APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

Minnesota Funding Application 33
Phase 3 Internal Combustion School Bus
Replacement Grant Program

August 2025

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary Minnesota

Lead Agency Authorized to Act on Behalf of the Beneficiary Minnesota Pollution Control Agency (MPCA)
(Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

Action Title:	MN Phase 3 Internal Combustion School Bus Replacement Grants
Beneficiary's Project ID:	R323VA06
Funding Request No.	*(sequential)* 33
Request Type: (select one or more)	☐ Reimbursement ■ Advance ☐ Other (specify): _____
Payment to be made to: (select one or more)	■ Beneficiary ☐ Other (specify): Minnesota Pollution Control Agency
Funding Request & Direction (Attachment A)	■ Attached to this Certification ☐ To be Provided Separately

SUMMARY

Eligible Mitigation Action Action Type	■ Appendix D-2 item (specify): 2 - Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Elig ☐ Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):
Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):	
See Attached	
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):	
See Attached	
Estimate of Anticipated NOx Reductions (5.2.3):	
See Attached	
Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1):	
See Attached	
Describe how the Beneficiary will make documentation publicly available (5.2.7.2).	
See Attached	
Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8).	
See Attached	
Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).	
See Attached	

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).
See Attached

ATTACHMENTS
(CHECK BOX IF ATTACHED)

☑	**Attachment A**	**Funding Request and Direction.**
☑	**Attachment B**	**Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).**
☑	**Attachment C**	**Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).**
☑	**Attachment D**	**Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding $25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding $25,000.]**
☐	**Attachment E**	**DERA Option (5.2.12). [Attach only if using DERA option.]**
☐	**Attachment F**	**Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.]**

CERTIFICATIONS

By submitting this application, the Lead Agency makes the following certifications:

1. **This application is submitted on behalf of Beneficiary** Minnesota **, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.**

2. **Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.**

3. **This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.**

4. **Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)**

5. **Beneficiary will maintain and make publicly available all documentation submitted in**

support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED: August 27, 2025

David J. Benke
Division Director

Minnesota Pollution Control Agency

[LEAD AGENCY]

for

Minnesota

[BENEFICIARY]

ATTACHMENT B
Minnesota Funding Application 33 – Phase 3 IC School Bus

PROJECT MANAGEMENT PLAN
PROJECT SCHEDULE AND MILESTONES

Milestone	Date
MPCA RFP Opens - (MN Phase 3 Internal Combustion School Bus)	March 13, 2025
MPCA RFP Closed – Application Deadline (MN Phase 3 Electric School Bus)	May 14, 2025
MPC selects grantees to finalize grant program	May to August, 2025
MPCA submits Funding Request to Trustee – Appendix D-4: Beneficiary Eligible Mitigation Action Certification including Attachments	August 15, 2025
Trustee Acknowledges Receipt of Funding Request	Receipt from Trustee
Trustee Allocates Share of State Funds	Transfer date
Grant agreements signed with selected entities	CY 2025, Q4
Grantee provides proof of purchase, invoices and other documents required for reimbursement	CY 2026, Q1 – CY 2027, Q4
MPCA reviews, requests corrections if necessary, certifies project completion, and provides reimbursement	CY 2026, Q4 – CY 2027, Q4
MPCA Reports to the Trustee on the status of and expenditures with Mitigation Actions completed and underway.	Within 6 months of first disbursement: January 30 and July 30 thereafter

Budget Category	Total Project Budget	Share of Total Budget to be Funded by the Trust	Cost-Share, paid by vehicle owners
1. Equipment and materials Expenditure	$4,641,880	$630,000	$4,011,880
2. Contractor Support/Labor	$0	$0	$0
3. Sub recipient Support	$0	$0	$0
4. Administrative[1]	$70,000	$70,000	$0
Project Totals	$4,711,880	$700,000	$4,011,880
Percentage	100%	14.9%	85.1%

PROJECT BUDGET

[1] Subject to Appendix D-2 15% administrative cap

PROJECTED TRUST ALLOCATIONS

	2018	2019	2020	2021	2022	2023	2024	2025
1. Anticipated Annual Project Funding Request to be paid through the Trust								$700,000
2. Anticipated Annual Cost Share								$4,011,880
3. Anticipated Total Project Funding by Year (line 1 plus line 2)								$4,711,880
4. Cumulative Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation	$2,350,000	$7,401,110	$1,871,242	$6,475,586	$5,519,112	$13,084,559	$1,007,216.25	$9,479,741
5. Current Outstanding Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation								$0
6. Current Beneficiary Project Funding to be paid through the Trust (line 1)								$700,000
7. Total Funding Approved (plus pending) for Beneficiary Eligible Mitigation Actions, inclusive of Current Action (sum of line 4, 5 and 6)	$2,350,000	$7,401,110	$1,871,242	$6,475,586	$5,519,112	$13,084,559	$1,007,216.25	$10,179,741
8. Beneficiary Share of Estimated Funds Remaining in Trust (Market Value of last statement date from Online Portfolio)	$47,133,334	$44,864,077	$38,437,993	$37,651,313	$31,187,749	$19,062,580	$15,730,948.58	$6,535,115.56
9. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 8 minus lines 5 and 6)	$44,864,077	$38,437,993	$37,651,313	$31,187,749	$27,317,301	$14,232,742	$14,723,732.33	$5,853,115.56

ATTACHMENT C
DETAILED PLAN FOR REPORTING ON
ELIGIBLE MITIGATION ACTION IMPLEMENTATION

The Minnesota Pollution Control Agency (MPCA) will provide detailed reporting on this Environmental Mitigation Trust project in 2 ways:

1. Timely updates to MPCA'sVolkswagen (VW) Environmental Mitigation Trust webpage (www.pca.state.mn.us/vw) ;
2. Minnesota's semiannual reporting obligation to Wilmington Trust (the "Trustee")

MPCA maintains a VW Environmental Mitigation Trust specific webpage that has been designed to support public access and limit burden for the general public. The MPCA's VW specific webpage can be found at www.pca.state.mn.us/vw. Timely updates to the webpage will inform the general public on the projects' status as well as when these projects have been completed.

Subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries details Minnesota's Reporting Obligations: "For each Eligible Mitigation Action, no later than six months after receiving its first disbursement of Trust Assets, and thereafter no later than January 30 (for the preceding six-month period of July 1 to December 31) and July 30 (for the preceding six-month period of January 1 to June 30) of each year, each Beneficiary shall submit to the Trustee a semiannual report describing the progress implementing each Eligible Mitigation Action during the six-month period leading up to the reporting date (including a summary of all costs expended on the Eligible Mitigation Action through the reporting date). Such reports shall include a complete description of the status (including actual or projected termination date), development, implementation, and any modification of each approved Eligible Mitigation Action. Beneficiaries may group multiple Eligible Mitigation Actions and multiple sub-beneficiaries into a single report. These reports shall be signed by an official with the authority to submit the report for the Beneficiary and must contain an attestation that the information is true and correct and that the submission is made under penalty of perjury. To the extent a Beneficiary avails itself of the DERA Option described in Appendix D-2, that Beneficiary may submit its DERA Quarterly Programmatic Reports in satisfaction of its obligations under this Paragraph as to those Eligible Mitigation Actions funded through the DERA Option. The Trustee shall post each semiannual report on the State Trust's public-facing website upon receipt."

MPCA shall, in the next semiannual report following the Trustee's approval of this project, describe the progress implementing this Eligible Mitigation Action that will include a summary of all costs expended on the Eligible Mitigation Action through the reporting date. The report will also include a complete description of the status, development, implementation (including project schedule and milestone updates), and any modification to this Eligible Mitigation Action.

Attachment D
DETAILED COST ESTIMATES FROM SELECTED OR POTENTIAL VENDORS FOR EACH PROPOSED EXPENDITURE EXCEEDING $25,000

School bus owners were asked to submit the total cost for each new school bus in their grant application.

The total number and average cost for buses to be funded with this grant are listed below.

New Bus Fuel Type	Number of Buses	Average New Bus Cost	Total New Bus Cost
Diesel	20	$135,200	$2,712,000
Propane	14	$137,849	$1,929,880
Grand Totals	34	$136,525	$4,641,880

Minnesota will only be funding $15,000 or $20,000 of the cost for each new bus. While these individual costs do not exceed the $25,000 expenditure limit, the overall project cost of $700,000 does.

Appendix D-4– Supplemental Information
Beneficiary Eligible Mitigation Action Certification

Beneficiary: Minnesota
Lead Agency: Minnesota Pollution Control Agency

In support of funding request no. 33
MN Phase 3 Internal Combustion School Bus Project Funding Request

Appendix D4 - Summary

Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):

A detailed description of this project is described on pages 10-17 of Minnesota's Beneficiary Mitigation Plan (see attached excerpt). This funding request will support the Internal Combustion School Bus program described on page 12.

Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):

This bus replacement project will permanently remove from service 34 1992-2009 model year diesel school buses, and replace them with new, 2024-2025 model year internal combustion school buses. This program will provide grants for the replacement of school buses for some economically disadvantaged schools.

We anticipate more than 40% of these projects will be located in areas disproportionately impacted by air pollution.

This school bus replacement grant is designed to reduce diesel exhaust exposure to young people who are particularly vulnerable to the health effects from diesel pollution. Due to higher respiration rates and continuing lung development in young people, particulate and nitrogen oxide pollution detrimentally affects lung function, development and growth.

The Minnesota Pollution Control Agency anticipates the following emissions reductions as a result of this school bus replacement project:

Pollutant	NOx	PM 2.5	GHG
Lifetime Tons of Pollution Reduced	18.41	0.173	3,164

Estimate of Anticipated NOx Reductions (5.2.3):

Lifetime NOx reductions will be 18.41 Tons

Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1):

The Minnesota Pollution Control Agency (MPCA) is responsible for all Volkswagen projects in MN.

Describe how the Beneficiary will make documentation publicly available (5.2.7.2):

- All non-private documents will be publicly available through Minnesota's public facing website: www.pca.state.mn.us/vw.

  The Minnesota Government Data Practices Act (MGDPA), found in Chapter 13 of Minnesota statutes, is a Minnesota state law that regulates the handling of all governmental data that are collected, created, disseminated, maintained, received and stored by a political subdivision, state agency or statewide system regardless of their physical form, how they are stored or how they are used. The Minnesota Pollution Control Agency (MPCA) is a state agency and, therefore, subject to the requirements of the MGDPA.

  There is a general presumption in the MGDPA that all governmental data are public unless there is a federal law, state statute or temporary classification that allows the data to be classified as not public. Some of the not public data types that may be included within the MPCA's grant application and award documentation include, but are not limited to, business data, personal information, security information, social security numbers, trade secret information etc.

  The MPCA is statutorily obligated to maintain such data types as not public and, therefore, will not provide them when requested or present them on our public facing website. The MPCA will provide requesters with notification that the not public data are not being provided and will cite the federal law, state statute or temporary classification that allows for this not public classification.

Describe any cost share requirements to be placed on each NOx source proposed to be mitigated (5.2.8):

This program is a specific grant for each eligible bus being replaced. The grant amount is about 22% of overall cost for the bus. Each bus owner is responsible for funding the remainder of the replacement cost for each bus.

Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9):

The Minnesota Pollution Control Agency contacted all necessary US Government agencies on Monday, Feb 12, 2018 as described in 4.2.8. The MPCA received replies from National Park Service and US Forest Service on Wed, Feb 14, 2018 acknowledging receipt of all necessary documents.

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10):

The MPCA is using our Environmental Justice and Department of Health mapping tools to help choose projects in areas that have historically borne a disproportionate share of the adverse impacts of NOx emissions.

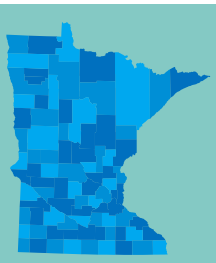
P3 Excerpt for Funding Requests

MN Volkswagen settlement

Minnesota's Volkswagen Settlement Beneficiary Mitigation Plan
Phase 3 (2024 - 2027)

Minnesota's plan for using funds from the national Volkswagen settlement.

MINNESOTA POLLUTION CONTROL AGENCY



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Executive summary

The settlement

In 2016, Volkswagen Corporation (VW) was caught violating air pollution standards for nitrogen oxides in its diesel cars and SUVs. Their vehicles were producing 30-40 times more pollution than allowed by law. The federal government took VW to court and in October 2017, the Department of Justice and VW signed a $15 billion settlement. A portion of the settlement – $2.9 billion – is shared among the U.S. states and tribes, based on the number of violating vehicles registered in each jurisdiction. Minnesota's share is $47 million. Governor Dayton designated the Minnesota Pollution Control Agency (MPCA) to manage the settlement funds, which will be spent over 10 years on projects to offset the excess pollution from the violating vehicles, clean up our air, and invest in a cleaner transportation future.

Minnesota's plan

Three phases

Minnesota's plan is structured in three phases, so the MPCA can seek additional input, incorporate lessons learned, consider new technologies, and make changes as needed along the way.

The three phases are:

- Phase 1: $11.75 million (25% of initial funds) – 2018-2019
- Phase 2: $23.5 million (50%) – 2020-2023
- Phase 3: $14 million (remainder of all funds) – 2024-2027

This document covers Phase 3 of the plan, from 2024 through 2027. States are required to develop plans for using their settlement funds and submit them for approval to the Trustee managing the funds nationally.

Phase 1 and Phase 2 summary

Minnesota completed its second phase of the VW plan in late 2023. In Phase 2, we invested $24 million to reduce air pollution in Minnesota through grant programs across five categories: school buses, transit buses and trucks (heavy-duty on-road vehicles), off-road equipment, heavy-duty electric vehicles, and electric vehicle (EV) infrastructure. We saw strong interest and received applications that exceeded grant amounts in all grant programs during Phase 2. To date, we funded the replacement of 475 older diesel vehicles and equipment with new versions that run on a variety of fuel types, including new diesels that meet stricter emission standards, propane, and electric alternatives. The MPCA also funded 103 new EV charging stations (206 charging plugs) throughout Minnesota.

The first two phases put us well on our way to achieving nearly all the 10-year goals outlined in the original plan. Specifically, we are on track to exceed most of our emissions reductions goals while making strides in maximizing health benefits, reducing exposure to air pollution, and ensuring Minnesotans across the state benefit from these investments. These results, along with public input, have informed our Phase 3 draft plan. For detailed Phase 1 and Phase 2 results, see Appendix 1.

10-year goals

The input MPCA received during the development of this Phase 3 plan confirmed that we should continue to strive for the 10-year goals we set in our original plan. The MPCA will continue to use the state's settlement funds

to support a healthy environment for all Minnesotans and achieve significant emissions reductions across the state, especially in communities most vulnerable to the effects of vehicle pollution. Because 60% of the violating vehicles were registered in the Twin Cities metropolitan area and 40% were registered in Greater Minnesota, the funds will again be targeted using the same 60:40 ratio in Phase 3. We will continue to invest in communities disproportionately impacted by air pollution, both in the Twin Cities area and in Greater Minnesota. In developing the grant programs and selecting projects for funding, we will balance project costs with emissions reductions and other benefits.

Six grant programs in Phase 3 (2024-2027)

In Phase 3, MPCA will invest VW settlement funds through six grant program areas that will allow different vehicle and equipment types to be compared with each other through a competitive grant process. With these investments in 2024 through 2027, MPCA expects to reduce between 2,722 to 3,365 tons of nitrogen oxides (NO_x), 153 to 297 tons of fine particles ($PM_{2.5}$), and 32,264 to 63,338 tons of greenhouse gases (GHG).

Table 1: Summary of Phase 3 grant programs

Grant programs (2024-2027)	**Settlement category**	**Eligible fuels (for new vehicle or equipment)**	**2024-2027 grants (Phase 3)**	
			Targeted percent*	**Targeted dollar amount**
Clean heavy-duty on-road vehicles program	Transit buses, class 4-8 trucks	Diesel, propane, natural gas	15%	$2,100,000
Clean heavy-duty off-road equipment program	Switcher locomotives, ferries, tugs, port cargo handling equipment, ocean-going vessel shore power, Diesel Emission Reduction Act (DERA)	Diesel, propane, natural gas, electric	30%	$4,200,000
School bus replacement program	School buses	Diesel, propane, natural gas	5%	$700,000
Electric school bus replacement program	Electric school buses	Electric	15%	$2,100,000
Heavy-duty electric vehicle program	Transit buses, class 4-8 trucks, airport ground support equipment, forklifts	Electric	20%	$2,800,000
Electric vehicle charging stations	Zero-emission vehicle infrastructure	Not applicable	15%	$2,100,000
Total: $14,000,000				

*Percentage of available Phase 3 settlement funds targeted at these activities for 2024-2027

The MPCA reserves the right to allocate funds as necessary to ensure all VW funds are invested prior to program expiration.

Outreach and input

The MPCA is committed to delivering a pollution reduction program that benefits all Minnesotans. To develop this Phase 3 plan, the agency sought input statewide throughout the summer of 2023 and into 2024. We shared results from our first six years of grant programs and posted information and data on our VW webpages. We held one stakeholder meeting, shared informational email bulletins, had an open survey hosted on Smart Comment, and sought input from the MPCA's Environmental Justice Advisory Group and Environmental Justice Advocates.

Public comments indicate that the efforts we began in Phase 1 and Phase 2 should continue:

- Reducing diesel emissions throughout the state, across a variety of vehicle types
- Investing in projects to reduce emissions in disproportionately impacted communities
- Funding EV charging stations and electric replacements for diesel vehicles and equipment
- Continuing to fund electric vehicles, when available
- Continuing to fund cleaner fuel alternatives to old, high emitting diesel vehicles
- Recognizing projects that are cost effective, where appropriate

Once the draft Phase 3 plan was released to the public in late 2023, the MPCA solicited input from the public and key stakeholders from across the state to ensure that the plan best reflected the comments and priorities we heard during this process. We held public meetings and accepted written comments until January 15, 2024. Details of this outreach effort can be found in Appendix 4.

Information gathered during the entire Plan development process is available at www.pca.state.mn.us/vw. We also encourage anyone interested in applying for grant funds to go to our website and sign up to receive email updates.

Minnesota's Plan

Minnesota's Beneficiary Mitigation Plan for submission to the Wilmington Trust of Wilmington, Delaware as required by the Environmental Mitigation Trust Agreement for State Beneficiaries as part of the Volkswagen Environmental Settlement.

Introduction

VWs tampered diesel vehicles have emitted an estimated 600 tons of excess air pollution in Minnesota. The MPCA is committed to ensuring that Minnesota's funding from the Volkswagen settlement – $47 million over 10 years – is used to improve air quality in our state, especially for those most vulnerable to air pollution. Our goals are to mitigate the pollution from VW vehicles and reduce air pollution while moving Minnesota towards a cleaner transportation future.

Purpose

This document outlines Phase 3 of Minnesota's Beneficiary Mitigation Plan, a required step in the federal court settlement. To use settlement funds, states must specify how they propose to spend them in a plan submitted to the Trustee managing the funds for states. The federal settlement specifies the project types on which states can spend funds. However, within that structure, we can prioritize projects and initiatives that make the most sense for Minnesotans and reflect our state's priorities and goals. The plan must include:

- Minnesota's goals for the funds
- The types of vehicles and equipment Minnesota plans to replace with the funds
- How Minnesota will use the funds to benefit communities disproportionately impacted by air pollution
- Estimates of the emissions reductions that Minnesota expects to achieve with these funds

This plan for Phase 3 describes our continued focus on the 10-year goals for the program and our projected investments for the next four years (2024-2027).

Goals

Prior to Phase 1, MPCA solicited input from Minnesotans across the state to develop the long-term goals that would guide us over the 10 years of the program, and to inform our plan for spending the VW settlement funds. In 2019 and 2023, MPCA again solicited input from Minnesotans on how the VW settlement funds should be spent and whether our goals for the VW settlement program should change.

Based on this public feedback as well as program experience, MPCA will continue to use VW settlement funds to achieve significant emissions reductions across the state, especially in areas that have been most impacted by vehicle pollution. Looking at the number of violating VW vehicles registered in different parts of the state, we will continue to target 60% of the settlement funds in the Twin Cities metropolitan area and 40% in Greater Minnesota. We will continue to maximize emissions reductions in areas disproportionately impacted by air pollution across the state. We will continue to prioritize bringing health benefits to Minnesotans by reducing their exposures to vehicle-related air pollution and to balance these priorities with cost-effective management of the funds.

Grant program plan

The federal settlement outlines 10 specific activities on which states can use settlement funds. Most of the allowable projects involve replacing older heavy-duty diesel vehicles or equipment with new, cleaner vehicles or equipment. The new vehicles can use diesel or alternative fuels such as propane, compressed natural gas, electricity, or hydrogen fuel cells. To ensure effective replacement, the old engine, and in most cases the entire vehicle, must be destroyed. States can also spend up to 15% of their settlement funds on EV charging stations. See Appendix 2 for a summary of the Volkswagen settlement, and Appendix 8 for the precise descriptions of the types of vehicles and equipment replacements that can be funded under the terms of the settlement.

Using the input of Minnesotans, analysis of Phase 1 and Phase 2 project benefits, and staff expertise, MPCA developed this plan for the third phase of funding (2024-2027) from Minnesota's $47 million allocation from the VW settlement. All funds for the entire settlement must be spent or committed to projects by October 2, 2027. See Appendix 1 for detailed results from Phase 1 and Phase 2, and Appendix 4 for input received during our public engagement.

Phased funding

Minnesota's $47 million allocation will be invested over three phases. This phased approach allows the agency to:

- Build in transparency and involve the public in reviewing and revising the plan between phases
- Learn which projects work best in Minnesota, and modify our requests for proposals in subsequent phases to focus the most effective projects
- Identify areas in need of additional assistance as we seek out proposals
- Track constantly changing vehicle technology and invest in the most effective technology available

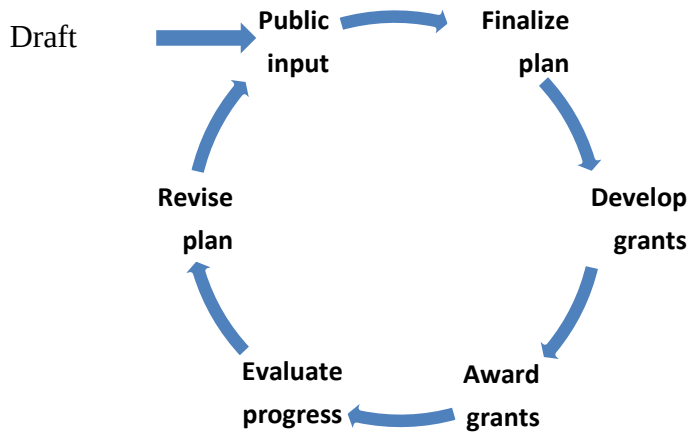
The three phases of funding are:

Phase 1: $11.75 million (25% of overall funds) – 2018-2019: Smaller amount of money to learn and ramp up. We solicited input and reviewed program results after Phase 1.

Phase 2: $23.5 million (50%) – 2020-2023: Most of the funds were spent during this phase, covered in this plan document. We developed the plan for Phase 2 after Phase 1 program review and public engagement. We repeated this public input and plan revision process in 2023, as we conclude Phase 2.

Phase 3: $14 million (25+%) – 2024-2027: Remaining funds, including additional interest earned over the course of the program, will be allocated.

Figure 1: Plan revision process



Phase 3 grants overview

In Phase 3 (2024-2027), MPCA will invest the remainder of Minnesota's funding, or $14 million through six grant program areas. If additional funds from interest earned over the course of the program become available, they may be added to this total. Table 2 reflects our preferred investment scenario. Our ability to fund projects in each

category at the target levels will depend on the applications received and interest by vehicle and equipment owners. If we do not receive sufficient applications in a given category, we may shift funds between grant programs. We may also release additional request for proposals where necessary.

Figure 2: Phase 3 grant program funding allocations

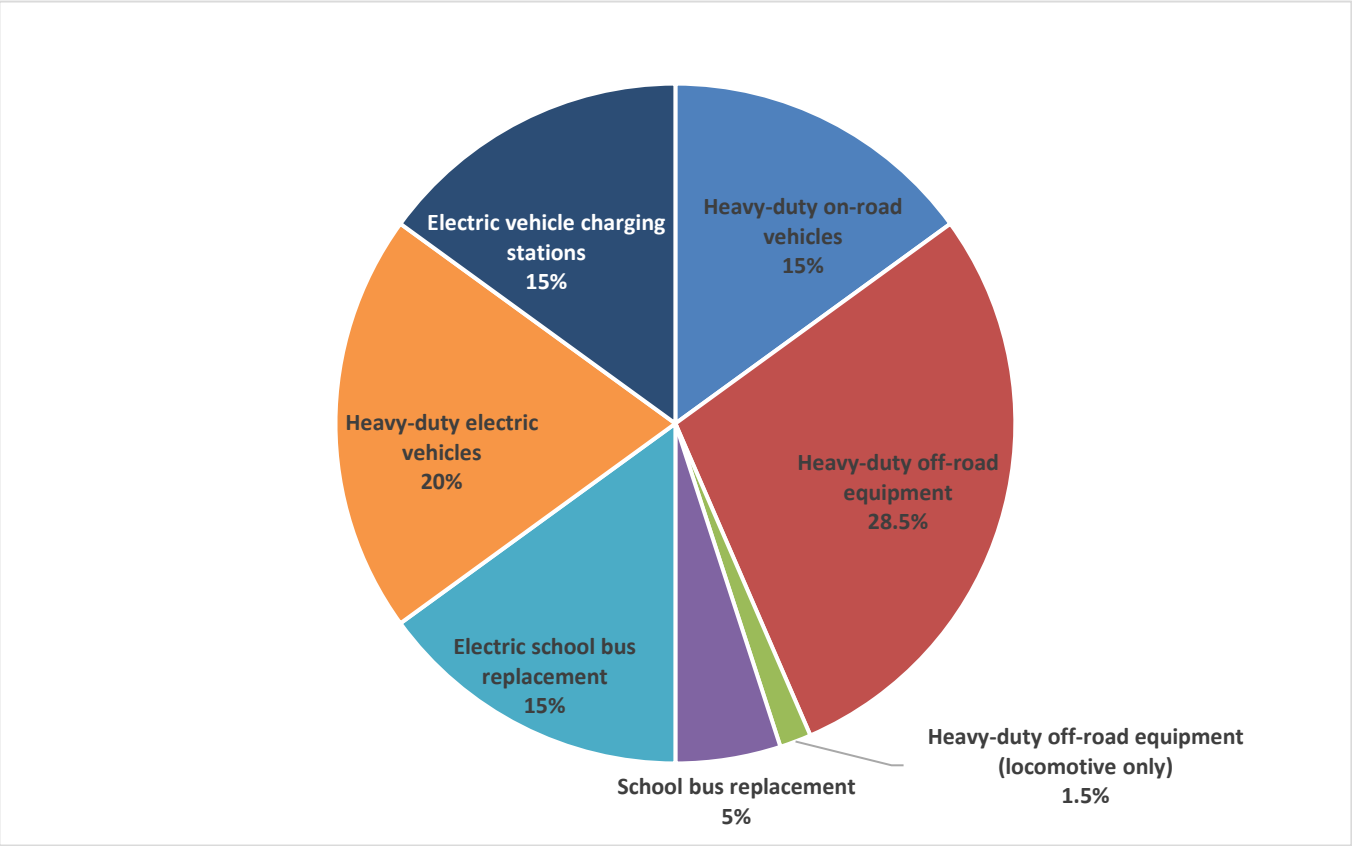


Table 2: Phase 3 grant programs and estimated emissions reductions

Grant programs (2024-2027)	Settlement category	Eligible fuels	2024-2027 grants (Phase 3)			
			Targeted percent*	Targeted dollar amount	Estimated number of projects**	Estimated emissions reductions (tons)***
Clean heavy-duty on-road vehicles program	Transit buses, class 4-8 trucks	Diesel, propane, natural gas	15%	$2,100,000	42	NO_X: 150-204 $PM_{2.5}$: 7-11 GHGs: 2,217-15,431
Clean heavy-duty off-road equipment program	Switcher locomotives, ferries, tugs, port cargo handling equipment, ocean-going vessel shore power, DERA	Diesel, propane, natural gas, electric	28.5%	$3,990,000	47	NO_X: 310-561 $PM_{2.5}$: 64-191 GHGs: 9,253-21,097
	Locomotive idle reduction technology		1.5%	$210,000	12	NO_X: 2,193-2,484 $PM_{2.5}$: 79-90 GHGs: 10,889-12,336
School bus replacement program	School buses	Diesel, propane, natural gas	5%	$700,000	34	NO_X: 13-15 $PM_{2.5}$: 0.65-0.84 GHGs: 929-1,207
Electric school bus replacement program	School buses	Electric	15%	$2,100,000	7	NO_X: 3-6 $PM_{2.5}$: 0.07-0.44 GHGs: 740-1,230
Heavy-duty electric vehicle program	Transit buses, trucks, airport ground support equipment, forklifts	Electric	20%	$2,800,000	11	NO_X: 52-93 $PM_{2.5}$: 2-5 GHGs: 3,511-7,314
Electric vehicle charging station program	Zero-emission vehicle infrastructure	Not applicable	15%	$2,100,000	Fast chargers: 13	NO_X: 0.96 $PM_{2.5}$: 0.07 GHGs: 4,724
Total: $14,000,000						NO_X: 2,722-3,365 $PM_{2.5}$: 153-297 GHGs: 32,264-63,338

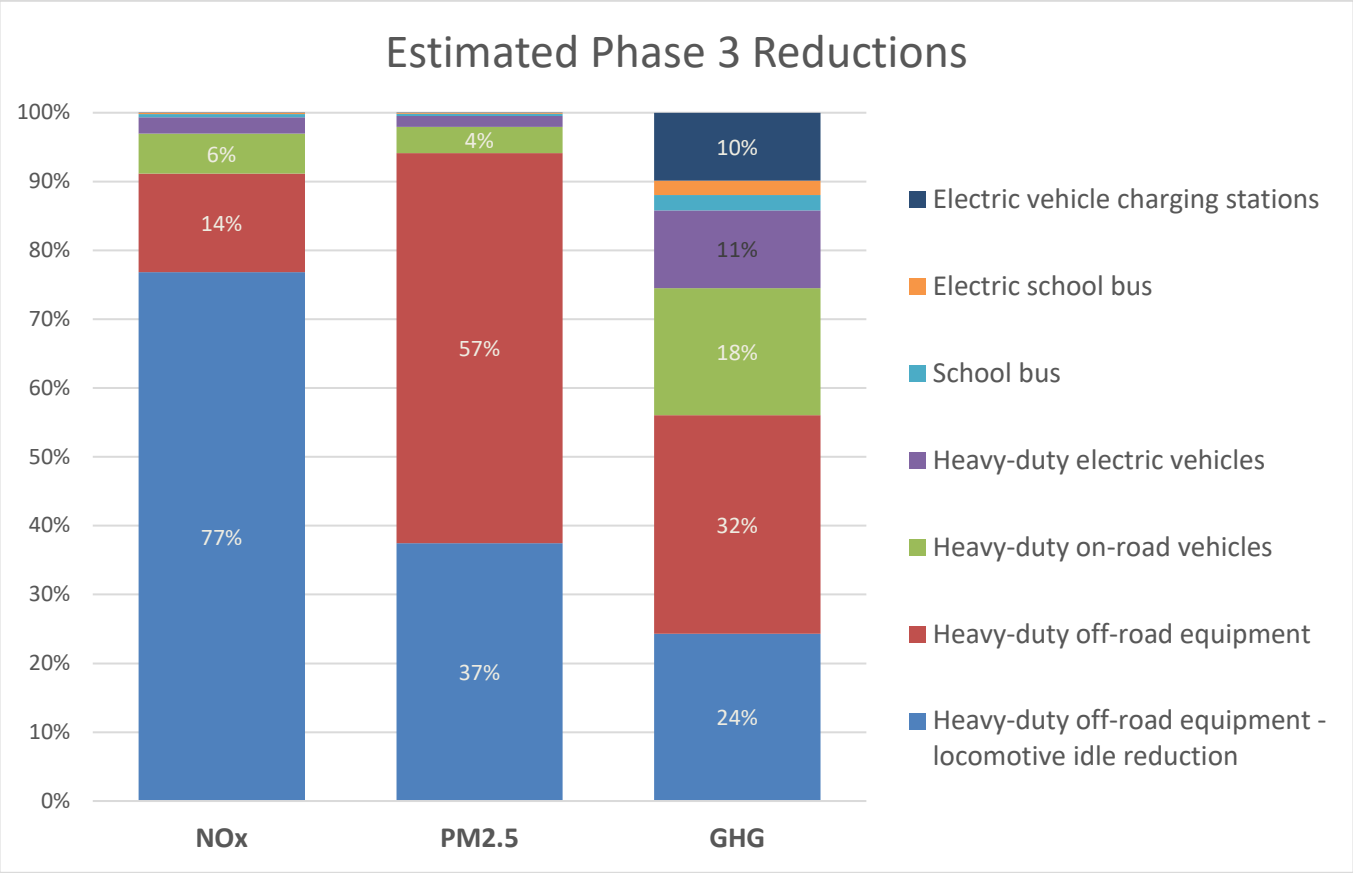
*Percentage of available settlement funds targeted at these activities for 2024-2027.

**Each category includes an estimated mix of eligible vehicles and equipment types. These estimates provide an idea of how many vehicles of each type could be funded in Phase 3 in order to make emissions calculations, but do not reflect a preference for any vehicle or fuel type or funding targets or allocations within each grant program. See Appendix 6 for

calculation methods.

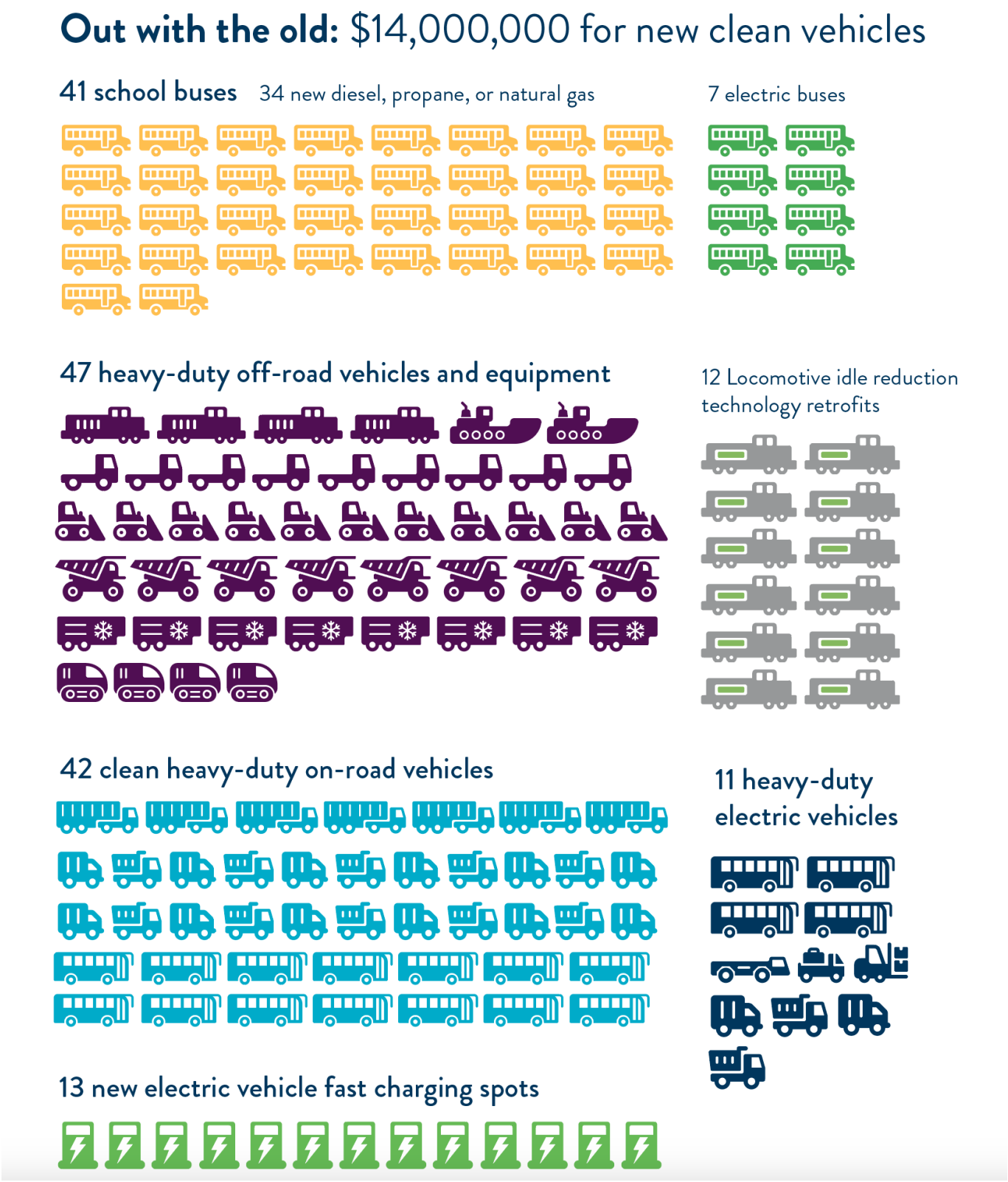
***Emission benefits for projects funded in Phase 3 compared to emissions expected if the old vehicles were to continue to operate for their remaining useful life. Calculated for nitrogen oxides (NO_X), fine particles ($PM_{2.5}$), and greenhouse gases (GHGs). NO_X and $PM_{2.5}$ emissions are calculated for tailpipe emissions only. GHG emissions benefits are calculated from well to wheel. See Appendix 6 for calculation methods.

Figure 3: Phase 3 estimated reductions by grant program (percent of total)



Phase 3 emissions reduction estimates show that a large majority -- 77% -- of the anticipated NO_X reductions will come from the locomotive idle-reduction grant program. Because of its high NO_X reducing potential, locomotive idle-reduction technology will be targeted specifically in Phase 3 to help meet the program wide goal of reducing 4,000 tons of NO_X emissions.

Figure 4: Phase 3 grants will replace hundreds of vehicles across the state.



Funding process

Projects will be funded through a competitive grant application process. The MPCA has developed a set of criteria for scoring projects and selecting those that best align with the program goals. The agency will continue to adapt and improve these criteria throughout Phase 3.

In most cases, the settlement requires that most of the funds for vehicle and equipment replacement be provided by equipment owners; the smaller portion of the total cost of the new vehicle will be covered by VW settlement funds (see next section for allowable matches). Eligible applicants are people and organizations who either own heavy-duty diesel vehicles and equipment or install EV charging infrastructure. Applicants may include, but are not limited to, local governments, tribes, school districts, state government agencies, metropolitan planning organizations, transit authorities, private businesses, and non-profit organizations.

As in Phase 1 and Phase 2, selected applicants will receive their funding as a reimbursement after the new equipment has been delivered and MPCA has received confirmation that their old equipment has been destroyed. Settlement funds cannot be used for vehicles, engines, or electric vehicle charging stations that are purchased before a grant agreement is signed between the owner and the MPCA. Additionally, under the clean heavy-duty off-road grant program, vehicle or equipment owners can work with third parties to submit aggregated applications for multiple vehicles owned by different organizations.

Phase 3 grant programs

Below are descriptions of the six grant programs the MPCA will administer during Phase 3.

Clean heavy-duty on-road vehicles grant program – 15% ($2,100,000)

Estimated emissions reductions: NO_X: 150-204 tons; $PM_{2.5}$: 7-11 tons; GHGs 2,217-15,431 tons

There are approximately 200,000 heavy-duty diesel class 4-8 delivery trucks in Minnesota. Heavy-duty diesel trucks have an estimated lifespan of 25 years, making replacements of older trucks a very cost-effective investment in terms of total pollution reduced per dollar spent. This program will fund the replacement of transit buses and large and medium-sized (class 4-8) delivery trucks, granting up to 25% of the overall cost of the vehicle. The MPCA may use a maximum funding cap to reflect that vehicles in this category vary greatly in size and that some can cost 2-3 times more than others, yet emission reductions may not be greater. During project selection, we will score additional points for GHG reductions and consider higher cap amounts or grant percentages for hybrid, ultra-low NO_X compressed natural gas (CNG), and ultra-low NO_X propane engines which cost more than clean diesel engines but achieve greater emission reductions.

Eligibility: Public and private organizations with eligible diesel trucks and transit buses operating 75% or more of their miles in Minnesota. Eligible fuel types include diesel, propane, natural gas, and fuel/electric hybrid. Gasoline vehicles are not eligible for funding under the terms of the settlement.

Why heavy-duty on-road vehicles? This category represents the largest on-road opportunity for emissions reductions, including GHG reductions. The heavy-duty on-road category contains diesel equipment that emit the most nitrogen oxides in Minnesota, and also offers some of the most cost-effective vehicle replacements. Compared with school bus replacements, heavy-duty on-road projects achieve greater NO_X, $PM_{2.5}$, and GHG reductions, as delivery trucks and transit buses travel two to six times further per year than school buses, with an estimated lifespan of 10 years longer.

Clean heavy-duty off-road equipment grant program – 28.5% ($3,990,000)

Estimated emissions reductions: NO_X: 310-561 tons; $PM_{2.5}$: 64-191 tons; GHGs: 9,253-21,097 tons

This program will fund the replacement or improvement of heavy-duty off-road equipment that is eligible under the DERA, such as marine engines, locomotives, trailer refrigeration units, terminal tractors, and off-road engines, and equipment or vehicles used in construction, handling of cargo, agriculture, mining, or energy production. On-road idle reduction and other eligible technology under DERA may also be eligible.

This program will fund projects up to the following levels, based on the matching levels allowed by DERA. Table 3 gives limits as of 2023, which are subject to change annually:

Table 3: DERA funding limits

Eligible Technologies	EPA Funding Limit	Mandatory Cost Share
Vehicle or Equipment Replacement with EPA Certified Engine	25%	75%
Vehicle or Equipment Replacement with Zero-tailpipe Emission Power Source	45%	55%
Engine Replacement with EPA Certified Engine	40%	60%
Engine Replacement with Zero-tailpipe Emission Power Source	60%	40%
EPA Verified Locomotive Idle Reduction Technologies	40%	60%
EPA Verified Exhaust After-treatment Retrofits	100%	0%

Note: DERA funding levels and equipment eligibility change every year. This program will follow the most recent rules as provided by the U.S. Environmental Protection Agency (EPA).

Eligibility: Public and private organizations across the state. Eligible fuel types include diesel, propane, natural gas, and electric. Gasoline equipment is not eligible for funding under the terms of the settlement. Groups of equipment owners may work with third parties to submit aggregated applications.

Aggregated applications: Aggregated applications/grant contractors are eligible under this program. Eligible contractors may request up to 10% for administrative costs above the grant amount requested per equipment with a maximum of up to $10,000 per piece of awarded equipment.

Why heavy-duty off-road equipment? Among the equipment types eligible for VW settlement funding, heavy-duty off-road equipment can be some of the largest emitters of air pollution and provide the most cost-effective emissions reductions. Through MPCA's experience with DERA and conversations with equipment owners, we know that many of these engines are rarely upgraded without financial incentive. There are many old diesels in this category in Minnesota that have no pollution controls at all.

Clean heavy-duty off-road locomotive idle reduction grant program – 1.5% ($210,000)

Estimated emissions reductions: NO_X: 2,193-2,484 tons; $PM_{2.5}$: 79-90 tons; GHGs: 10,889-12,336 tons

This program will target funding SmartWay Verified List of Idling Reduction Technologies (IRTs) for Locomotives. Technologies could include Automatic Engine Shut-Down/Start-up Systems (AESS), Auxiliary Power Units/Gen Sets (APU/GS), Fuel Operated Heaters aka Direct Fired Heaters (FOH aka DFH), and Shore Connection Systems (SCS).

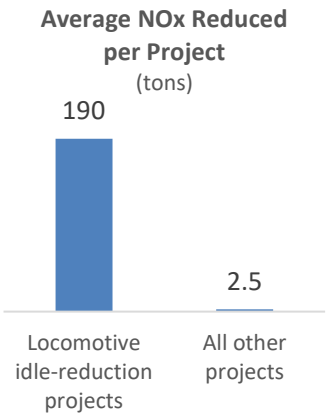
This program will fund projects up to 40% of the total cost of the Idle Reduction Technology.

Eligibility: Public and private organizations across the state. Eligible fuel types include diesel, propane, natural gas, and electric. Gasoline equipment is not eligible for funding under the terms of the settlement. Groups of equipment owners may work with third parties to submit aggregated applications.

Aggregated applications: Aggregated applications/grant contractors are eligible under this program. Eligible contractors may request up to 10% for administrative costs above the grant amount requested per equipment with a maximum of up to $10,000 per piece of awarded equipment.

Why locomotive idle reduction equipment? In Phase 1 of the Volkswagen Settlement plan, MPCA funded five locomotive idle-reduction projects that resulted in significant NO_X reductions. Cumulatively, the five projects reduced an estimated 952 tons of NO_X, an average of **190** tons per project. By comparison, the average NO_X reduction for all other projects that were funded is **2.5** tons.

In addition to the significant NO_X reductions, the locomotive idle-reduction projects are also the most cost-effective projects funded to date, with just **$90** spent in grant funding per ton of NO_X reduced. By comparison, the total cost effectiveness for all other projects that were funded is **$21,650** per ton of NO_X reduced.



Because of the high NO_X emissions reductions and cost effectiveness of these projects, we plan to target funding specifically for locomotive idle-reduction technologies to help meet our NO_X reductions goals. Under the assumption that we will be able to fund projects similar to those we funded in Phase 1, we estimate that with $210,000 in funding, we will be able to achieve between 2,193-2,484 tons of NO_X emissions reductions in Phase 3. This would result in achieving our goal of reducing 4,000 tons of NO_X! Because these projects yield high reductions, the MPCA may shift additional funds to these projects.

Locomotive idle-reduction technology such as Auxiliary Power Units (APU) and Automatic Engine Shutdown/Start up (AESS) allow locomotives to reduce time spent idling, thus reducing fuel consumption and emissions. APUs act as a small engine, warming and circulating coolant and oil, allowing the main locomotive to shut down while retaining the ability to restart immediately. *(Pictured right)* An APU installed on one of the five locomotive grant projects funded.

School bus (non-electric) grant program – 5% ($700,000)

Estimated emissions reductions: NO_X: 13-15tons; $PM_{2.5}$: 0.65-0.84 tons; GHGs: 929-1,207 tons

This program will provide grants for the replacement of eligible Class 4-8 school buses up to $15,000 each, or $20,000 each for operators serving school districts where 40% of students are eligible for free or reduced-cost lunch. The MPCA will provide a list of districts eligible for additional funding.

Eligibility: All Minnesota school bus operators, both public and private. Eligible replacement fuel types include diesel, propane, and natural gas. Gasoline vehicles are not eligible for funding under the terms of the settlement.

Bus owners intending to replace their diesel bus with an electric school bus are eligible to apply under the electric school bus grant program.

Why school buses? During the MPCA public engagement efforts, prioritizing projects that reduce pollution exposures for children and replacing aging school buses emerged as a main theme. During the first two phases of the VW program, Minnesota invested more than $3 million into clean school buses, along with more than $5 million into electric school buses. These investments have reduced diesel exhaust exposure to thousands of children throughout Minnesota, and this investment into school bus replacement in Phase 3 will enhance the overall air quality in all areas of the state.

Electric school bus grant program – 15% ($2,100,000)

Estimated emissions reductions: NO_X:3-6 tons; $PM_{2.5}$:0.07-0.44 tons; GHGs: 740-1,230 tons

This program will provide grants for the purchase of new electric school buses to replace older, Class 4-8, diesel school buses. Funding electric buses was the most common comment received throughout the comment period.

Using a portion of the funds in Phase 2, the MPCA created a pilot project to fund a limited number of electric school buses throughout Minnesota. Data collected from the pilot project will provide information on the electric vehicle technology for school buses and their practical application across Minnesota. Investment and implementation of new technology can present financial risk and variables that MPCA would like to learn about and report on to increase interest in future electric school bus grant opportunities.

Taking into consideration the data from the pilot project, as well as the information we learn from the variety of new federal and state electric school bus programs, the MPCA intends to release another RFP in Phase 3 for electric school bus adoption in Minnesota. The maximum grant amount will be 50-95% of the cost of a new electric bus. The exact amount will be determined after we have analyzed the data from our pilot project. The agency intends to offer increased grant amounts for school districts with 40% of students eligible for free or reduced-cost lunch.

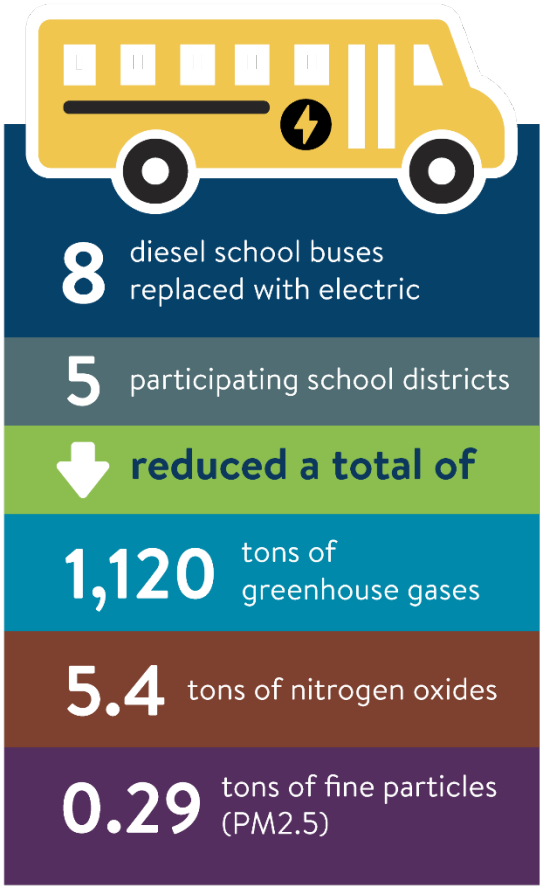
Eligibility: All Minnesota school bus operators, both public and private. Vehicle owners must replace a diesel bus with an electric bus.

Why electric school buses? During our previous public engagement, we received many comments encouraging more dedicated funding for electric school buses. The purchase price of an electric bus is considerably higher than that of a diesel one. However, compared to diesel units, electric buses can achieve operational savings in both maintenance and fuel costs over the life of the vehicle. They also generate fewer GHG emissions and other pollutants, making them a good choice for the environment and for children's health. Figure 5 summarizes the estimated emissions reductions achieved from our Phase 2 Electric School Bus Pilot Grant Program.

The MPCA recognizes and values the positive long-term, transformational results from funding an emerging clean technology. We also wish to balance that view with the awareness and understanding that the technology is still developing and improving as more data, especially on the operational side, is generated and made available.

The travel range of electric buses is increasing but may present potential challenges for rural and other high-mileage route areas. The Phase 2 Minnesota pilot project as well as electric school bus programs from other cold-weather states like Michigan, Massachusetts, and Vermont have provided much-needed information on electric school bus implementation, including operator training needs, cost-effectiveness, and geographical considerations. The MPCA will continue using results from these programs as data become available to help hone and improve our grant opportunities for electric buses. Future electric school bus requests for proposals may encourage partnerships with local utilities and other interested parties to help fund the adoption of electric buses.

Figure 5: Electric School Bus Pilot Grant Program



The **2021 Electric School Bus Pilot Grant** program provided funds to replace older diesel school buses with electric buses. In total, the program funded eight electric school buses throughout five school districts in Minnesota. An estimated 1,120 tons of greenhouse gases, 5.4 tons of nitrogen oxides, and 0.29 tons of fine particles were reduced as a result of the grant program. On average, 140 tons of greenhouse gases were reduced per bus. Emissions reductions were estimated by calculating the amount of emissions avoided over the remaining lifetime of the old diesel bus.

Heavy-duty electric vehicle grant program – 20% ($2,800,000)

Estimated emissions reductions: NO_X: 52-93 tons; $PM_{2.5}$: 2-5 tons; GHGs: 3,511-7,314 tons

This program provides funds for electric alternatives to heavy-duty vehicles and equipment. We anticipate particular interest in replacing transit buses and shuttles, delivery trucks, and airport ground support equipment. Heavy-duty EVs are newer technology and significantly more expensive than other diesel alternatives; organizations may therefore need more financial assistance to begin to adopt EV technology. With a larger investment in Phase 2, this grant program will provide a greater opportunity for our state to adopt and explore this technology.

Eligibility: Public and private organizations across the state. All heavy-duty vehicles (except school buses) and equipment eligible for replacement with an electric alternative are eligible to apply for funding. Airport ground support equipment and forklifts will also be considered in this category, as they are only eligible for electric replacements under the terms of the settlement. Vehicle or equipment replacements must be all-electric.

Why heavy-duty electric vehicles? Support for more EVs was the most common comment we received during our public engagement. Public transit providers, trucking companies, and Minnesotans across the state all said the MPCA should invest in this technology. EVs have no tailpipe emissions and support Minnesota's Next Generation Energy Act goals for reducing greenhouse gas emissions. Public input and survey results from Minnesota Department of Transportation's "Pathways to Decarbonizing Transportation in Minnesota" 2019 report

demonstrated strong support for electric trucks and buses (as well as passenger vehicles) to meet the low-carbon goals for Minnesota's transportation sector.

Electric vehicle charging station grant program – 15% ($2,100,000)

Estimated emissions reductions: NO_X: 0.96 tons; $PM_{2.5}$: 0.07 tons; GHGs: 4,724 tons

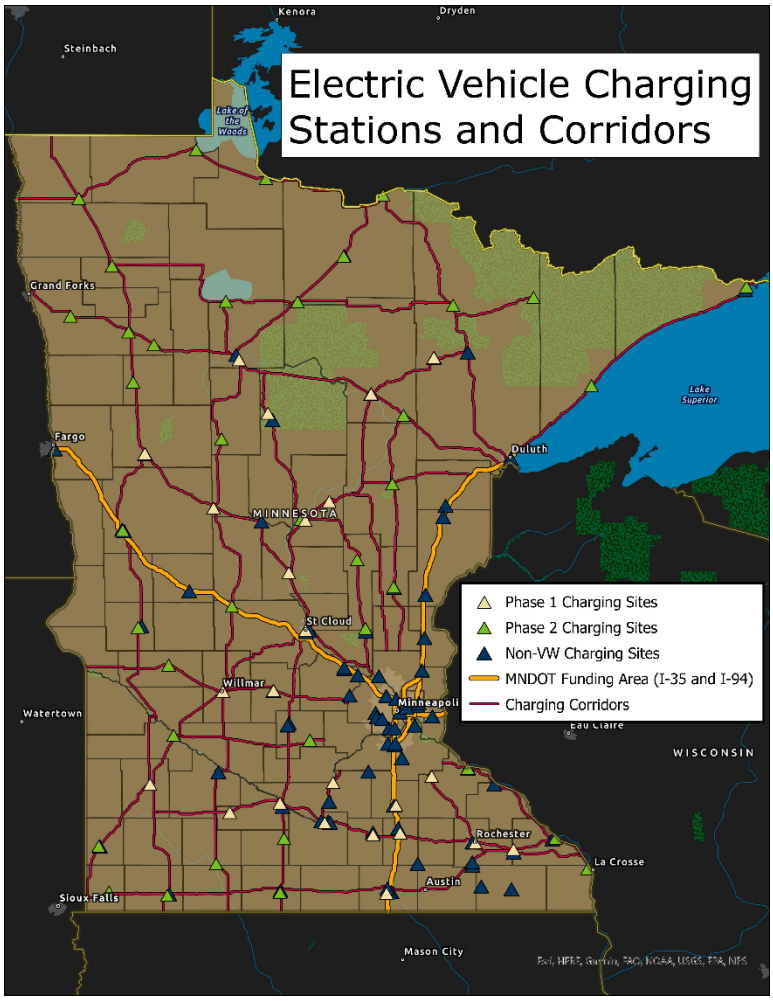
Minnesota will spend the funds in this grant program on EV direct current (DC) fast-charging stations along highway corridors in Greater Minnesota for public use. Approximately ninety percent ($2.1 million dollars) will be spent on an estimated 13 new DC fast-charging locations, reimbursed up to 80% of total eligible project costs or up to $150,000 per 150-kilowatt (kW) charging station installation. In order to build a statewide EV charging network across Minnesota, MPCA has identified preliminary roadways for funding (see Figure 6). Some locations have been proposed for installation of a DC fast-charging station while others are left open for selection by the grant recipient. These pre-selected locations are not mandatory as they were in Phase 1 but are merely possibilities based on traffic volume and location in proximity to existing and proposed EV charging stations. This flexibility is designed to create a complete EV charging network across Minnesota. These roadways will be grouped into corridors similarly to Phase 1. Applicants will be required to apply for installation of the entire corridor with multiple DC fast charging stations. The MPCA will consider the location of newly installed DC fast-charging stations when writing the request for proposals in an attempt to avoid duplication.

Eligibility: Applicants will be required to apply for installation of the entire corridor, including DC fast charging stations on multiple roadways. Grantees building fast-charging stations along corridors shall install them at approximately 15- to 70-mile increments along identified roadways approximately two miles or less from the exit. Fast-charging stations must provide a minimum of 150 kW. The MPCA may require the installation to include adequate electrical conduit at each station for future upgrades up to 350 kW and space for extending the parking pad. To maximize emission reductions, we will encourage charging stations to be powered by electricity generated from renewable sources (wind, solar) through either a utility renewable energy program or by purchasing renewable energy credits.

Why electric vehicle charging stations? Support for more EVs was the most common comment we received during our public engagement. Minnesotans strongly advocated for using the maximum amount allowed for EV charging stations (15%) under the terms of the settlement. Survey and comment data indicate support for a fast-charging network across the state to expand EV access for all Minnesotans and reduce range anxiety. Based on public comments received, MPCA plans to continue to install 150 kW chargers with necessary conduits for future upgrades along highway corridors. Funding 150 kW chargers will allow Minnesota to extend our fast-charging network more rapidly than if we were to require higher-cost chargers. 150kW charging also aligns with current vehicle technology.

Stakeholders also told us that fast-charging is harder to finance without subsidy; slower Level 2 chargers are lower cost and easier to fund without assistance.

Figure 6: Planned DC Fast Charging stations after funding in Phase 1 and Phase 2



The MPCA had identified preliminary roadways for funding in Phase 1 and Phase 2. The MPCA did not award funding for any DC fast-charging stations within the seven-county Twin Cities metro area due to the present publicly available options for charging.

Core application criteria

During Phase 3, as in Phase 1 and Phase 2, our 10-year goals will guide the application and project selection process. The process will consider the location of each replacement vehicle to meet our 60% Twin Cities metropolitan area and 40% Greater Minnesota investment goals, as well as our goals to invest in vulnerable communities. Each program's application process may have specific criteria based on the purpose of the program, but we plan to include the following core criteria in all applications for diesel replacement projects.

- Emissions reduction: Reducing NO_X, $PM_{2.5}$, and GHG
- Cost-per-ton: Cost-effectiveness of NO_x reductions based on cost paid with VW funds (not total project cost). Additionally, GHG reductions may be used to evaluate cost-effectiveness of certain projects
- Vulnerable populations: Vehicles and equipment operating in areas of concern for environmental justice, based on the MPCA's mapping tool

- Air quality and health: Reducing emissions in areas of higher expected levels of air pollution associated with diesel emissions as identified using MPCA's air pollution modeling tool and Minnesota Department of Health (MDH) data on rates of health conditions exacerbated by air pollutants found in diesel emissions

Most of the EV charging stations will be installed along highway corridors throughout Greater Minnesota. For EV charging infrastructure, other core criteria are:

- Cost effectiveness for fast-charging
- Renewable energy: Powering charging stations with electricity generated from renewable sources (wind, solar) through either a utility renewable energy program, by purchasing renewable energy credits, or on-site generation
- Vulnerable populations: Level 2 charging stations operating in areas of concern for environmental justice, based on the MPCA's mapping tool
- Air quality and health: Level 2 charging stations operating in areas of higher expected levels of air pollution as identified using MPCA's air pollution modeling tool and MDH data on rates of health conditions exacerbated by air pollutants found in diesel emissions

Additional criteria may be included in each application. Each grant Request for Proposal (RFP) will provide more detailed scoring. The MPCA may modify the mechanisms for ranking these criteria based on experience in project selection and application review from Phase 1 projects. These modifications will allow us to meet the long-term goals of the VW program.

Making funding accessible

The MPCA will continue to promote opportunities to apply for funds broadly, especially in rural communities and communities disproportionately impacted by air pollution. We have developed user-friendly applications so that vehicle and equipment owners are able to fill out the forms themselves without help from professional grant writers. We also surveyed potential applicants about their experience with the application process in order to continue to make improvements.

The MPCA is committed to working within the state's grant processes to create application processes that balance our need for information with the needs of applicants. We will continue to provide opportunities to ask questions about the funding applications, publicly share answers to those questions, and host meetings and webinars about funding opportunities. The purpose of these efforts is to lower the barriers to access these funds and help all Minnesotans with eligible projects understand the process, and especially to help people and organizations without experience in applying for state funds. We will continue to seek input from applicants and potential applicants on how to improve the process.

10-year program goals

Prior to Phase 1, MPCA solicited input from Minnesotans across the state to develop the long-term goals that would guide us over the 10 years of the program. More recent input from Minnesotans confirmed that these program goals should not change in Phase 3. Our aim is to use the funds to bring the most benefits to the state and most effectively manage the settlement funds.

We are committed to transparency and making our data accessible to the public. The agency developed an online interactive data tool that measures and tracks progress towards our program goals. Visit www.pca.state.mn.us/vwprogress to explore the data.

Achieve significant emissions reductions

Projects funded will target specific reductions in three categories:

- NO_X: 4,000 tons
- $PM_{2.5}$: 150 tons
- GHG: 100,000 tons

What Minnesotans told us: During public meetings throughout the first two phases of the VW program, we heard the need to continue reducing emissions from diesel sources by replacing vehicles and equipment with cleaner options. Given the progress toward achieving NOX emission reductions in Phase 1 and Phase 2, MPCA should continue to consider PM2.5 and GHG reductions in addition to NOX. Fine particles from diesel pollution are the main driver of health risks from breathing outdoor air in Minnesota. Reducing GHG emissions reduces the state's contribution to climate change and helps us meet Minnesota's emissions reductions goals.

Benefit all parts of the state

- 60% of the funds will be invested in the Twin Cities metropolitan area
- 40% of the funds will be invested in Greater Minnesota

Because 60% of the violating vehicles were registered in the Twin Cities metropolitan area and 40% were registered in Greater Minnesota, the funds will be targeted using the same 60:40 ratio over the course of the 10-year program (2018-2027).

What Minnesotans told us: There was strong feedback throughout the state that projects should be funded both in the Twin Cities metropolitan area and in Greater Minnesota.

In Greater Minnesota, Minnesotans told us they were interested in using EVs, but concerned about the lack of EV charging facilities connecting highways between Greater Minnesota cities that were not part of the Phase 1 or Phase 2 corridors. They were also concerned about the lack of charging stations in some areas. For school buses, there were concerns about the feasibility of new technology in Greater Minnesota.

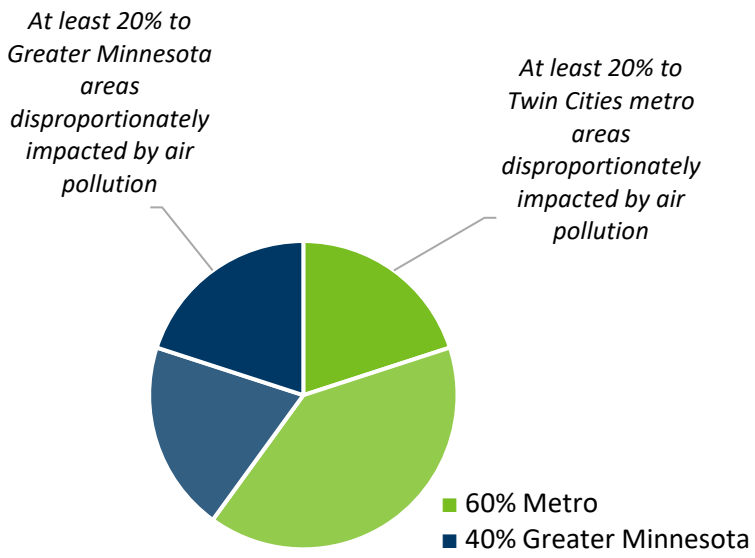
In the Twin Cities, residents shared concerns about school buses, and the need to replace more of them with newer technology vehicles, especially electric buses. They also discussed wanting to use EVs but felt concerned that without charging opportunities across the state, they would not be able to travel outside of the metropolitan area.

Help people and places disproportionately affected by air pollution

Over the course of Minnesota's 10-year VW program (2018-2027), at least 40% of the funds will be invested in areas disproportionately affected by air pollution in Minnesota. Half of this, or at least 20% of the overall funds, will go to such areas in the Twin Cities metro, and the other half (20% of overall funds) to such areas in Greater Minnesota.

The VW settlement directs states to consider the potential impact of the projects they fund on areas that "bear a disproportionate share of the air pollution burden within its jurisdiction." The MPCA considers areas disproportionately impacted by air pollution to be areas of concern for environmental justice**.**

Figure 7: How Minnesota will invest VW settlement funds



The criteria that define environmental justice areas have changed over the course of the VW program. New projects funded through the VW program have reflected our best understanding of the MPCA's environmental justice criteria available at the time. The current four criteria used to identify environmental areas are:

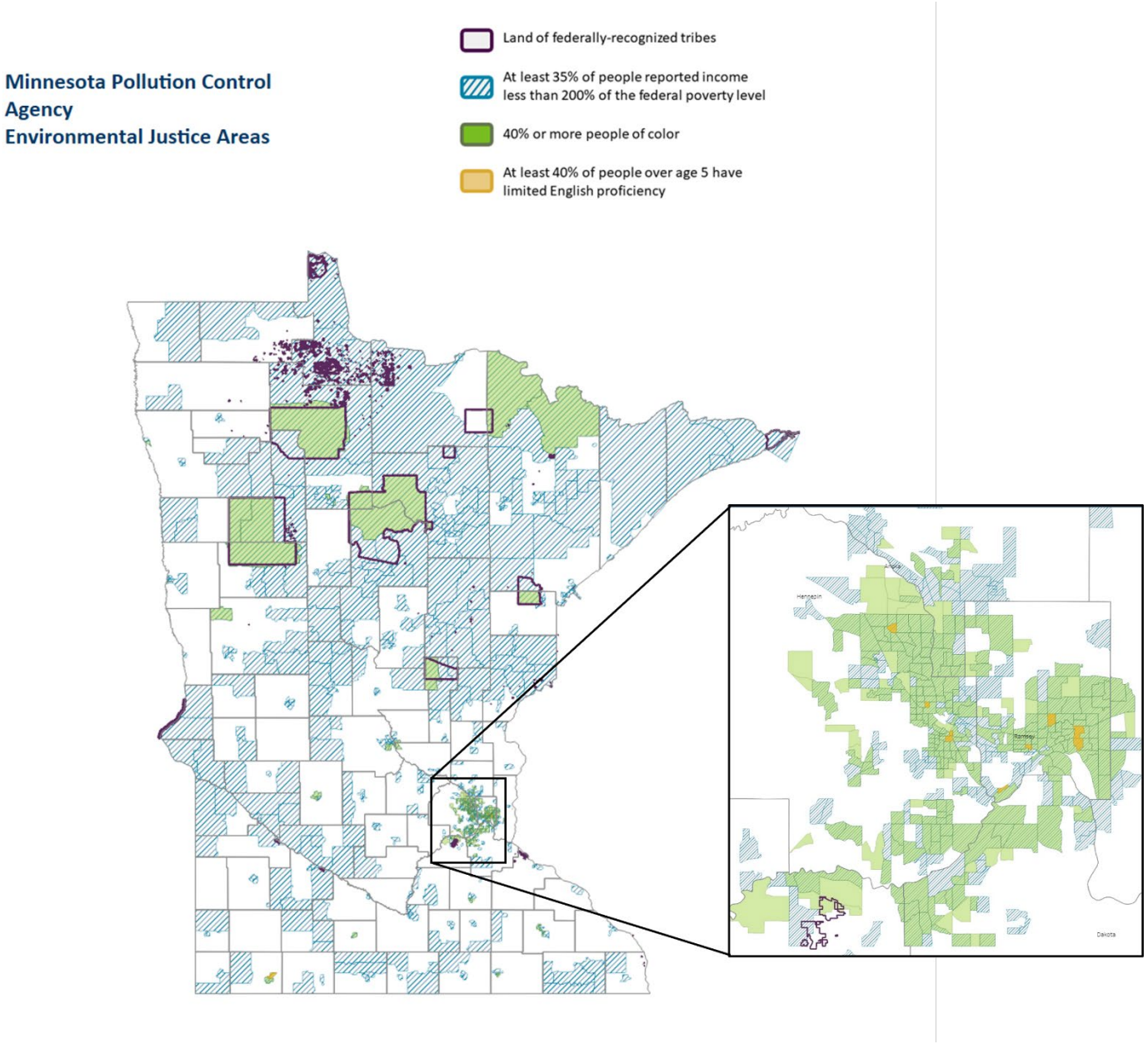
- Census tracts where more than 40% of residents are people of color or American Indians
- Census tracts where 35% or more of households have an income of less than 200% of the federal poverty level
- Tribal lands
- At least 40% of people have limited English proficiency

The MPCA considers environmental justice in the scoring criteria for selecting projects for funding when possible. Combining this demographic information with diesel exhaust exposure and health data can help identify overburdened communities.

What Minnesotans told us: During our public outreach efforts, Minnesotans asked the MPCA to emphasize projects benefiting air quality in areas with greater health effects from air pollution. Some communities not only experience higher levels of pollution, but also may not have the amenities, resources, and conditions to support healthy living. We are working with a variety of stakeholders and state, local, national, and tribal government partners to address disparities in air pollution exposure and related health effects with the VW settlement funds. We worked to meaningfully involve communities of color and low-income communities during the development and will continue to seek deeper engagement in the implementation of this plan.

The agency's Environmental Justice Advisory Group participated in stakeholder meetings, provided advice on engagement, and recommended ways to incorporate these concerns into our plan.

Figure 8: Minnesota areas of concern for environmental justice



An interactive version of this map is available on the MPCA's website.

Reduce exposures to harmful air pollutants and maximize health benefits

The MPCA will continue to use air quality modeling and health data to consider public health in choosing projects to fund. Agency modeling indicates that diesel exhaust is a primary driver of health risks from outdoor air pollution in the state. We use modeled air concentrations of NO_X and $PM_{2.5}$ to score submitted projects based on where a vehicle replacement or EV charging station will operate. We also score projects using MDH data on the prevalence of certain air pollution-related health outcomes in the area where a project will operate, such as asthma-related hospitalizations. In Phase 3, we will continue to work with MDH on the public health scoring criteria used to select projects to fund.

What Minnesotans told us: Many in our public meetings said we should focus on reducing people's exposures to diesel pollution and target funding in areas where people experience disproportionate levels of health outcomes related to air pollution.

Balance cost-effectiveness with other program goals

The MPCA will require applicants, including governments, to match settlement funds towards the cost of new vehicles. Cost-effectiveness will also be considered in project selection. We will strive to leverage other funding opportunities when possible.

What Minnesotans told us: We heard that we should continue striving to operate a cost-effective program that focuses on achieving real emissions reductions. Minnesotans also told us that we should achieve other important benefits with these funds. For instance, Minnesotans want funds to be used to replace school buses, which are important for reducing children's exposures to air pollution; however, school buses do not emit as much overall pollution as some other vehicles, such as trucks. While school bus replacements might not be the most cost-effective funding option, the opportunity to reduce exposures to children—a population particularly vulnerable to the effects of air pollution—makes them an important investment option. Therefore, cost effectiveness will be balanced with our other important goals.

Economic benefits

The VW settlement will not only benefit our air quality, but also our economy. Phase 3 projects will invest an anticipated $5.6 million in Greater Minnesota and $8.4 million in the Twin Cities metropolitan area and have far-reaching benefits beyond how the settlement funds are spent.

The reduction of vehicle emissions resulting from Phase 3 spending should contribute to improved air quality and related health outcomes, including fewer:

- Asthma attacks
- Respiratory symptoms
- Work-loss days
- Hospital admissions for respiratory and cardiovascular issues
- Non-fatal heart attacks
- Premature deaths

According to the EPA's 2018 report "Technical Support Document Estimating the Benefit per Ton of Reducing $PM_{2.5,}$" each dollar invested in clean diesel projects generates between $11 and $30 in public health benefits.

These investments also mean jobs for Minnesotans. New Flyer manufactures transit buses at their facility in St. Cloud, producing clean electric, hybrid, diesel, and CNG buses used around the region. Replacing engines in large equipment such as boats, locomotives, and construction equipment can take weeks or months of labor; a project may require between $60,000 and $200,000 to employ mechanics with the appropriate skills. In addition, companies in Minnesota such as ZEF Energy, ChargePoint, Werner Electric, and Hunt Electric install, operate, and maintain EV charging stations.

The MPCA's previous experience with the DERA demonstrated that heavy-duty vehicle replacements both reduce communities' exposures to harmful diesel pollution and benefit industries that rely on heavy equipment. Vehicle efficiency improvements reduce maintenance and operation costs for grant recipients, who can then invest the savings elsewhere. For instance, a 2016 DERA grant replaced two school buses in St. Louis County, which reduced

emissions from those buses by 95% and saved the school district more than $21,000 a year in maintenance and fuel costs.

EVs have lower fuel and maintenance costs than traditional models over the life of the vehicles. In addition, EV prices are decreasing, and the used market is expanding, making them an affordable choice for more people. Installing more charging stations around the state will make EVs even more accessible to all Minnesotans. Restaurants, shops, and tourist destinations will benefit from hosting charging stations when EV drivers eat, shop, or explore while they wait for their cars to charge up.

Public input

The MPCA sought public input early in the process to help develop our plan, and we have made every effort to create a plan for Phase 3 that reflects the input and needs of Minnesotans. There were additional opportunities for public review, comment and input built into the process as we finalized this plan.

The MPCA's VW settlement website (www.pca.state.mn.us/vw) offers details of the settlement, information on public meetings and other ways that were available to provide input, and data on the progress toward our 10-year goals. For more on our public engagement and what we heard, see Appendices 4 and 5.

Ongoing input

We will continue to engage with the public during the entirety of this program. We intend to solicit ideas and improve the program as we learn more about what is working in Minnesota. We will use our public website, email lists, and social media to keep the public informed of any projects and processes that may be of interest to them, as well as to receive ideas and suggestions to help improve the program.