transport no such declaration is required, and data is harder to come by. Yet all this data collection is essential to make prudent investments in various transport options to assure Minnesota remains competitive. Minnesota Department of Transportation is gearing up to launch an excellent initiative quantifying the movement of freight into and out of Minnesota. Till that project generates results, action can be taken to bridge current glaring supply chain gaps like the Minnesota-to-Europe gap.

The Minnesota-Chicago Supply Chain Corridor

It is important we understand the volume and value of finished and semifinished products and high value raw materials of our various industries, in transit between MSP and Chicago O'Hare daily/nightly for shipment to international destinations. By doing so we can then begin to look at other improved supply chain and transportation options. We understand that some data and information is owned by individual companies, some by research organizations, and some by international freight forwarders to name a few. This data can provide insights into reducing the reliance on truck movement between MSP and Chicago. We believe this has the potential to supply savings for our manufacturers, reduce damage from shipment/transit handling, reduce

the cost of trucking, and improve our sustainability profile by reducing emissions from trucks currently serving these geographic areas. We believe that now is the time to study the return of an international air commerce/cargo hub and corridor to the MSP Airport or region which we lost after the Northwest Airline acquisition.

Other Minnesota Options

Other options include the use of Rochester International Airport, (RST) 78 miles away. While a future study is needed, RST could become the key freight/commerce airport for this Region much like the way Rockford, Ill. (RFD) is becoming a full-service air freight airport supporting Chicago O'Hare. This possibility could allow MSP to focus on passenger traffic expansion for many years into the future.   A future key question could be the explore transit options and connectivity between MSP and RST airports to support the movement of high-value, time-sensitive raw materials, work-in progress and finished goods.

Scenario Planning & Analysis

We believe we need to gather quantitative and qualitative data to enable the determination of how much international air freight is moving via truck to an airport for transit.   We need to know if the volume and value of products shipped can support one, three or more flights a week between MSP and a major air freight airport located in the Golden Logistics Triangle of Europe (made up of Amsterdam, Paris, and Frankfurt). An example could be the rapidly developing Liege Airport, (LGG), in Belgium.

Other key questions could include: Will companies, high-value shippers, and freight forwarders be willing to share their international air freight data? Can assurances be provided for protection of this data? Can this data be anonymized and then shared? This information can be gathered via surveys, in partnership with our chambers of commerce, from their members.

Recommendations for Minnesota's Supply Chain Revitalization

We have described the needs of current Minnesota industry and a requirement to attract future industries to Minnesota. Presidential Executive Order 14017, America's Supply Chains, set a series of steps in motion including billions of dollars available to the states to create more resilient supply chains. We have a once-in-a-generation opportunity to evaluate our needs and upgrade our logistics links with the rest of the world to not only help our businesses thrive but attract new business to Minnesota. This is an especially important task with the reshoring megatrend taking hold in the U.S with the CHIPS Act. We recommend:

1. Form an Analytics Resource Team

Form a volunteer Analytics team to be ready to lend support exploring existing data, however imperfect, and offer some granular detail on the trading routes that will reduce the number of days Minnesota exports will be in transit to reach their destination. Engage industry and academia. The team can be activated by a mechanism determined by the International Mobility Forum.

2. Pilot 1: Explore Minnesota-Liege, Belgium Route as a Rapid Export Route to the European Union

Liege, Belgium is expanding its aviation footprint. Explore either MSP or RST airports can be used to ship Minnesota-made products to their European destination, reducing the days of inventory tied up in transit for our businesses.

3. Pilot 2: Explore Minnesota-Liverpool, UK Route as a Rapid Export Route to the UK and the EU

With the emergence of a new study of Duluth to Liverpool, UK shipping, due to the possibility of open navigation throughout the year in the Great Lakes, explore this option for feasibility of reaching the UK market and the European Union market.

Summary

To attract businesses to invest in Minnesota, the state must provide competitive transportation options. As our State's economic output moves increasingly to high value products, our businesses need faster transportation and supply chain options to one of their key markets, Europe. Instead of trucking international air freight first by truck to Chicago, we can save time, reduce costs, improve economic competitiveness, and improve transportation carbon footprint by creating a direct air freight corridor between Minnesota and Europe. This requires a public-private-academic effort to drive the establishment of these economically important export links.

MINNESOTA
EXPORT STATISTICS
Department of Employment and Economic Development

m̓ MINNESOTA

First, choose to view quarterly or annual data. Then, choose a time period. Hover over map or bar charts for more information. In the last chart below, choose a country to view detailed data.
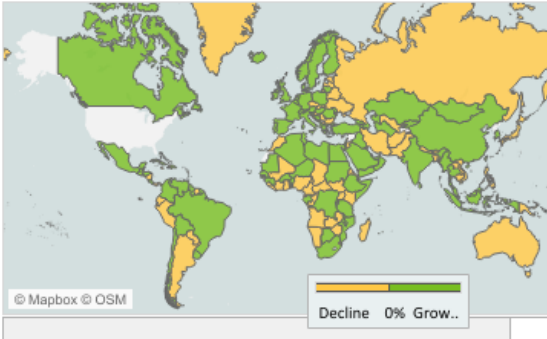
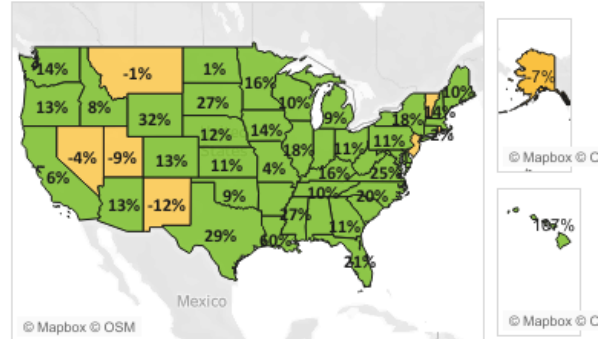| 1. Choose Quarterly or Annual Data	2. Choose a Time Period
Annual	2022

2022   MN Exports: **$27.3B**   MN Change (%): **16%**   U.S. Change (%): **18%**
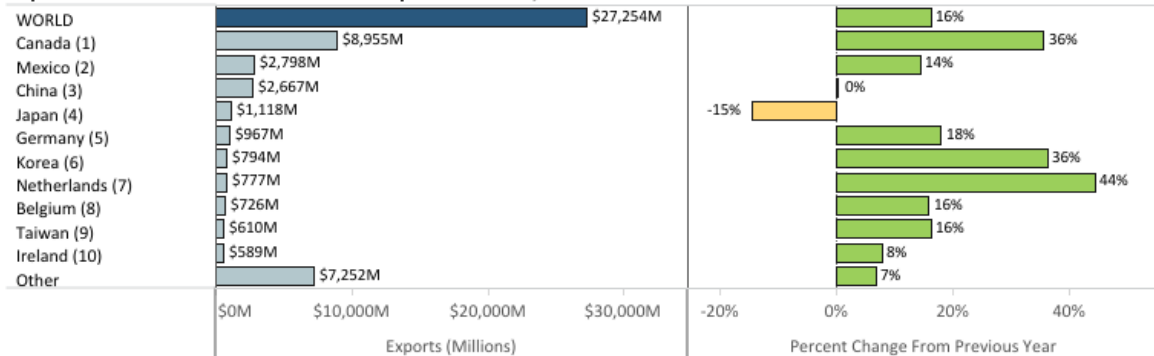
Export Growth Trends, by Country, *2022*

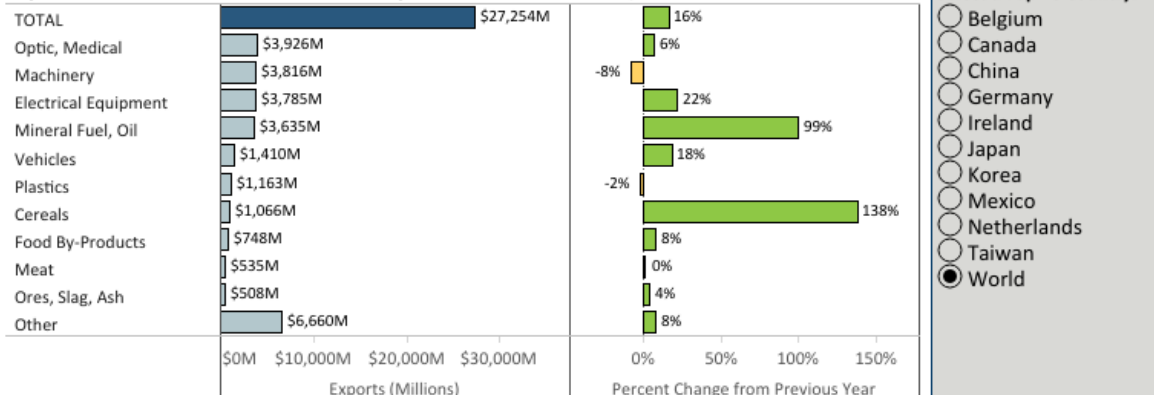Decline   0%   Grow..

Export Growth Rates, by State, *2022*

Exports and Trends for Minnesota's Top 10 Markets, *2022*

Market	Exports (Millions)	Percent Change From Previous Year
WORLD	$27,254M	16%
Canada (1)	$8,955M	36%
Mexico (2)	$2,798M	14%
China (3)	$2,667M	0%
Japan (4)	$1,118M	-15%
Germany (5)	$967M	18%
Korea (6)	$794M	36%
Netherlands (7)	$777M	44%
Belgium (8)	$726M	16%
Taiwan (9)	$610M	16%
Ireland (10)	$589M	8%
Other	$7,252M	7%

Exports and Trends for Minnesota's Top 10 Products to *World*, *2022*

Product	Exports (Millions)	Percent Change from Previous Year
TOTAL	$27,254M	16%
Optic, Medical	$3,926M	6%
Machinery	$3,816M	-8%
Electrical Equipment	$3,785M	22%
Mineral Fuel, Oil	$3,635M	99%
Vehicles	$1,410M	18%
Plastics	$1,163M	-2%
Cereals	$1,066M	138%
Food By-Products	$748M	8%
Meat	$535M	0%
Ores, Slag, Ash	$508M	4%
Other	$6,660M	8%

Select a Top 10 Country:
- ○ Belgium
- ○ Canada
- ○ China
- ○ Germany
- ○ Ireland
- ○ Japan
- ○ Korea
- ○ Mexico
- ○ Netherlands
- ○ Taiwan
- ● World

Note: Some percentage changes may be omitted from charts when they exceed 400% (or are less than -400%) to reduce chart distortion.
Data Source: Harmonized Tariff Schedule, Origin of Movement Export Series from Census Bureau, U.S. Department of Commerce, accessed from USA Trade Online (Census Bureau) and Trade Data Monitor (TDM).

Global Wellness Connections, (GWC)/International Commerce Mobility, (ICM)

Feasibility Study: Minnesota Export Transportation Equity Project

1.0. Global Wellness Connections/International Commerce Mobility
        1.1 Program Management and Coordination: $90,000

        1.2 Public Information Research and Review: $40,000

2.0. Transportation research regarding Equity and the Environmental impact on disadvantaged areas of our Region

        2.1. Required engineering services targeting impact between Twin Cities and Chicago, that will require an environmental engineering firm: $150,000

        2.2. Resources focused on modal change: the possible removal of some trucking between this Region and Chicago and replaced with a modal shift, that could have a positive impact on disadvantaged communities: $90,000

        2.3. This study will require technical resources/expertise that can focus on mid-to-deep environmental analysis since this is a fairly unique study: $100,000

        2.4. Data services in support of analysis: $30,000

3.0.   Project Advisor
        3.1. A Metropolitan-Based Strategic Advisor: $50,000

4.0. Contingency funding
        4.1. Necessary funding that is reserved for assignment by the GWC/ICM as required as the study develops: $50,000

Total Estimated Budget, (including a 20% match): $600,000

Unique Projects – Application of Interest

Minnesota Export Transportation Equity Project

Submitted 15 December 2023 to Metropolitan Council

Contents

PROJECT INFORMATION

PROJECT TITLE: Minnesota Export Transportation Equity Project

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PROJECT LOCATION (limit 100 words):

This project will focus on the 7-county Twin Cities metro area to investigate the environmental impact of trucking Minnesota exports to Chicago for airfreight to Europe on a low-income and minority communities (two socioeconomic factors that were explicitly named in Executive Order 12898 on Environmental Justice).

BRIEF PROJECT DESCRIPTION (Include types of improvements – limit to 300 words):

Freight traffic disproportionately affects disadvantaged communities by compromising safety, increasing congestion, and exposing residents to pollution and noise. Two decades ago, upper body airfreight was discontinued in the Twin Cities and Minnesota, forcing local exporters to rely on trucking to Chicago for transit to Europe. This study examines how the lack of dedicated airfreight impacts the environment and marginalized communities, particularly in terms of low-income and minority populations, as highlighted in Executive Order 12898 on Environmental Justice. Historic zoning practices have often placed communities of color near major highways, exacerbating environmental injustices. Diesel trucks, though a small part of traffic, significantly contribute to pollutants like NO_2. Reducing heavy trucking can lead to a 60% decrease in weekend truck traffic and a subsequent 40% reduction in pollution inequality.

Approach: The project employs a multi-disciplinary approach, combining environmental science, public health research, and logistics analysis. It begins with comprehensive data collection to understand the volume and routes of trucking, followed by an assessment of pollution levels in affected communities. The project also includes robust community engagement to ensure that the voices and concerns of the most impacted residents are heard and addressed.

Collaborations: A cornerstone of this initiative is building partnerships across various sectors. Collaborations with local communities, environmental groups, government agencies, the freight industry, academic institutions, and technology companies are integral to the project's success. These partnerships aim to provide diverse perspectives, expertise, and resources.

Government Analytica®   Advisors-Advocates-Analysts

Outcomes: The expected outcomes include detailed insights into the environmental impacts of current freight practices, identification of key areas for intervention, and actionable recommendations for policymakers and industry stakeholders leading to reduced pollution, improved health outcomes, greater environmental justice, and improved competitiveness.

Impact: This project is positioned to not only address a regional challenge but also set a precedent for how urban centers can tackle transportation-related environmental injustice. It aims to create a more sustainable, efficient, and equitable freight transportation system, ultimately contributing to healthier, more livable Minnesota communities.

PROJECT BUDGET AND SOURCES (Provide a general budget for the project and budget description; at a minimum, include anticipated total budget and federal request figures – limit to 100 words):

A partnership of public and private entities intended to collaborate on this project and will submit a proposal by December 18, 2023. Current project cost is estimated between $500,000 to $1 million.

Evaluation Criteria

1.   *Describe the project's significance. Describe how the project will have a regional impact or how it could be expanded to more of the region. Describe how the project will be using new approaches to existing or emerging challenges, including "proof of concept" approaches.*

This project, focused on the environmental impact of trucking Minnesota exports to Chicago, is of substantial regional importance, addressing a critical issue of pollution inequality in low-income and minority communities within the Twin Cities metro area. By exploring the correlation between freight traffic and the escalation of pollutants, the project seeks to unearth actionable insights that could lead to more equitable environmental conditions. The significance of this project is manifold:

1. **Highlighting Environmental Injustice**: This project shines a light on the disproportionate impact of freight transportation on disadvantaged communities. It aligns with concerns raised in Executive Order 12898 on Environmental Justice. By delving into specific socioeconomic factors, it offers a detailed understanding of how transportation policies might perpetuate environmental inequalities.

2. **Informing Policy and Planning**: The findings from this study will provide essential data for policymakers, aiding in the development of more equitable transportation and environmental policies. This could lead to changes in zoning practices, optimization of freight routing, and the adoption of cleaner transportation technologies.

3. **Health and Quality of Life Improvements**: A reduction in pollution from heavy trucking could result in significant health benefits for residents in affected areas, potentially decreasing the occurrence of respiratory and other pollution-related health issues.

4. **Economic Implications**: Proposing alternatives to current trucking practices, such as dedicated airfreight from Minnesota, could streamline export processes and positively influence the regional economy.

5. **Scalability and Regional Expansion**: Initially centered on the Twin Cities, the project's methodology and results could be adapted to other regions with similar challenges. This scalability ensures a wider applicability and potential for a more significant regional impact.

6. **Innovative Approaches**: The project employs new methods in data analysis, community engagement, and environmental assessment to tackle this emerging challenge. Its "proof of concept" approach, particularly in estimating the impact of reduced trucking on pollution levels, could serve as a model for other urban areas facing comparable issues.

7. **Advancing Environmental Sustainability**: By advocating for cleaner transportation methods and more efficient freight practices, the project aligns with broader goals of environmental sustainability and reduced carbon emissions.

In summary, this project is not just an environmental study; it is a step toward reimagining urban freight transportation in a way that prioritizes both efficiency and equity. It stands as a potential catalyst to show how urban centers can address the intersection of market access, transportation, environmental justice, and community health.

2.   *Describe how the project will reduce the adverse environmental impacts of transportation.*
This project focuses on reducing the environmental impact of trucking in Minnesota, particularly in low-income and minority areas of the Twin Cities. It uses a comprehensive approach, including data analysis, community involvement, and innovative strategies to create sustainable and equitable transportation. Key aspects include:

1. **Emission Analysis & Reduction**: Quantifying emissions from heavy trucking to identify major pollutants like NO_2 and particulate matter. Solutions include rerouting trucks, enforcing stricter emissions standards, and adopting cleaner technologies like electric/hybrid trucks.

2. **Policy Recommendations & Implementation**: Making data-backed policy suggestions at local/regional levels. Proposals include using alternative freight modes, incentives for cleaner technologies, and zoning law revisions to protect vulnerable communities.

3. **Community-Centric Solutions**: Engaging with impacted communities to ensure solutions align with their needs and preferences, focusing on environmental justice.

4. **Sustainable Freight Practices**: Advocating for optimized routing, off-peak deliveries, and alternative freight options to reduce truck numbers.

5. **Educational & Awareness Campaigns**: Raising awareness about the environmental and health impacts of freight transportation, targeting both the public and industry stakeholders.

6. **Monitoring & Evaluation Framework**: Implementing a system to track the effectiveness of changes, allowing for adjustments and improvements.

Overall, the project aims to address environmental challenges posed by heavy trucking, offering practical, data-driven solutions for pollution reduction, community protection, and sustainable transportation.

3.   How will the project directly improve racial equity, particularly for black, indigenous and people of color?

This project aims to enhance racial equity, especially for BIPOC communities, by mitigating the unequal environmental impacts of transportation pollution. Key strategies include:

1. **Focusing on Affected Areas:** Targeting low-income, minority neighborhoods in the Twin Cities metro area, which face greater pollution burdens due to their proximity to highways and industrial zones.

2. **Improving Health Equity:** Addressing respiratory and other health issues prevalent in BIPOC communities near heavy traffic areas by reducing pollution, congestion, noise, and improving road safety, thereby enhancing air quality and health outcomes.

3. **Community Engagement:** Involving BIPOC communities in discussions to incorporate their concerns into decision-making, promoting empowerment and ownership over solutions.

4. **Policy Advocacy:** Using project findings to advocate for policies that prioritize environmental justice, such as stricter emission controls and investments in cleaner transportation, specifically benefiting affected communities.

5. **Economic Benefits:** Healthier environments may lead to lower healthcare costs, more livable neighborhoods, increased property values, and economic opportunities for BIPOC communities.

6. **Educational Outreach:** Educating residents about the links between transportation, pollution, and health, empowering them to advocate for their rights and improved environmental conditions.

7. **Setting a Precedent:** Successful project implementation can serve as a model for addressing similar issues elsewhere, encouraging broader systemic changes that prioritize racial equity in environmental policies.

Overall, the project targets reducing environmental and health burdens in BIPOC communities caused by transportation pollution through comprehensive research, community involvement, policy advocacy, and educational efforts.

4.   Describe how the project supports multimodal logistics.

The project aims to improve Minnesota's export transport to Chicago by promoting multimodal logistics, which combines different transportation modes for efficiency and sustainability. Key aspects include:

1. **Alternative Freight Modes**: Exploring options like rail or airfreight alongside trucks to reduce environmental impact and enhance efficiency.

2. **Route Optimization**: Analyzing truck routes and schedules to optimize multimodal usage, potentially integrating rail for longer distances and trucks for last-mile delivery.

3. **Congestion and Emission Reduction**: By diversifying transport methods, the project aims to decrease road congestion, emissions, and road wear.

4. **Supply Chain Efficiency**: Investigating various logistic strategies, including multimodal solutions, for more reliable and eco-friendly goods movement.

5. **Policy and Infrastructure**: The project will likely suggest policy changes and infrastructure development to support multimodal logistics, like intermodal facilities and incentives for cleaner transport methods.

6. **Economic Competitiveness**: Enhancing regional economic competitiveness by reducing transport costs and improving shipment reliability.

In essence, the project not only tackles environmental issues related to trucking but also fosters a more integrated, efficient, and sustainable freight transport system. This holistic approach is vital for meeting future transport needs while minimizing environmental impacts and boosting economic growth.

5.   Describe how the project will build partnerships or collaboration.

The project to mitigate Minnesota's trucking exports' environmental impact relies on diverse collaborations:

1. Local Community Engagement: Involving local communities, particularly in low-income and minority areas, is crucial. Partnerships with local organizations and leaders will ensure community needs are addressed.

2. Environmental and Public Health Groups: Collaborating with these groups offers insights into transportation emissions' environmental and health effects, aiding advocacy and information dissemination.

3. Government Agency Cooperation: Partnering with local, state, and federal agencies is key for data access, regulatory support, and policy implementation.

4. Industry Engagement: Working with the freight and logistics industry, including trucking companies, helps understand operational challenges and develop feasible solutions.

5. Academic and Research Institution Involvement: Collaboration with universities and research institutes enhances data analysis and research in environmental science, transportation, and public health.

6. Technology Partnerships: Teaming up with tech companies specializing in transportation and environmental monitoring provides innovative solutions for emissions tracking and reduction.

7. Networking with NGOs: Partnering with NGOs focusing on environmental justice and sustainable transportation boosts advocacy and offers platforms for sharing best practices. These partnerships aim to gather data, develop effective solutions, and ensure stakeholder implementation, crucial for lasting change and reducing trucking's environmental impact on disadvantaged communities.

PROJECT TITLE: Minnesota Export Transportation Equity Project

1. Significance

Measure A -- Regional Impact

Freight traffic disproportionately affects disadvantaged communities by compromising safety, increasing congestion, and exposing residents to pollution and noise. Two decades ago, upper body airfreight was discontinued in the Twin Cities and Minnesota, forcing local exporters to rely on trucking to Chicago for transit to Europe. This study examines how the lack of dedicated airfreight impacts the environment and marginalized communities, particularly in terms of low-income and minority populations, as highlighted in Executive Order 12898 on Environmental Justice. Historic zoning practices have often placed communities of color near major highways, exacerbating environmental injustices. Diesel trucks, though a small part of traffic, significantly contribute to pollutants like NO2. Reducing heavy trucking can lead to a 60% decrease in weekend truck traffic and a subsequent 40% reduction in pollution inequality.

Here's an overview of the project's impact:

1. **Direct Impact on Population**:

   - The Twin Cities metro area, encompassing Minneapolis, St. Paul, and their suburbs, has a population of over 3 million people.

   - The project specifically targets low-income and minority communities that are most affected by trucking emissions. According to demographic data (see appendix), these groups constitute a nearly half a million people in the metro area's population.

   - If we consider the areas immediately adjacent to major trucking routes and industrial zones, the project could directly impact several hundred thousand residents. This includes people living in neighborhoods with higher exposure to pollutants from trucking traffic.

2. **Percentage of Impacted Population**:

   - The exact percentage of the population directly impacted varies by community and proximity to trucking routes. However, in some neighborhoods, particularly those historically subjected to environmental injustice, a significant majority of residents could be directly impacted.

   - For instance, in certain areas, the percentage of affected residents could be upwards of 50-60%, especially in neighborhoods predominantly inhabited by low-income and BIPOC communities.

3. **Geographic Reach**:

   - The project's geographic reach primarily encompasses the 7-county Twin Cities metro area. This includes Hennepin, Ramsey, Dakota, Anoka, Washington, Scott, and Carver counties.

- Within this region, the focus will likely be on neighborhoods and communities situated along major trucking routes and near industrial zones where freight is frequently transported.

- The reach extends to both urban centers (Minneapolis and St. Paul) and surrounding suburban areas, reflecting the diverse socio-economic and racial composition of the metro area.

Measure B – Expandability

The "Minnesota Export Transportation Equity Project" possesses considerable potential for expansion and replication beyond its initial focus in the Minneapolis-St. Paul metro area. Its adaptability and applicability to a broader market are key strengths.

Expandability Regionwide

1. **Applicability Across the Midwest**: The core concepts and methodologies of this project can be adapted to other major metropolitan areas in the Midwest, which face similar challenges related to freight transportation and environmental justice.

2. **Scalable Data Analysis and Methodologies**: The data analysis techniques and environmental impact assessment methods used in the Twin Cities can be scaled and modified to suit other urban areas with different demographics and transportation infrastructures.

3. **Collaboration Models**: The project's approach to building partnerships with local communities, government bodies, and industry stakeholders can serve as a model for similar initiatives across the region.

Replicability in Other Locations

1. **Urban Areas with Freight Transportation Challenges**: Cities with significant freight traffic, especially those relying heavily on trucking, are potential locations for replicating this project. These could include major logistics hubs or urban areas near ports, railways, or highways.

2. **Diverse Socioeconomic Settings**: The project's focus on environmental justice makes it particularly relevant to diverse urban settings where low-income and minority communities are disproportionately affected by transportation-related pollution.

3. **Policy-Driven Environments**: Locations with a policy framework that supports environmental justice and sustainable transportation initiatives would be ideal for replicating this project. Areas where there is already an awareness and commitment to addressing environmental disparities would benefit greatly.

Market Characteristics Beyond Initial Project

1. **Sustainable Transportation Market**: The project aligns with the growing market for sustainable transportation solutions, including electric trucks, alternative fuel vehicles, and efficient logistics technologies.

2. **Environmental Monitoring and Tech Solutions**: Markets that focus on environmental monitoring, pollution control technology, and data analysis tools for sustainable urban planning would find the project's outputs and methodologies valuable.

3. **Public Health and Urban Planning Sectors**: The project's findings would be beneficial for markets focusing on public health, urban planning, and community development, especially those prioritizing environmental health and equity.

In conclusion, the Minnesota Export Transportation Equity Project is not only a critical initiative for the Twin Cities but also represents a template for other regions and markets focusing on the intersection of transportation, environmental justice, and sustainable urban development. Its methodologies, collaborative approaches, and focus on policy and community engagement make it a replicable and expandable model for a wide range of locations and markets.

Measure C – New Approach

The "Minnesota Export Transportation Equity Project" adopts a novel approach to address the challenge of environmental injustice caused by freight transportation emissions in low-income and minority communities. This project stands out in its comprehensive integration of environmental science, public health research, logistics analysis, and community engagement.

Challenges Addressed

1. **Environmental Injustice**: The project targets the disproportionate impact of freight transportation pollution on marginalized communities, a longstanding issue often overlooked in urban planning and transportation logistics.

2. **Lack of Direct Freight Options**: The absence of direct airfreight from Minnesota, forcing exports to be trucked to Chicago, creates excess emissions. This logistical inefficiency is a key challenge.

3. **Community Health Concerns**: Increased exposure to pollutants like NO_2 and particulate matter in certain communities leads to health disparities, a critical public health challenge.

Development of the Approach

- **Integration of Diverse Disciplines**: The approach was developed by synthesizing methods from environmental studies, public health, and logistics, providing a holistic view of the issue.

- **Community-Centric Focus**: Inspired by environmental justice movements and successful community engagement models in other regions, this project places significant emphasis on involving affected communities in the planning and decision-making process.

- **Leveraging Technology and Data Analysis**: The project incorporates advanced data analysis and environmental monitoring techniques, some of which have been successfully used in other urban settings.

Risk Assessment and Mitigation Strategies

1. **Risk of Inadequate Data**: To mitigate this, partnerships with academic institutions and government agencies will be formed to ensure access to comprehensive and accurate data.

2. **Technology Adoption Risks**: There's a risk that proposed technological solutions may not be readily adopted. This will be mitigated by engaging with industry stakeholders early in the project to align solutions with industry capabilities and needs.

3. **Community Engagement Risks**: The risk of insufficient community buy-in will be mitigated by involving community leaders and representatives throughout the project to ensure their needs and concerns are addressed.

4. **Policy Implementation Risks**: The project might face challenges in influencing policy changes. This will be mitigated by continuous engagement with policymakers and providing them with compelling data and community-backed recommendations.

Responsibility for Risk Mitigation

-   **Data and Technology Risks**: Managed by the project team in collaboration with academic and technology partners.

-   **Community Engagement Risks**: Addressed by a dedicated community liaison team within the project.

-   **Policy Risks**: Handled by the project's policy advocacy and stakeholder engagement units.

In summary, this project's innovative approach lies in its interdisciplinary methodology, community-centric focus, and data-driven strategies, aiming to tackle significant environmental and health challenges. It incorporates lessons from other regions and utilizes advanced technologies, while actively engaging with stakeholders to manage and mitigate potential risks.

2. Environmental Impacts

Measure A – Improve air quality

The primary mechanism for this improvement is the reduction of pollutants, such as NO2 and diesel particulate matter, which are major byproducts of diesel truck emissions. We will focus on two outcomes:

1. Reduction of heavy trucks (transporting manufactured products from Minnesota to Chicago due to lack of direct air freight)
2. Improvement in Air Quality (specifically Diesel Particulate, also measured by EPA)

Methodology for Determining Project Impact

1. **Emissions Data Collection**: Gather or estimate comprehensive data on current trucking volumes, routes, and schedules for transporting goods from Minnesota to Chicago. This includes specifics on the number of trucks,

types of cargo, and frequency of trips. We will rely on the truck transport volume study that the Metropolitan Airports Commission is undertaking as input.

2. **Air Quality Monitoring**: Use available air quality monitoring in identified high-impact areas (EPA has basic data set). This involves including in our analysis levels of key pollutants. Reductions of about 60% are seen in metro areas like Los Angeles where weekend levels of heavy truck emissions drop by 60% versus weekday.

3. **Comparative Analysis**: Model projections of the difference in air quality between baseline (current scenario) and post-intervention scenarios. This will provide a clear picture of the project's impact on reducing harmful emissions.

4. **Health Impact Assessment**: Do a meta analysis public health data and based on that project likely changes in air quality and consequently health outcomes in the affected communities.

5. **Traffic Pattern Analysis**: Post-intervention, analyze changes in traffic patterns, specifically the reduction in heavy truck traffic, and correlate these changes with improvements in air quality, congestion reduction, road safety improvements, etc.

Beneficiaries of the Project

1. **Residents of Impacted Communities**: The primary beneficiaries are residents of low-income and minority communities situated near major trucking routes. They will benefit from reduced exposure to diesel particulate matter and other pollutants, leading to potential improvements in respiratory health and overall quality of life.

2. **Local Governments and Policymakers**: Local authorities will benefit from the data and insights generated, which can inform future urban planning and transportation policies aimed at improving air quality.

3. **Freight and Logistics Industry**: Reduction in trucking may lead to exploring more efficient freight modalities, like rail or air, potentially offering cost savings and efficiency improvements.

Measure B – Contribution to climate change improvement

The project's primary contribution to climate change improvement lies in its targeted reduction of greenhouse gas (GHG) emissions, particularly those emanating from a portion of the heavy truck traffic in the Minneapolis-St. Paul metro area. By focusing on more sustainable transportation practices and reducing reliance on diesel-fueled trucks, the project directly addresses a source of carbon emissions.

Mechanisms for Reducing Greenhouse Gas Emissions

1. **Reduction in Diesel Truck Usage**: By advocating for alternative transportation modes (like rail or airfreight) or optimizing trucking routes and schedules, the project aims to reduce the number of diesel trucks on the road. Since diesel trucks are significant emitters of CO_2 and other GHGs, their reduction will have a direct impact on lowering greenhouse gas emissions.

2. **Promotion of Cleaner Transportation Technologies**: The project explores the feasibility of adopting cleaner, more sustainable transportation technologies. This includes electric trucks or those powered by alternative fuels that emit fewer GHGs compared to traditional diesel trucks. The state is also looking at alternative aviation fuels including airfreight. Move to clean transportation necessitates that one by one we remove or pollution sources or replace them with clean ones.

3. **Improved Logistics Efficiency**: By optimizing freight logistics, the project aims to reduce unnecessary trips, idling, and congestion. More efficient logistics mean less fuel consumption and, consequently, lower GHG emissions.

4. **Encouraging Policy Change**: The project's findings and recommendations could influence policy decisions that promote sustainable transportation, including incentives for low-emission vehicles, investment in green infrastructure, and stricter emissions standards for freight transportation.

Impact on Climate Change

- **Direct Impact**: The immediate and most measurable impact will be the reduction in CO2 and other GHG emissions in the project area due to decreased diesel truck usage and improved transportation efficiency.

- **Indirect Impact**: By setting a precedent and creating a model for sustainable freight transportation, the project has the potential to influence broader regional and national approaches to freight logistics. This wider adoption can lead to substantial long-term reductions in GHG emissions.

Summary

In addressing the specific issue of freight transportation emissions, this project contributes to the broader goal of mitigating climate change by reducing greenhouse gas emissions. It not only focuses on direct interventions to lower emissions from trucks but also seeks to influence systemic change in transportation policies and practices, leading to a more sustainable and climate-resilient future.

Measure C – Improve surface or ground water quality and management

The project, primarily focused on reducing air pollution from trucking in the Minneapolis-St. Paul metro area, also has implications for surface and ground water quality and management. While its direct interventions are targeted at air quality, the indirect benefits to water ecosystems are due to the interconnected nature of environmental pollutants. Here's how the project contributes to improving water quality and management:

1. **Reduction of Pollutant Runoff**: Heavy truck traffic contributes to non-point source pollution. Pollutants from exhaust, as well as material wear like tire particles, can accumulate on road surfaces. During rain, these pollutants are washed into waterways, impacting surface water quality. By reducing truck traffic, the project indirectly lessens the amount of pollutants entering water systems.

2. **Improved Soil Health**: Decreased air pollution also means less deposition of harmful substances in the soil that can eventually leach into groundwater. Healthier soil can better filter and manage ground water.

3. **Promotion of Sustainable Practices**: The project may encourage the adoption of more environmentally friendly practices in the transportation industry. For instance, using cleaner fuels or electric trucks reduces the potential for harmful substances to enter the water cycle.

Summary

While the project's primary focus is on air quality, its strategies for reducing truck emissions and promoting sustainable transportation indirectly benefit water quality and management. By decreasing the amount of pollutants that can enter water systems through runoff and leaching, and by advocating for overall environmental responsibility, the project contributes to the health and sustainability of regional water resources.

Measure D – Other environmental improvements

While primarily aimed at reducing the environmental impacts of trucking on air quality, extends its benefits to a broader spectrum of environmental improvements:

1. **Noise Pollution Reduction**: Heavy truck traffic is a significant source of noise pollution, which impacts both human health and wildlife. Reducing truck traffic, especially in residential areas, will lower noise levels, contributing to a quieter, more peaceful environment and potentially improving the health and well-being of local residents and wildlife.

2. **Improved Traffic Flow and Reduced Congestion**: By optimizing truck routes and possibly shifting some freight to other modes like rail or air, the project can contribute to smoother traffic flow. This not only reduces emissions but also minimizes the environmental impact of congestion, such as excessive fuel consumption and associated emissions from idling vehicles.

3. **Reduced Wear and Tear on Roads**: A decrease in heavy truck traffic can lead to less wear and tear on roads, reducing the need for frequent repairs and the associated environmental impact of construction activities, including emissions from construction vehicles and the use of asphalt and concrete.

4. **Resource Efficiency in Logistics**: Optimizing freight logistics not only reduces emissions but also promotes resource efficiency. This includes better fuel efficiency and a potential reduction in the overall use of resources associated with freight transportation.

5. **Setting a Precedent for Sustainable Practices**: By demonstrating the feasibility and benefits of reducing trucking-related pollution, the project sets a precedent for other cities and regions. This broader influence can lead to more widespread environmental improvements as more regions adopt similar strategies.

Summary

In conclusion, the project's approach to reducing trucking-related emissions in the Minneapolis-St. Paul metro area is expected to have multiple environmental benefits. These include reducing noise pollution, improving traffic flow, promoting green infrastructure, minimizing road wear, influencing sustainable urban planning, enhancing resource efficiency in logistics, and setting a precedent for sustainable practices in other regions.

3. Racial Equity

Measure A – Improve connectivity and access to places and opportunity for BIPOC communities

The project's focus on reducing the environmental impacts of heavy trucking, particularly in low-income and minority areas in the Twin Cities metro area, has the potential to reduce exposure of BIPOC communities to heavy truck pollutants often travelling in freeways built through these communities. Here's how:

1. **Enhanced Public Health and Quality of Life**: By reducing air pollution from truck traffic, the project aims to improve the health of residents in BIPOC communities living adjacent to heavy truck transportation corridors.

2. **Improved Local Transportation Networks**: The project might indirectly influence local transportation planning, leading to better and more accessible public transportation options. Enhanced public transit connectivity is crucial for BIPOC communities, providing more reliable and affordable access to employment, education, healthcare, and other essential services.

3. **Job Opportunities and Economic Development**: We hope heavy trucks to Chicago will be replaced by airfreight from MSP to Europe. While trucking jobs will for this route will not be needed, new jobs will be developed at MSP to support airfreight. This can provide a pathway to economic mobility for individuals in BIPOC communities.

4. **Community Engagement and Empowerment**: Involvement of BIPOC communities in the project ensures their needs and voices are heard, leading to more equitable decision-making in transportation and urban planning. This empowerment can lead to greater advocacy for and realization of community needs and aspirations.

5. **Influence on Future Urban and Regional Planning**: Successful implementation of the project can set a precedent for inclusive and equitable urban planning. This can lead to more BIPOC-friendly urban spaces, where connectivity and access to opportunities are key considerations.

In summary, the project's impact on improving air quality and reducing truck traffic has far-reaching benefits for BIPOC communities, enhancing connectivity, access to opportunities, and overall quality of life. It sets the stage for more inclusive urban development where the needs of marginalized communities are prioritized and addressed.

Measure B – Removing barriers

The project, aimed at mitigating the environmental impacts of heavy trucking in the Twin Cities metro area, has the potential to address various barriers that affect movement, participation, and cultural recognition, especially in BIPOC communities. Here's how it can address these barriers:

Physical Barriers

1. **Reduction in Traffic Congestion**: By reducing the volume of heavy trucks, the project can decrease traffic congestion. This improvement in traffic flow makes it easier for residents to move around, access services, and engage in community activities.

2. **Safer Streets and Improved Mobility**: Less truck traffic can lead to safer streets for pedestrians and cyclists in BIPOC communities. This improves mobility for all community members, including those who rely on walking or biking as their primary mode of transportation.

3. **Enhanced Public Transit Options**: Reduced road congestion can lead to more reliable and faster public transportation services heavily used by BIPOC communities.

Engagement Barriers

1. **Systemic Outreach Improvements**: The project aims to improve outreach by establishing consistent communication channels with BIPOC communities via listening sessions. This includes community meetings, collaboration with local leaders and organizations, and regular updates.

2. **Empowering Community Voices**: The project can serve as a platform for marginalized communities to voice their concerns and aspirations, thereby addressing systemic barriers to participation in transportation decisions. By facilitating involvement, the project helps to ensure that these communities have a say in local and regional planning.

In essence, the project not only aims to reduce environmental pollution from trucking but also to address physical, cultural, and engagement barriers that hinder movement, participation, and cultural recognition in BIPOC communities. By doing so, it contributes to creating more inclusive, accessible, and culturally respectful urban environments.

Measure C – Contributions to quality-of-life improvements

The project's focus on reducing the environmental impact of freight transportation has the potential to significantly contribute to quality-of-life improvements for BIPOC communities in the Minneapolis-St. Paul metro area. These improvements can be multifaceted, affecting various aspects of daily life:

Placemaking or Strengthening a Sense of Place

1. **Enhanced Public Spaces**: By reducing traffic congestion and pollution, the project can lead to the development of cleaner, more attractive public spaces. This improvement in the physical environment can foster a stronger sense of community and belonging, encouraging residents to take pride in and care for their neighborhoods.

Sense of Safety or Security

1. **Reduced Traffic Dangers**: Decreasing the number of heavy trucks on residential streets directly contributes to a safer environment for pedestrians and cyclists, particularly children and the elderly. This reduction in traffic hazards enhances the overall sense of safety within the community.

2. **Improved Public Health**: By lowering exposure to harmful pollutants, the project contributes to better overall health outcomes for residents. A healthier community where chronic diseases are less prevalent due to environmental factors can foster a greater sense of security and well-being.

Job Creation and Increased Economic Development

1. **Job Opportunities**: The shift towards sustainable transportation methods may open up new job opportunities in MSP if direct airfreight routes can be established diminishing the need to transport freight to Chicago. These jobs can provide new employment avenues, including those in BIPOC communities.

In essence, the project's efforts in improving environmental conditions, coupled with its focus on community engagement and sustainable development, will contribute to a heightened sense of place, safety, and economic opportunity in BIPOC communities. These improvements not only enhance the immediate quality of life but also lay the foundation for long-term community resilience and prosperity.

4. Multimodal Communities

Measure A – Improve multiple non-single-occupant vehicle (SOV) modes within the system

The project, while primarily focused on mitigating the environmental impacts of trucking, also presents opportunities to enhance and improve non-single-occupant vehicle (SOV) modes within the transportation system. These improvements can be realized through creating interconnectivity between modes, developing structures or facilities serving multiple modes, and enhancing multimodal trip planning. Here's how:

Creating Interconnectivity Between Modes

- **Optimized Routes and Schedules**: By analyzing and optimizing trucking routes, the project could indirectly influence the planning of public transit routes and schedules, leading to more efficient and user-friendly public transportation services that complement other modes like biking and walking.

Through these initiatives, the project can contribute to the improvement and integration of non-SOV modes, enhancing the overall efficiency, accessibility, and attractiveness of the transportation system. This holistic approach not only aligns with the project's environmental goals but also promotes a more sustainable, inclusive, and interconnected urban mobility landscape.

Measure B – Land use and development strategies that support walkable, bikeable, transit-friendly communities

The project, while primarily focused on reducing the environmental impacts of trucking, also supports and influences land use and development strategies that contribute to creating walkable, bikeable, and transit-friendly communities. These strategies are essential for fostering sustainable urban environments. Here's how the project aligns with and supports these strategies:

Promoting Dense, Mixed-Use Communities

1. **Reducing Dependence on Trucking**: By advocating for a reduction in truck traffic and exploring alternatives like rail or airfreight, the project indirectly supports the development of less car-dependent neighborhoods. This shift can free up land currently used for wide roads or trucking infrastructure, allowing for more pedestrian-friendly urban design.

2. **Supporting Local Businesses**: Decreased pollution and traffic congestion can make neighborhoods more attractive for local businesses and mixed-use and affordable housing developments popping up. This creates a vibrant, walkable environment where residents can access services, shopping, and recreation within a short distance of their homes.

3. **Advocating for Policy Changes**: The project can influence urban planning policies advocating for zoning laws minimizes truck transport through these neighborhoods.

Enhancing Walkability and Bikeability

1. **Improving Street Design**: The project can support the design of streets that prioritize pedestrians and cyclists. This includes wider sidewalks, protected bike lanes, and traffic-calming measures that make walking and biking safer and more enjoyable.

Supporting Transit-Friendly Communities

1. **Integrated Transportation Planning**: By contributing data and insights, the project can support integrated transportation planning that aligns freight transport needs with public transit development, ensuring that transit options are efficient, reliable, and meet community needs.

In summary, the project supports land use and development strategies that foster dense, mixed-use communities, enhance walkability and bikeability, and promote transit-friendly environments. These strategies are integral to creating sustainable, livable urban areas that prioritize the needs and well-being of residents.

Measure C – Support first- and last-mile solutions for people connecting to places they need to go

The project, through its focus on reducing the environmental impact of trucking and advocating for sustainable transportation practices, indirectly supports first- and last-mile solutions. These solutions are crucial for ensuring that people can efficiently and safely connect to key destinations such as work, education, healthcare, and other essential services. Here's how the project contributes to this aspect:

Supporting First- and Last-Mile Solutions

1. **Enhancing Non-Motorized Transport Infrastructure**: By reducing truck traffic and improving air quality, the project creates a more conducive environment for walking and biking. Investments in safer and more comfortable pedestrian and bicycle infrastructure directly support first- and last-mile connectivity.

Destinations Connected and Level of Demand

1. **Residential Areas**: Particularly in BIPOC communities, improving transportation links from residential areas to essential services and other destinations is crucial. This improvement addresses the demand for equitable access to opportunities and services.

In essence, while the project's primary focus is on reducing trucking emissions, its broader implications for urban planning and sustainable transportation directly support first- and last-mile solutions. By improving the overall transportation infrastructure and advocating for integrated mobility options, the project helps connect people to key destinations, addressing the high demand for efficient, safe, and accessible transportation in the Minneapolis-St. Paul metro area.

5. Partnerships

Measure A – Stakeholder groups involved in project development

The project's success in reducing the environmental impact of trucking in the Twin Cities metro area is heavily reliant on establishing strong partnerships across various sectors. A diverse array of stakeholders have been involved in shaping our proposals intent through the International Commerce and Mobility Forum.

Number of Partners and Types of Partnerships (see list in appendix)

1. **Public Partnerships**: These include local and state government agencies, such as MNDOT and environmental departments, which provide regulatory support, access to data, and potential funding. Mayors of several cities in the area have been involved. University of Minnesota has also been engaged.

2. **Private Partnerships**: Engagement with private sector entities, particularly within the freight and logistics industry, is crucial. This includes trucking companies, logistics firms, and technology providers.

Involvement of Small, Minority-Owned, and Locally Run Businesses (see appendix)

1. **Small and Minority-Owned Businesses**: A targeted effort will be made to involve disadvantaged business enterprises (DBEs), targeted group businesses (TGBs), and Met Council underutilized businesses (MCUBs).

2. **Locally Owned or Run Businesses**: Prioritizing partnerships with locally owned or run businesses ensures that the project directly contributes to the local economy and is more aligned with community needs.

In total, the project anticipates engaging with a diverse range of partners across public, private, philanthropic, and community sectors. The exact number of partners will depend on the project's scope and specific needs as it evolves, but a broad and inclusive partnership strategy is central to its success. Emphasizing collaborations with small, minority-owned, and locally run businesses ensures that the project not only achieves its environmental and social objectives but also contributes to economic inclusivity and community empowerment.

Measure B – Match contribution

- A high level project plan is included in the appendix

- **Matching Funding Source**: MnDOT could serve as a matching fund source for the project, especially considering its relevance to transportation and environmental impact in Minnesota. The department often allocates funds for initiatives that align with its goals of improving transportation infrastructure, safety, and sustainability.

- **Grant Programs**: MnDOT administers various grant programs that could be pertinent to the project. These may include grants focused on transportation improvements, environmental impact mitigation, or community development.

Appendix: Preliminary Project Plan

The goal of this proposal is to develop a plan to assess the impact of trucking Minnesota exports to Chicago on pollution levels in low-income and minority communities in the Twin Cities metro area. This involves understanding the environmental impact of current freight practices so then one can explore solutions for reducing pollution inequality. Here's a preliminary plan:

1. **Research and Data Collection Phase (2-4 months)**

   - **Identify Key Areas**: Pinpoint low-income and minority communities in the Twin Cities metro area most affected by truck emissions.

   - **Data Gathering**: Collect data on current trucking volumes, routes, and schedules for transporting goods from Minnesota to Chicago.

   - **Pollution Data Analysis**: Analyze existing data on pollution levels (NO2, particulate matter) in the identified communities, focusing on differences between weekdays and weekends.

2. **Impact Assessment Phase (4-6 months)**

   - **Emission Estimation**: Estimate emissions from heavy trucks based on collected data.

   - **Comparative Analysis**: Compare emission levels in the target communities on weekdays and weekends to gauge the impact of trucking activities.

   - **Health and Environmental Impact Study**: Assess the correlation between trucking activities and health/environmental outcomes in the affected communities.

3. **Stakeholder Engagement (2 month, overlaps with Phase 2)**

   - **Community Engagement**: Hold meetings with community leaders and residents to understand their concerns and experiences.

   - **Industry Consultation**: Engage with freight companies to understand logistical challenges and potential for route or method changes.

4. **Solution Development Phase (4 months)**

   - **Alternative Analysis**: Explore alternatives like dedicated airfreight from Minnesota, rerouting trucking away from sensitive areas, or using cleaner transportation methods.

   - **Cost-Benefit Analysis**: Assess the economic, environmental, and social impacts of proposed solutions.

5. **Report Preparation and Presentation (2 month)**

   - **Compilation of Findings**: Assemble data, analyses, and community feedback into a comprehensive report.

   - **Recommendations**: Outline actionable steps and policy recommendations based on findings.

6. **Follow-up Plan (ongoing)**

    - **Monitoring and Evaluation**: Set up a system to monitor changes in pollution levels and community health if recommendations are implemented.

    - **Outreach 7 Education**: Work with local policymakers to educate them about the project findings.

Appendix: Partnerships

- Hennepin County Diversity, Equity and Inclusion Officer
- MN Dot office of sustainability
- Metropolitan Airports Commission, (MAC)
- Small Business Administration office of Equity and Development
- Minneapolis African American Leadership Forum
- MN DEED Office of Workforce Development
- MN League of Cities Land Use development
- Supplier diversity stakeholder (Kristin Guild, GreaterMSP)
- Private Sector Air Cargo Association in MSP: Airfreight Minneapolis, IATA, etc.
- Council of Supply Chain Management Professionals
- U.S. DOT office of Supply Chain and FLOW
- University of Minnesota
- Multiple freight forwarders
- Two regional express truck carriers
- Logistics Companies specializing in warehousing, distribution, fulfillment and logistics
- For air freight, the Federal Aviation Administration (FAA) sets guidelines and safety standards for operations, promoting efficiency and safety in the airspace.
- Similarly, the Federal Motor Carrier Safety Administration (FMCSA) oversees truck freight, establishing regulations to ensure road safety and reduce congestion.
- On the state level, Minnesota's Department of Transportation (MnDOT) collaborates closely with agencies in Wisconsin to harmonize regulations and promote efficient cross-state truck freight transportation.
- Private sector stakeholders, including 3PL logistics companies, actively engage in public-private partnerships to enhance infrastructure, such as building more accessible routes to airports and highways.

Appendix: Air Cargo Tonnage by Airport

Listing US Air Cargo tonnage by Airport (Published by FAA)

CY 2021 Qualifying Cargo Airports, Rank Order, and Percent Change from 2020 | Federal Aviation Administration (faa.gov)

Minneapolis ranks 34 in U.S. Air Cargo volumes.

Source: CY21 ACAIS   Calendar Year 2021 All-Cargo Landed Weight   8/30/2022

| Rank	RO	ADO	ST	Locid	City	Airport Name	Svc Lvl	Hub	2021 Landed Weight (lbs.)	2020 Landed Weight (lbs.)	% Change
1	AL	AAL	AK	ANC	Anchorage	Ted Stevens Anchorage International	P	M	25,219,077,526	22,882,827,499	10.21%
2	SO	MEM	TN	MEM	Memphis	Memphis International	P	M	24,867,472,042	25,156,876,655	-1.15%
3	SO	MEM	KY	SDF	Louisville	Louisville Muhammad Ali International	P	S	17,506,400,843	16,756,934,214	4.47%
4	WP	LAX	CA	LAX	Los Angeles	Los Angeles International	P	L	14,789,239,464	13,171,992,460	12.28%
5	SO	ORL	FL	MIA	Miami	Miami International	P	L	11,283,672,121	9,929,929,001	13.63%
6	GL	CHI	IL	ORD	Chicago	Chicago O'Hare International	P	L	8,590,863,840	7,877,649,208	9.05%
7	SO	MEM	KY	CVG	Hebron	Cincinnati/Northern Kentucky International	P	M	8,478,266,612	8,209,931,440	3.27%
8	GL	CHI	IN	IND	Indianapolis	Indianapolis International	P	M	7,160,133,175	5,653,005,700	26.66%
9	WP	LAX	CA	ONT	Ontario	Ontario International	P	M	5,344,522,774	5,220,302,257	2.38%
10	EA	NYC	NY	JFK	New York	John F Kennedy International	P	L	5,020,677,738	3,431,222,328	46.32%
11	SW	TEX	TX	DFW	Fort Worth	Dallas-Fort Worth International	P	L	3,914,555,658	4,515,027,123	-13.30%
12	WP	SFO	CA	OAK	Oakland	Metro Oakland International	P	M	3,901,370,785	3,677,415,748	6.09%
13	SO	ATL	GA	ATL	Atlanta	Hartsfield - Jackson Atlanta International	P	L	3,650,738,103	3,165,690,474	15.32%
14	GL	CHI	IL	RFD	Rockford	Chicago/Rockford International	P	N	3,410,070,576	2,739,584,350	24.47%
15	WP	HNL	HI	HNL	Honolulu	Daniel K Inouye International	P	M	3,348,874,100	3,430,615,600	-2.38%
16	EA	HAR	PA	PHL	Philadelphia	Philadelphia International	P	L	3,248,882,680	3,148,398,964	3.19%
17	EA	NYC	NJ	EWR	Newark	Newark Liberty International	P	L	3,149,132,360	2,986,808,278	5.43%
18	NM	SEA	WA	SEA	Seattle	Seattle-Tacoma International	P	L	2,920,048,979	2,715,552,788	7.53%
19	WP	PHX	AZ	PHX	Phoenix	Phoenix Sky Harbor International	P	L	2,429,846,732	2,423,935,280	0.24%
20	SW	TEX	TX	AFW	Fort Worth	Perot Field/Fort Worth Alliance	R	-	2,416,564,940	1,662,707,397	45.34%
21	NM	SEA	OR	PDX	Portland	Portland International	P	M	2,373,895,508	2,143,216,982	10.76%
22	SW	TEX	TX	IAH	Houston	George Bush Intcntl/Houston	P	L	2,263,132,027	2,458,897,596	-7.96%
23	NM	DEN	CO	DEN	Denver	Denver International	P	L	1,832,675,444	1,827,472,290	0.28%
24	SO	ATL	PR	SJU	San Juan	Luis Munoz Marin International	P	M	1,666,915,382	1,479,233,218	12.69%
25	EA	WAS	MD	BWI	Glen Burnie	Baltimore/Washington International Thurgood Marshall	P	L	1,519,179,563	1,512,061,740	0.47%
26	GL	DET	OH	LCK	Columbus	Rickenbacker International	P	N	1,450,387,773	1,186,394,661	22.25%
27	SO	ORL	FL	MCO	Orlando	Orlando International	P	L	1,374,010,420	1,292,668,960	6.29%
28	NM	DEN	UT	SLC	Salt Lake City	Salt Lake City International	P	L	1,330,935,291	1,337,308,784	-0.48%
29	SO	ORL	FL	TPA	Tampa	Tampa International	P	L	1,324,458,660	1,406,131,050	-5.81%
30	WP	SFO	CA	SFO	San Francisco	San Francisco International	P	L	1,312,670,650	1,245,566,300	5.39%
31	NE	ANE	MA	BOS	Boston	General Edward Lawrence Logan International	P	L	1,288,581,050	1,197,590,350	7.60%

Calendar Year 2021 All-Cargo Landed Weight   8/30/2022

Rank	RO	ADO	ST	Locid	City	Airport Name	Svc Lvl	Hub	2021 Landed Weight (lbs.)	2020 Landed Weight (lbs.)	% Change
32	NE	ANE	CT	BDL	Windsor Locks	Bradley International	P	M	1,228,028,070	1,214,517,070	1.11%
33	SO	MEM	NC	GSO	Greensboro	Piedmont Triad International	P	S	1,156,085,147	752,587,537	53.61%
34	GL	DMA	MN	MSP	Minneapolis	Minneapolis-St Paul International/Wold-Chamberlain	P	L	1,149,929,379	1,102,871,589	4.27%
35	GL	DET	MI	DTW	Detroit	Detroit Metro Wayne County	P	L	947,101,222	888,306,650	6.62%
36	SW	TEX	TX	SAT	San Antonio	San Antonio International	P	M	891,732,300	933,425,120	-4.47%
37	WP	LAX	CA	SBD	San Bernardino	San Bernardino International	R	-	873,352,800	467,634,388	86.76%
38	WP	SFO	CA	SMF	Sacramento	Sacramento International	P	M	859,117,500	713,740,750	20.37%
39	EA	HAR	PA	PIT	Pittsburgh	Pittsburgh International	P	M	812,896,728	547,841,586	48.38%
40	SO	MEM	NC	CLT	Charlotte	Charlotte/Douglas International	P	L	785,516,250	784,913,564	0.08%
41	SW	TEX	TX	ELP	El Paso	El Paso International	P	S	754,170,132	719,310,424	4.85%
42	SO	ORL	FL	LAL	Lakeland	Lakeland Linder International	R	-	738,778,000	203,390,000	263.23%
43	SO	MEM	NC	RDU	Raleigh	Raleigh-Durham International	P	M	735,931,665	631,531,300	16.53%
44	CE	ACE	MO	MCI	Kansas City	Kansas City International	P	M	695,201,560	595,447,328	16.75%
45	WP	LAX	CA	SAN	San Diego	San Diego International	P	L	693,765,850	673,630,370	2.99%
46	NM	SEA	WA	BFI	Seattle	Boeing Field/King County International	P	N	693,696,765	714,618,694	-2.93%
47	SW	TEX	TX	AUS	Austin	Austin-Bergstrom International	P	M	684,479,790	607,956,455	12.59%
48	EA	WAS	VA	RIC	Highland Springs	Richmond International	P	S	660,323,666	584,051,286	13.06%
49	WP	PHX	NV	RNO	Reno	Reno/Tahoe International	P	M	659,346,790	618,645,604	6.58%
50	SO	ATL	SC	GSP	Greer	Greenville Spartanburg International	P	S	658,001,219	397,462,514	65.55%
51	EA	HAR	PA	ABE	Allentown	Lehigh Valley International	P	S	651,975,388	574,400,694	13.51%
52	SW	TEX	TX	LRD	Laredo	Laredo International	P	N	630,306,259	403,806,379	56.09%
53	NE	ANE	NH	MHT	Manchester	Manchester Boston Regional	P	S	618,060,570	595,945,960	3.71%
54	SO	ORL	FL	JAX	Jacksonville	Jacksonville International	P	M	609,655,860	570,894,355	6.79%
55	SW	LANM	NM	ABQ	Albuquerque	Albuquerque International Sunport	P	S	607,093,150	607,964,788	-0.14%
56	GL	CHI	WI	MKE	Milwaukee	General Mitchell International	P	M	606,695,536	596,265,276	1.75%
57	CE	ACE	MO	STL	St. Louis	St Louis Lambert International	P	M	590,883,490	500,158,300	18.14%
58	NM	HLN	MT	BIL	Billings	Billings Logan International	P	S	570,062,360	517,340,932	10.19%
59	EA	WAS	VA	IAD	Dulles	Washington Dulles International	P	L	546,124,221	541,535,150	0.85%
60	CE	ACE	NE	OMA	Omaha	Eppley Airfield	P	M	545,301,262	476,378,900	14.47%
61	NM	SEA	WA	GEG	Spokane	Spokane International	P	S	544,413,398	463,994,572	17.33%
62	SO	ATL	SC	CAE	Columbia	Columbia Metro	P	S	538,905,440	472,684,703	14.01%
63	WP	SFO	CA	MHR	Sacramento	Sacramento Mather	R	-	538,225,200	598,247,250	-10.03%
64	SO	ORL	FL	FLL	Fort Lauderdale	Fort Lauderdale/Hollywood International	P	L	526,003,020	391,351,570	34.41%
65	EA	HAR	PA	MDT	Harrisburg	Harrisburg International	P	S	523,417,680	448,263,880	16.77%
66	SW	LANM	LA	MSY	New Orleans	Louis Armstrong New Orleans International	P	M	503,451,756	399,138,690	26.13%

# Appendix: Low-Income, Minority & Environmental Profiles

a. 7-County Metro: Some 1.3 million people live in disadvantaged census tracts.
b. Environmental Burden is above threshold.
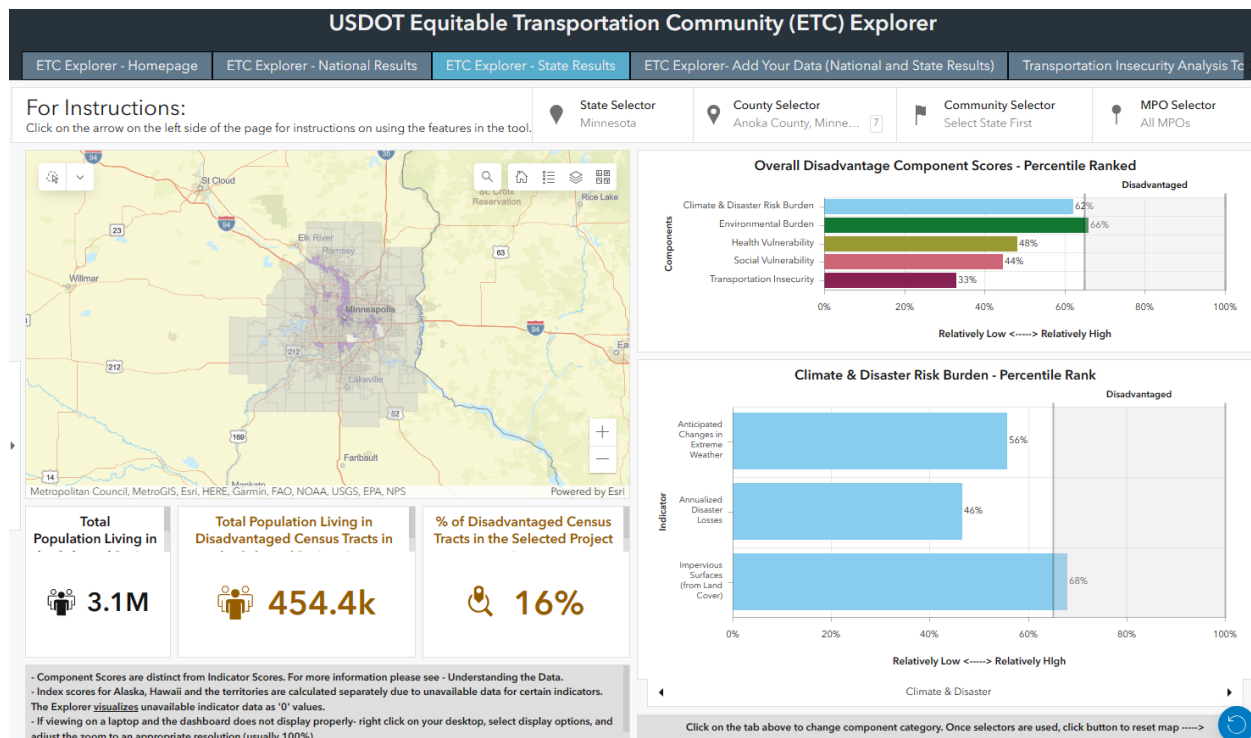
On the next page, one can see that the diesel emissions, mostly from heavy trucks, map directly onto communities where low-income or minority populations live exposing them to environmental consequences. This project will quantify what fraction stems from heavy truck freight transport from Twin Cities to Chicago.

Env

Diesel Particulates Prevalence
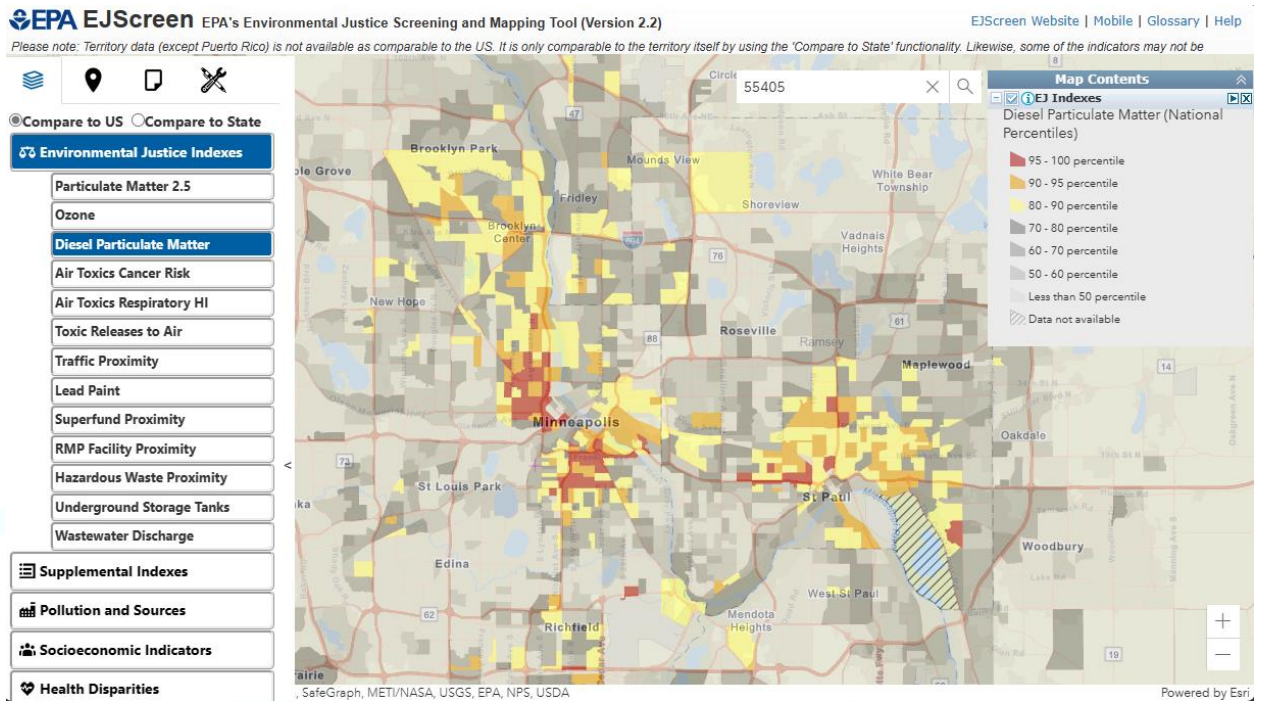
Demographic Index: A combination of percent low-income and percent minority, the two socioeconomic factors that were explicitly named in Presidential Executive Order 12898 on Environmental Justice