

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification
MN Phase 2 DERA 4

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary _____

Lead Agency Authorized to Act on Behalf of the Beneficiary _____
(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:	
Beneficiary's Project ID:	
Funding Request No.	<i>(sequential)</i>
Request Type: (select one or more)	<input type="checkbox"/> Reimbursement <input type="checkbox"/> Advance <input type="checkbox"/> Other (specify): _____
Payment to be made to: (select one or more)	<input type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify): _____
Funding Request & Direction (Attachment A)	<input type="checkbox"/> Attached to this Certification <input type="checkbox"/> To be Provided Separately

SUMMARY

Eligible Mitigation Action <input type="checkbox"/> Appendix D-2 item (specify): _____ Action Type <input type="checkbox"/> 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):
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):
Estimate of Anticipated NOx Reductions (5.2.3):
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):
Describe how the Beneficiary will make documentation publicly available (5.2.7.2).
Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8).
Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).

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).

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 _____, 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: _____

David J. Benke
Division Director

[LEAD AGENCY]

for

[BENEFICIARY]

ATTACHMENT B
Minnesota Funding Application 20 – Phase 2 MN DERA 4
PROJECT MANAGEMENT PLAN
PROJECT SCHEDULE AND MILESTONES

Milestone	Date
Request for Proposals announced (Phase 2 MN DERA 4)	September 14, 2021
Request for Proposal Closing – Application Deadline	December 1 ,2021
MPCA selects potential grant recipients from eligible application pool	January 2022
MPCA submits Funding Request to Trustee – Appendix D-4: Beneficiary Eligible Mitigation Action Certification including Attachments	February 2022
Trustee Acknowledges Receipt of Funding Request	Receipt from Trustee
Trustee Allocates Share of State Funds	Transfer date
Grant agreements signed with selected entities	CY 2022, Q2
Grantee provides proof of destruction, invoices and other documents required for reimbursement	CY 2022, Q2 – CY 2024, Q2
MPCA reviews, requests corrections if necessary, certifies project completion, and provides reimbursement	CY 2022, Q2 – CY 2024, 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	Share of Total Budget paid by Federal DERA Program	Cost-Share, paid by fleet owners
1. Equipment Expenditure	\$5,166,887	\$1,139,112	\$321,900	\$3,705,875
2. Contractor Support (Provide List of Approved Contractors as Attachment with approved funding ceilings)	\$66,313	\$0	\$66,313	\$0
3. Sub recipient Support	\$0	\$0	\$0	\$0
4. Administrative ¹	\$133,595	\$0	\$133,595	\$0
Project Totals	\$5,366,795	\$1,139,112	\$521,808	\$3,705,875
Percentage	100%	21.2%	9.7%	69.1%

PROJECT BUDGET

¹ Subject to Appendix D-2 15% administrative cap

PROJECTED TRUST ALLOCATIONS

	2018	2019	2020	2021	2022
1. Anticipated Annual Project Funding Request to be paid through the Trust					\$1,139,112
2. Anticipated Annual Cost Share					\$4,227,683
3. Anticipated Total Project Funding by Year (line 1 plus line 2)					\$5,366,795
4. Cumulative Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation	\$2,350,000	\$7,401,110	\$1,871,242	\$6,664,286	\$1,778,000
5. Current Outstanding Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation					\$3,551,300
6. Current Beneficiary Project Funding to be paid through the Trust (line 1)					\$1,139,112
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	\$7,401,110	\$6,664,286	\$4,690,412
8. Beneficiary Share of Estimated Funds Remaining in Trust (Market Value of last statement date from Online Portfolio)	\$47,133,334	\$38,437,993	\$36,941,535	\$29,409,040	\$30,015,839
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	\$36,941,535	\$29,409,040	\$27,103,427

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's Volkswagen (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

Project owners were asked to submit the total cost for each new project in their grant application.

Listed below are detailed equipment cost estimates for projects that are projected to have a grant expenditure above \$25,000.

Project	Project Label	Projected VW + DERA grant equipment expenditure	Projected total equipment cost
Excavator	4	\$53,250.00	\$213,000.00
Material Handler	5	\$180,977.00	\$683,908.00
Material Handler	6	\$180,977.00	\$683,908.00
Loader	7	\$95,198.40	\$399,000.00
Loader	8	\$145,220.00	\$540,880.00
Excavator	9	\$130,500.00	\$482,000.00
Loader	10	\$276,988.50	\$615,530.00
Loader	12	\$133,627.50	\$296,950.00
Electric Rail Car Mover	14	\$230,831.25	\$883,325.00
Electric Terminal Truck	16	\$84,255.25	\$306,385.00

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

Beneficiary: Minnesota

Lead Agency: Minnesota Pollution Control Agency

In support of funding request no. 20

MN Phase 2 DERA 4

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 2021 DERA program.

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

This DERA4 Off-Road replacement and idle reduction program will use VW funds to award grants to replace 11 old diesel pieces of equipment. Five of these new pieces of equipment will be operated in Greater Minnesota, and 6 will be located in the Twin Cities Metropolitan area. New equipment includes two diesel material handlers, one diesel skid steer, one all-electric terminal tractors, one electric rail car mover, four diesel loaders, and two diesel excavators. All new pieces of equipment will replace old diesel equipment, resulting in substantial environmental improvement.

We anticipate more than 40% of all MN VW projects will be located in areas disproportionately impacted by air pollution. All projects are selected using Minnesota’s environmental justice mapping tools as part of our selection criteria.

The Minnesota Pollution Control Agency anticipates the following emissions reductions as a result of DERA3 Off-Road project:

Pollutant	NOx	PM 2.5	GHG
Lifetime Tons of Pollution Reduced	92	6.1	3111

Estimate of Anticipated NOx Reductions (5.2.3):

Lifetime NOx reductions will be 92 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):

There is a maximum grant percentage for each eligible piece of off-road equipment being replaced. The grant amount is 25% for total replacement of equipment, or 40% for either engine replacement or adding idle reduction technology. All electric replacement pieces of equipment may be reimbursed up to 50% of the cost of the equipment. Each off-road equipment owner is responsible for funding the remainder of the replacement for their projects.

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 of VW Consent Decree. 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.

ATTACHMENT E
Minnesota Funding Request 20 – Phase 2 MN DERA 4

DERA Option
Approved EPA Proposal

From: Hosna, Alexis <Hosna.Alexis@epa.gov>
Sent: Tuesday, March 8, 2022 3:48 PM
To: David, Eric (MPCA) <eric.david@state.mn.us>
Cc: Anson, Colleen (MPCA) <colleen.anson@state.mn.us>; Gibbs, Peggy (MPCA) <peggy.gibbs@state.mn.us>
Subject: RE: Minnesota DERA DS00E65306 Amendment

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Hi Eric,

I'm pleased to inform you that MPCA's Rebudgeting Amendment for DS00E65306 has been approved. It is currently with the grants office waiting finalization, but all documents have been reviewed and approved on my end. Thank you for providing the necessary documents and patience through this process.

Best,

Alexis Hosna | (she/her/hers)
State and Tribal Planning Section
Air and Radiation Division
U.S. EPA, Region 5
(312) 353-3209

2021 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative Template

INSTRUCTIONS: States and territories applying for 2021 DERA State Grants should use this template to prepare their Work Plan and Budget Narrative.

Please refer to the 2021 DERA State Grants Program Guide full program details, eligibility criteria and funding restrictions, and application instructions.

SUMMARY PAGE

Project Title: State of Minnesota Clean Diesel Program

Project Manager and Contact Information

Organization Name: Minnesota Pollution Control Agency (MPCA)

Project Manager: Eric David

Mailing Address: 520 Lafayette Road, St Paul, MN 55155

Phone: 651-757-2218

Fax:

Email: eric.david@state.mn.us

Project Budget Overview:

	2021
EPA Base Allocation	\$347,872
EPA Match Bonus (if applicable)	\$173,936
Voluntary Matching Funds (if applicable)	\$642,218 \$1,139,112
Mandatory Cost-Share	\$2,791,672 (this amount is an estimate - there is no way to know this before grantees are selected) \$3,705,875
TOTAL Project Cost	\$3,955,698 \$5,366,795

Project Period

October 1, 2021 – September 30, 2023

Summary Statement

In past years, MPCA has offered a broad range of on-road and off-road diesel categories in its DERA grant program. Because the Volkswagen settlement does not allow funding for non-road construction and certain other kinds of projects that are allowed in DERA, we will be focusing MPCA's DERA program on the projects and fill the gaps left by the VW consent decree. MPCA will seek eligible projects including, but not limited to: marine engines, locomotives, trailer refrigeration units, terminal tractors, drayage trucks, 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 may also be made eligible under this funding.

Note: the MPCA is submitting Amendment 1 due to increased Voluntary Match funding being included, grantees being chosen with mandatory match funds identified, and moving funds from

Contractual to Other based on our conversation with EPA on January 5, 2022. These changes will not increase the EPA's funding of Minnesota's DERA program.

More information is at the MPCA's main Clean Diesel Web page: www.pca.state.mn.us/cleandiesel. Full information on Minnesota's VW work can be found on the website: www.pca.state.mn.us/vw

SCOPE OF WORK

STATE/TERRITORY GOALS AND PRIORITIES:

The MPCA's long-term goals related to Air include:

- Ensure ambient air quality is better than air quality standards and benchmarks.
- Reduce Minnesota's contribution to global mercury levels.
- Reduce Minnesota's contribution to global concentrations of greenhouse gases.
- Disproportionate negative impacts from pollution are reduced or prevented.

It is clear that several of these Agency-wide goals laid out above dovetail directly with our DERA funding partnered with Minnesota's \$47 million in VW funding.

Related to these long-term goals, MPCA's five-year strategic plan charts the agency's direction through 2022. This plan reflects insight gathered from external stakeholders in 2017 and thoughtful review from agency staff and management. Below are the MPCA's Air Strategic Goals:

Air



Improve air quality in population centers.



Offset excessive emissions and advance diesel reductions via the Volkswagen Settlement.



Reduce air permitting backlog.



Reduce Minnesota's greenhouse gas emissions from transportation.

This DERA and VW funding will be put to work to help achieve 3 of these 4 Agency wide goals:

- Improve air quality on population centers
- Offset excessive emissions and advance diesel reductions via the Volkswagen Settlement
- Reduce Minnesota's greenhouse gas emissions from transportation.

Volkswagen Goals

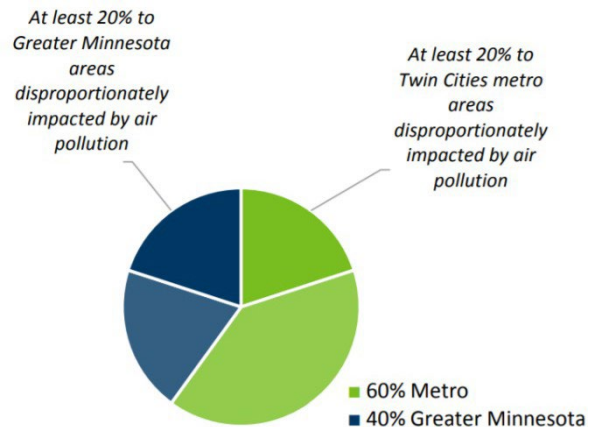
The Volkswagen goals bridge nicely with this DERA funding. The input MPCA received during the development of Minnesota's Phase 2 (2020-2023) Beneficiary Mitigation Plan (plan) confirmed that we should maintain and continue to strive for the 10-year goals we set out in our Phase 1 plan. MPCA will continue 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 Volkswagens 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 2. 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.

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 the Twin Cities metro area, and the other half (20% of overall funds) to 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." MPCA considers areas disproportionately impacted by air pollution to be areas of concern for environmental justice. These areas are:

- Census tracts where more than 50% of residents are people of color or American Indians
- Census tracts where more than 40% of the households have an income of less than 185% of the federal poverty level
- Tribal lands



Program Partnerships

Since 2006, the MPCA Clean Diesel Grants Program has leveraged state and federal funds and collaborated with Environmental Initiative, a Clean Air Minnesota (CAM) partner, on Project Green Fleet to reduce diesel emissions across the state. Among other diesel retrofit efforts, Project Green Fleet used state and private funding to retrofit all 3,108 eligible school buses in Minnesota, significantly reducing the exposure of children to harmful fine particles by 20 to 25-percent.

MPCA and Project Green Fleet have made significant strides in upgrading diesel trucks across the state. Looking forward, we will target construction, marine and rail equipment for upgrades through DERA. Diesel construction equipment can be especially old and dirty, and may often operate 16-24 hours a day sometimes near homes and businesses.

Modeling and Data

MPCA has tracked the total statewide emissions of four major criteria air pollutants from 2002 to 2016. During this time, estimated emissions of these pollutants have been reduced by almost 50-percent. While this report focuses on statewide total emissions, MPCA understands that some air pollutants are emitted disproportionately in areas of concern. MPCA is committed to addressing health and environmental inequities from mobile source pollution.

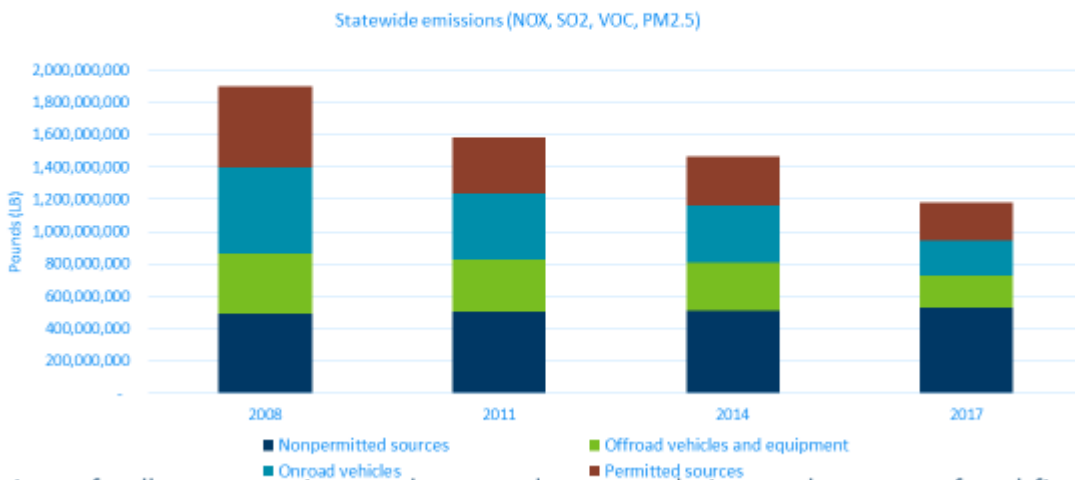
In 2014, the majority of air pollution came from smaller, widespread sources, including vehicles, small businesses and construction equipment.

Minnesota remains in compliance with national ambient air quality standards, but has been close to both the PM2.5 and ozone standards in recent years.

Below: sources of air emissions in Minnesota, includes state emissions from PM2.5,NOx, SO2 and VOCs.

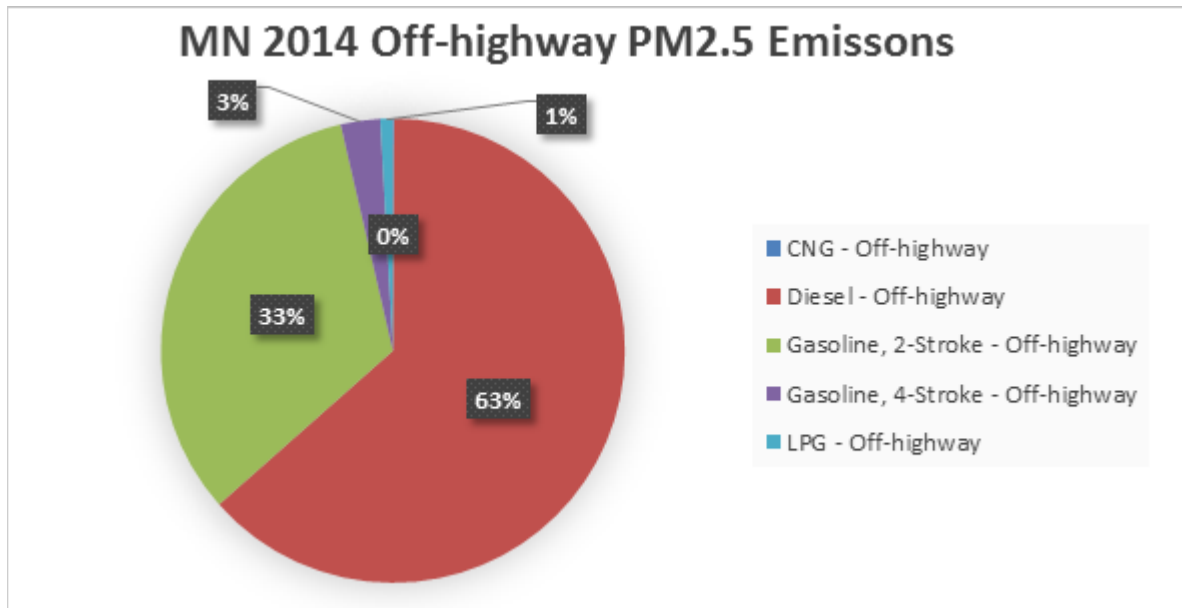
Air Goal 1:

Measure 2 – Trends in key air emissions in Minnesota

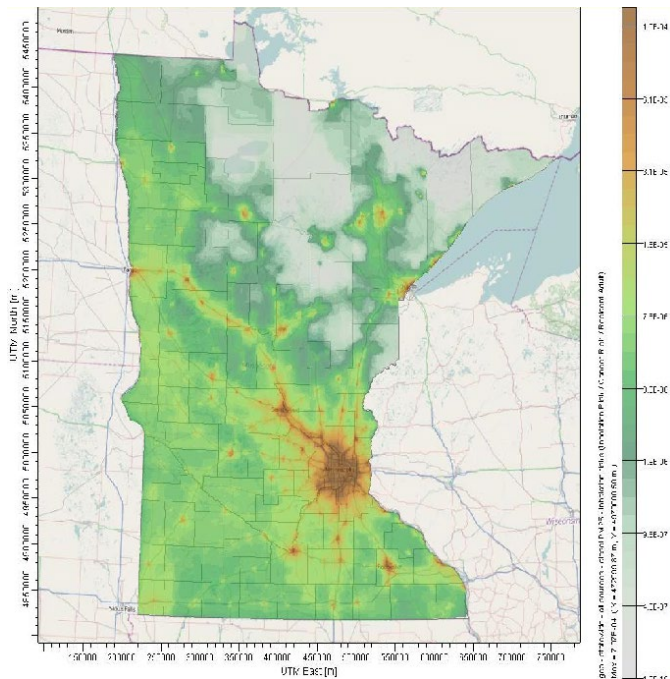


Emissions of pollutants continue to decrease due to regulation, replacement of coal-fired EGUs, and cleaner vehicles.

The 2014 data chart below -- PM_{2.5} emissions. The chart below shows that *off-road diesel* represents 63-percent of all off-road PM_{2.5} emissions.



The following map of Minnesota shows the levels and locations of Inhalation Cancer Risk from ALL Diesel PM_{2.5} in Minnesota with green representing low levels and orange and brown representing high levels.



VEHICLES AND TECHNOLOGIES:

MPCA will offer competitive grant awards to projects that are eligible under the criteria set out in the DERA Program Guide. MPCA will seek eligible projects including, but not limited to: marine engines, locomotives, trailer refrigeration units, terminal tractors, drayage trucks, and off-road engines, and equipment or vehicles used in construction, handling of cargo, agriculture, mining, or energy production.

These eligible projects will be upgraded via 3 main eligible diesel emission reduction solutions: engine replacements (electric/diesel/alt fuel), vehicle replacements (electric/diesel/alt fuel), and idle reduction technologies. Potential additional technologies include: engine upgrades and remanufacture, cleaner fuels and additives, aerodynamic technologies, or clean alternative fuel conversions. On-road idle reduction and other eligible technology may also be made eligible under this funding. All funded replacement vehicles, engines and emission-reducing technologies must be EPA/CARB-verified.

The MPCA anticipates funding approximately 5 – 25 projects. This number is extremely hard to predict with some projects only being a few thousand dollars to others being hundreds of thousands of dollars. Minnesota state statutes requires the use of a competitive Request for Proposal (RFP) process in the award of sub-recipient grants and contracts, so we can only roughly estimate what types of fleets, and types of technologies, and what their emission reductions may be. Thus, we cannot guarantee what fleets/projects will apply and what fleets the MPCA will select. However, we will provide this information once the process is complete and MPCA has selected the fleets per new EPA program guidelines.

ROLES AND RESPONSIBILITIES:

The MPCA will manage DERA funds by using grants awarded through a competitive request for grant applications – open to all private and public entities in Minnesota.

All applications are screened for eligibility by our Contracts unit. A team of three from our Resource Management & Assistance division scores eligible projects based on criteria stated in the RFP. MPCA grant scoring has been strengthening its environmental justice emphasis and criteria along with health impacts. We will have revised criteria in these categories along with our emission reduction cost per ton criteria. While PM2.5 remains the primary pollutant, co-benefits from reducing other criteria pollutants such as NOx and CO2 will also be utilized in scoring.

Sub-grantees work with the DERA program manager to develop a workplan/timeline and must sign a grant agreement that outlines tasks and responsibilities for the project, as outlined below in the Timeline and Milestones section. No work can begin until the grant agreement (contract) is fully executed by both parties. The partner fleet is only reimbursed grants funds after grant agreement is signed, the work is complete, and the reimbursement package has been submitted to MPCA.

In addition, Minnesota’s Phase 2 plan does allow for aggregated applications. Eligible contractors may apply for funding on behalf of partner fleets/equipment and 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.

TIMELINE AND MILESTONES:

- June/July 2021: MPCA staff works on the DERA Request for Proposal
- July/August 2021: MPCA launches new RFP with 60-90 day application period
- November/December 2021: MPCA staff screens and scores grant applications for eligibility
- December 2021/1st quarter 2022: MPCA finalizes grant agreements
 - Grant agreements are signed after 60-75 day time period by the VW Trustee
- 1st quarter 2022: Work begins as soon as the MPCA executes the grant agreements
- 1st quarter 2022 – September 2023: MPCA grant manager works with grantees and any applicable contractors to complete projects and stay abreast of any potential delays in work. Grant Manager conducts site visits as needed per MPCA policies.
 - Sub grantees complete projects, submit documentation of destroyed engine/vehicle, invoices, etc. and are reimbursed electronically
 - We require a paid-in-full invoice and photos of the destroyed engines and/or chassis to accompany our disbursement request form.
- As projects are completed: MPCA may communicate successful projects via articles, events, or other publicity options.
- Quarterly: MPCA will submit the EPA Quarterly Report
- September 30, 2023: All projects complete.
- December 31, 2023: Final report submitted to EPA including final costs for projects, mandatory match from fleets, MPCA admin/staff costs, etc.

DERA PROGRAMMATIC PRIORITIES:

Per the Program Guide (page 18): “The principal objective of the assistance to be awarded under this program is to achieve significant reductions in diesel emissions in terms of tons of pollution produced and reductions in diesel emissions exposure from vehicles, engines and equipment operating in areas designated as poor air quality areas.”

In Minnesota, the counties identified in the “2021 County Priority List” are Anoka, Clay, Dakota, Hennepin, and Ramsey Counties. These counties have areas of concern for Environmental Justice and will receive extra points for being in those areas.

The guide also states priority projects that are located at ports/airports, rail yards, terminals, and distribution centers. These industries listed have proven to be very cost-effective options and have received funding in past years. This is due to the Evaluation Scoresheet containing high points for cost-effectiveness, which the PCA calculates by taking the grant dollars for the project divided by the PM emissions reductions.

The PCA will also consider awarding additional points for projects in these areas outside of the traditional cost-effectiveness calculation.

EPA’S STRATEGIC PLAN LINKAGE AND ANTICIPATED OUTCOMES/OUTPUTS:

1. Linkage to EPA Strategic Plan:

Per the Program Guide: *“Awards made under this announcement will support Goal 1, “A Cleaner, Healthier Environment” Objective 1.1, “Improve Air Quality.” Under this objective, EPA will “Deliver a cleaner, safer, and healthier environment for all Americans and future generations by carrying out the Agency’s core mission.””*

MPCA projects funded under this program focus on reducing emissions from diesel fleets in targeted areas around Minnesota. These projects are highly cost-effective at reducing local and regional air pollution, thereby Improving Air Quality and supporting Goal 1 and Objective 1.1.

2. Outputs:

It is difficult to estimate the number of projects and emissions reductions that will take place through this funding. However, the MPCA anticipates funding approximately 5– 25 projects in this FFY21 funding cycle. This number is extremely hard to predict with some projects only costing a few thousand dollars to others being hundreds of thousands of dollars. Minnesota state statutes requires the use of a competitive Request for Proposal (RFP) process in the award of sub-recipient grants and contracts, so we can only roughly estimate what types of fleets, and what types of technologies may apply, and what their emission reductions may be. However, we will provide this information once the process is complete and MPCA has selected the fleets per new EPA program guidelines.

3. Outcomes:

Emissions reductions are very difficult to forecast because we do not know what projects will apply or be awarded grant funding. However, based upon the past 2 years of projects, MPCA estimates lifetime emissions reductions of the combined DERA and VW funding of approximately 13 tons of PM, 68 tons of NOX, and 1,106 tons of CO2. These figures will be honed in when projects are selected after consultation with EPA, and finalized in the Final Report.

Additional Outcomes include:

- Increased community health and participation in MPCA’s Environmental Justice objectives.
- The MPCA Clean Diesel-focused email subscriber list has grown from 65 interested parties seven years ago to around 1,400 today. For initial grant round announcements, the MPCA combines this list with the MPCA air quality list for a combined unduplicated list of

interested parties numbering around 2,100. The VW list is over 1,000.

- MPCA clean diesel grants, loans, and some state funding gained for school buses that leveraged these grants has reduced PM_{2.5} by the equivalent of taking over a million cars off the road.
- Lately, we have been expanding our off-road grant project categories including marine projects and scrapyards/recycling equipment such as forklifts and material handlers.
- MPCA is expanding a pilot anti-tampering outreach program – much of which is diesel-related. A small outreach team is now led by enforcement staff and supported by mobile sources staff.
- It is important to remember that Minnesota is in attainment and therefore all actions are voluntary. Still, the CAM-MPCA message is clear that our state is close to exceeding Federal air standards for both fine particles and ozone. This message is resonating with metro municipalities and counties and gaining traction with metro businesses as well. We hope to continue to build support via CAM stakeholders for emission reduction efforts beyond federal and VW grant-financed projects.

4. Performance Measures:

The MPCA will be in close interaction with all fleet partners and contractors during the course of the project(s). We operate with the adage that it is better to keep the lines of communication open and work with our partners in order to get the job done- we are all on the same team here.

The MPCA is committed, at a minimum, to fill out the EPA Quarterly Report as required by the program. This is a key document that details not only project status but also staff costs. In addition, MPCA will be requiring any contractors working with partner fleets more stringent reporting requirements- for example, a paired down status report monthly.

SUSTAINABILITY OF THE PROGRAM:

MPCA has been successfully coordinating DERA funding in partnership with EPA and CleanAir Minnesota for well over a decade. We will build on this history and continue to strive for even greater heights. Key points of Sustainability include:

- MPCA is a member of EPA's Ozone and PM_{2.5} Advance group because of Minnesota's extensive nonpoint air pollution efforts, despite being in attainment.

- We expect to use VW Settlement funds for our match over the next several years. With MN eligible for \$47 million in VW settlement funds available over 10 years, we anticipate funding and fruitful results. See MPCA's VW Phase 2 Plan (<https://www.pca.state.mn.us/sites/default/files/aq-mvp2-35c.pdf>)
- The MPCA publishes DERA grant projects awards on its Clean Diesel Web pages. MPCA also writes clean diesel grant success stories and posts them on the Web. The MPCA promotes the DERA program through direct email, news releases and in talking points of various presentations by both MPCA management and staff.
- Similar efforts will be done for the numerous other emission reduction programs previously mentioned – that are, or will be, funded by VW settlement funds.
- There is the possibility that much higher profile PR events will be held as FFY18 and FFY19 projects are completed. EPA will be kept abreast of these events and asked to participate when feasible.

BUDGET NARRATIVE

2021 Itemized Project Budget

Budget Category	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
			VW Mitigation Trust Funds	Other Funds	
1. Personnel	\$78,220				\$78,220
2. Fringe Benefits	\$25,030				\$25,030
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual	\$35,000				\$35,000
7. Other	\$353,213 \$388,213	\$2,791,672 \$3,705,875	\$642,218 \$1,139,112		\$3,787,103 \$5,233,200
8. Total Direct Charges (sum 1-7)	\$491,463	\$2,791,672 \$3,705,875	\$642,218 \$1,139,112		\$3,925,353 \$5,336,450
9. Indirect Charges	\$30,345				\$30,345
10. Total (Indirect + Direct)	\$521,808	\$2,791,672 \$3,705,875	\$642,218 \$1,139,112		\$3,955,698 \$5,366,795
11. Program Income					

Explanation of Budget Framework

- **Personnel**
 - **Eric David**
 - **Title:** State Program Administrator Principal
 - **Annual Salary:** \$78,220
 - **Percentage of time assigned to the project:** 100%
 - **Total cost:** \$78,220

FFY 2021			
Budget Category	EPA	State or Territory Match (if applicable)	State or Territory Match (if applicable)
Clean Diesel Grants Lead - One Planner Principal State - Annual Salary \$78,220 * 1.0 FTE	78,220	-	-
EPA Match Incentive (if applicable)			

- **Fringe Benefits**

FFY 2021			
Budget Category	EPA	State or Territory Match (if applicable)	State or Territory Match (if applicable)
Actual Fringe Benefit calculation is 32% which includes Insurance, Retirement and FICA	25,030	-	-

- **Travel**

- No Travel costs are included in this budget

- **Supplies**

- No Supplies costs are included in this budget

- **Equipment**

- No Equipment costs are included in this budget

- **Contractual**

- ~~A cost of \$35,000 is included in this category for the possible use of a contractor that is selected on a competitive per project basis to carry out EPA verified projects. This amount is budgeted as a result of the VW public forum session. Per the MPCA’s published Phase 2 plan: “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.”~~
- ~~In order to ensure fair competition and the most “bang for the buck”, if a contractor applies on behalf of fleet(s) that individual equipment/engine is evaluated including the contractor cost. Since cost effectiveness was 40% of the evaluation score in FFY20 this has a large impact.~~
- ~~Potential contractor(s) would be responsible for all of the project management aspects: applying for projects on behalf of partner fleet, guiding the partner fleet through the steps of acquiring new equipment and if necessary, destroying old equipment, and submitting reimbursement package to MPCA for grant reimbursement.~~
- ~~The grant agreement between MPCA and contractor(s) would begin once VW funds are received from Trustee and have a deadline of when EPA funds are due. For FFY21 funds, that currently is set for September 30, 2023.~~

- **Other**

- There is a total of ~~\$995,431~~ \$1,527,325 between federal DERA funds and VW match which will be used for the purchase of EPA verified equipment. MPCA releases a

RFP that has details of allowable projects which are taken from the Program Guide. Individual fleets with projects or contractors are eligible to apply. Contractors apply on behalf of individual fleets but the MPCA evaluates each project. The MPCA will enforce the mandatory match requirements laid out in the Program Guide depending upon the project: equipment replacement, electric replacement, idle reduction, etc. The mandatory match included here is \$3,705,875. ~~of \$2,791,672 is unpredictable and will change based upon projects selected. This figure is a conservative estimate based upon an estimate of the past 3 years of DERA grants.~~

Contractor funds- these funds are now included in the Other category based on the MPCA’s conversation with EPA on January 5, 2022.

- A cost of ~~\$35,000~~ \$66,313 is included in this category for the possible use of a contractor that is selected on a competitive per-project basis to carry out EPA verified projects. This amount is budgeted as a result of the VW public forum session. Per the MPCA’s published Phase 2 plan: “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.”
- In order to ensure fair competition and the most “bang for the buck”, if a contractor applies on behalf of fleet(s) that individual equipment/engine is evaluated including the contractor cost. Since cost-effectiveness was 40% of the evaluation score in FFY20 this has a large impact.
- Potential contractor(s) would be responsible for all of the project management aspects: applying for projects on behalf of partner fleet, guiding the partner fleet through the steps of acquiring new equipment and if necessary, destroying old equipment, and submitting reimbursement package to MPCA for grant reimbursement.
- The grant agreement between MPCA and contractor(s) would begin once VW funds are received from Trustee and have a deadline of when EPA funds are due. For FFY21 funds, that currently is set for September 30, 2023.

• **Indirect Charges**

Budget Category	FY 2021		
	EPA	State or Territory Match (if applicable)	State or Territory Match (if applicable)
Indirect Charges calculation is 29.39% of Personnel and Fringe which is the federal negotiated indirect cost rate.	30,345	-	-

• **Administrative Costs Expense Cap**

- The MPCA is aware of this 15% maximum and ~~Our budget lines of Personnel, Fringe, and Contractual add up to a total cost of \$138,250 which is well below the 15% threshold based on the \$3,955,698 \$5,366,795 budget.~~

- **Matching Funds and Cost-Share Funds**
 - Voluntary match funding is coming from the Volkswagen Settlement. Mandatory cost-share funding will be provided by the partner fleet according to the Program Guide.

- **Funding Partnerships**
 - The MPCA will follow all applicable EPA guidelines for funding partnerships.

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

Volkswagen's (VW) tampered diesel vehicles have emitted an estimated 600 tons of excess air pollution in Minnesota. The Minnesota Pollution Control Agency (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 2 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 2 describes our continued focus on the 10-year goals for the program and our projected investments for the next four years (2020-2023). MPCA intends to repeat this public input and plan revision process in 2023, as we conclude Phase 2 and begin our anticipated final Phase 3.

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, 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 recent feedback, 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. Based on 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 electric vehicle (EV) charging stations. See Appendix 2 for a summary of the Volkswagen settlement, and Appendix 10 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 project benefits, and staff expertise, MPCA developed this plan for the second phase of funding (2020-2023) 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 Appendix 5 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) –

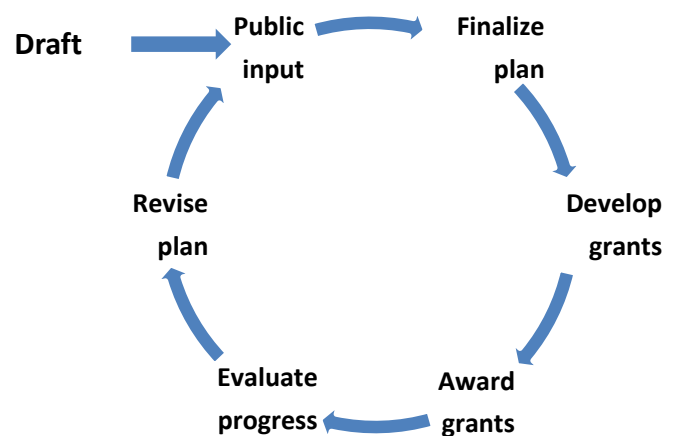
2018-2019: Smaller amount of money to learn and ramp up. We solicited input and reviewed program results after Phase 1.

Phase 2: \$23.5 million (50%) – 2020-2023: Most of the funds will be 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 will repeat this public input and plan revision process in 2023, as we conclude Phase 2.

Phase 3: \$11.75 million (25%) – 2024-2027:

Remaining funds, including additional interest earned over the course of the program, will be allocated.

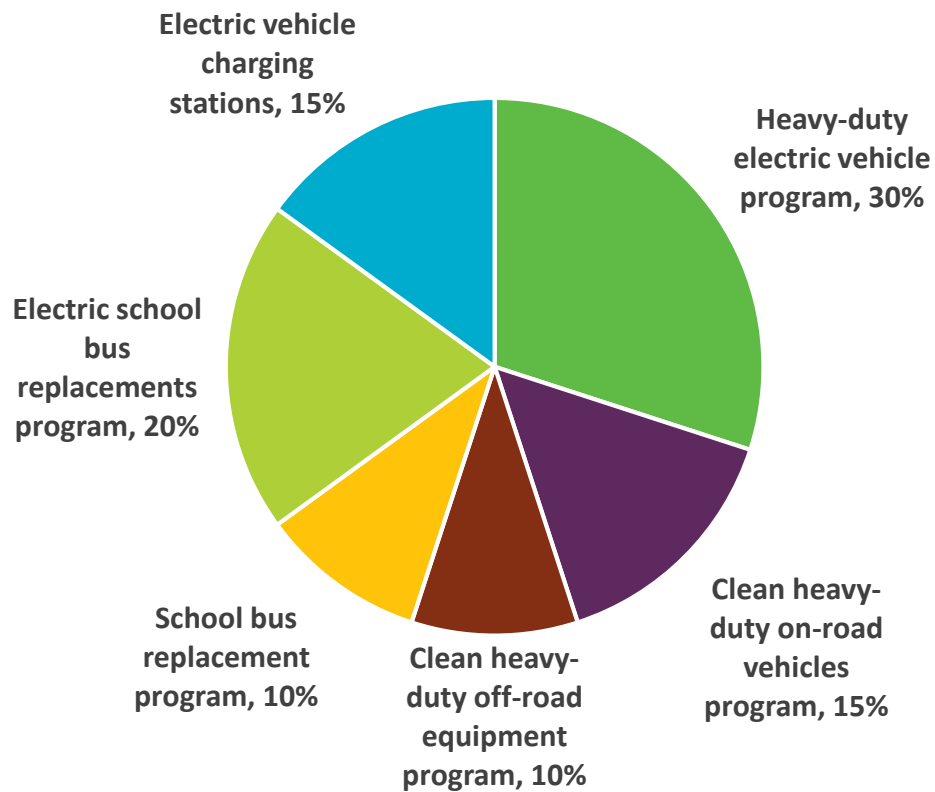
Figure 1: Plan revision process



Phase 2 grants overview

In Phase 2 (2020-2023), MPCA will invest 50% of Minnesota’s funding, or \$23.5 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 in Phase 2, or move funds into the next funding phase (2024-2027). We may also release additional request for proposals where necessary.

Figure 2: Phase 2 grant program funding allocations



EXCERPT

Table 2: Phase 2 grant programs and estimated emissions reductions

Grant programs (2020-2023)	Settlement category	Eligible fuels	2020-2023 grants (Phase 2)			
			Targeted percent*	Targeted dollar amount	Approx. number purchased**	Estimated emissions reductions (tons)***
Clean heavy-duty on-road vehicles program	Transit buses, class 4-8 trucks	Diesel, propane, natural gas	15%	\$3,525,000	80	NO _x : 142-187 PM _{2.5} : 6-9 GHGs: 4,467-9,616
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	10%	\$2,350,000	39	NO _x : 3,707-6,368 PM _{2.5} : 132-385 GHGs: 22,292-31,567
School bus replacement program	School buses	Diesel, propane, natural gas	10%	\$2,350,000	106	NO _x : 26-30 PM _{2.5} : 1.8-2.2 GHGs: 1,985-2,643
Electric school bus replacement program	School buses	Electric	20%	\$4,700,000	14-27	NO _x : 4-10 PM _{2.5} : 0.2-0.5 GHGs: 554-1405
Heavy-duty electric vehicle program	Transit buses, trucks, airport ground support equipment, forklifts	Electric	30%	\$7,050,000	64	NO _x : 229-378 PM _{2.5} : 5-47 GHGs: 24,427-39,268
Electric vehicle charging station program	Zero-emission vehicle infrastructure	Not applicable	15%	\$3,525,000	Fast chargers: 43 Level-2 charging ports: 104	NO _x : 2.41 PM _{2.5} : 0.1 GHGs: 10,349
Total: \$23,500,000						NO_x: 4,110-6,975 PM_{2.5}: 145-444 GHGs: 64,074-94,848

*Percentage of available settlement funds targeted at these activities for 2020-2023.

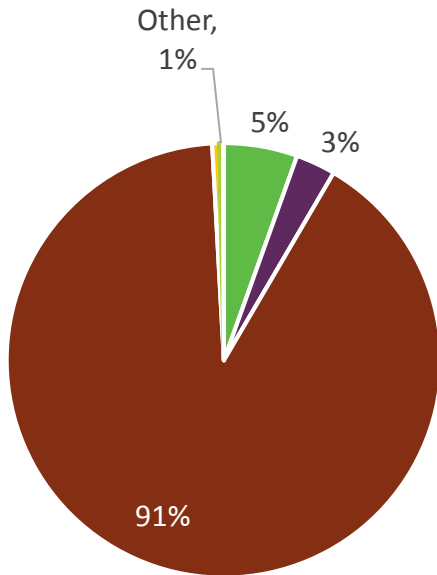
**Each category includes an estimated mix of eligible vehicles and equipment types. These estimates provide an idea of how many vehicles of each type could be funded in Phase 2 in order to make emissions calculations, but do not reflect a preference for any vehicle or fuel type or funding targets or allocations within each grant program. See Appendix 8 for calculation methods.

***Emission benefits for projects funded in Phase 2 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 8 for calculation methods.

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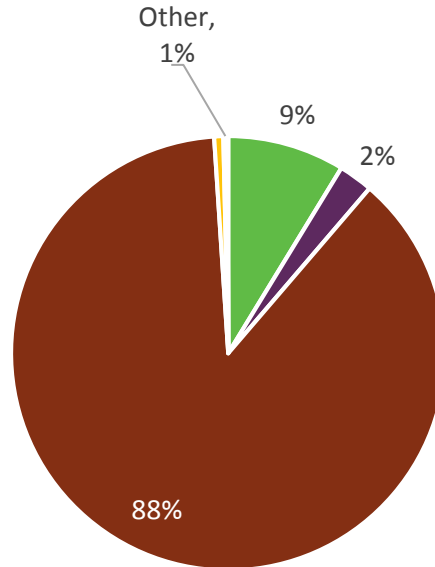
Figure 3: Phase 2 estimated reductions by grant program (percent of total)

Phase 2 estimated NO_x reductions:
4,110 - 6,975 tons



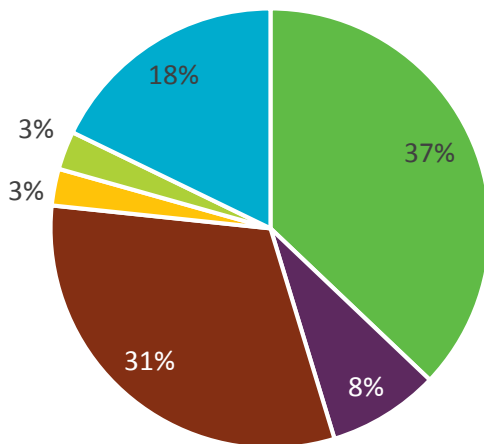
Other (NO_x reductions):
School bus replacements, 0.5%
Electric school bus replacements, 0.3%
Electric vehicles charging stations, 0.1%

Phase 2 estimated PM_{2.5} reductions: 145 - 444 tons



Other (PM_{2.5} reductions):
School bus replacements, 0.7%
Electric school bus replacements, 0.3%
Electric vehicle charging stations, 0.1%

Phase 2 estimated GHG reductions:
64,074 - 94,848 tons



Grant program

- Heavy-duty electric vehicles/equipment
- Clean heavy-duty on-road vehicles
- Clean heavy-duty off-road vehicles
- School bus replacements
- Electric school bus replacements
- Electric vehicle charging stations

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Figure 4: Phase 2 grants will replace hundreds of vehicles across the state

Out with the old: \$23,500,000 for new clean vehicles

159 school buses 106 new diesel, propane, or natural gas



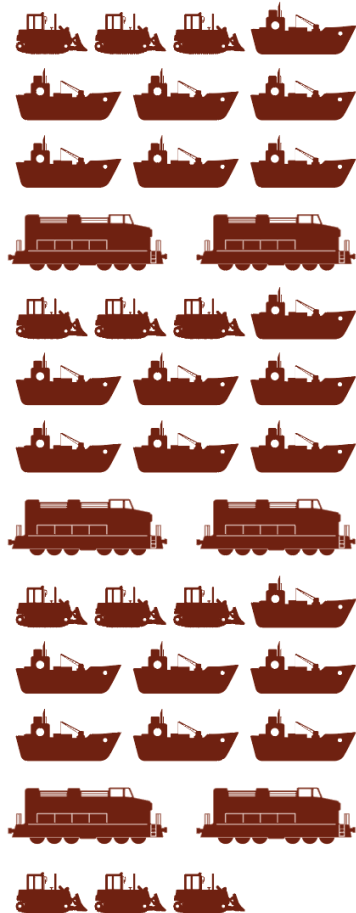
14 electric



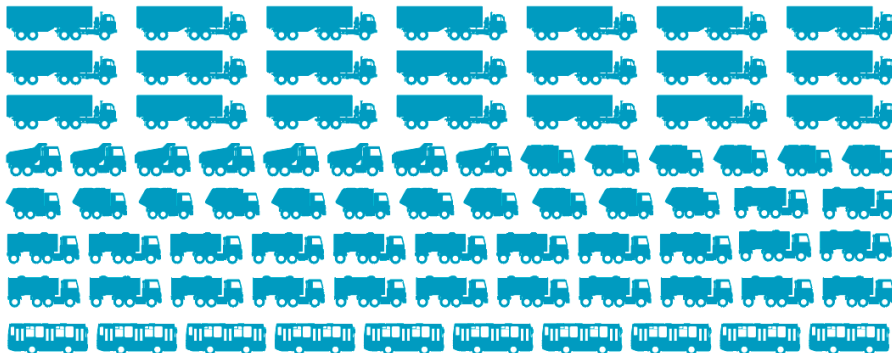
64 heavy-duty electric



39 heavy-duty off-road



80 trucks and transit buses



147 new electric vehicle charging spots

43 fast chargers 104 level 2 chargers



Funding process

Projects will be funded through a competitive grant application process. 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 2.

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, 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.

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. In Phase 1, aggregated applications through grant contractors were allowed for all grant programs; however, based on applications received and input from stakeholders, in Phase 2 aggregated applications eligible for administrative costs will be eligible solely in the clean heavy-duty off-road grant program. The agency may re-evaluate this policy as needed for specific projects.

Phase 2 grant programs

Below are descriptions of the six grant programs the MPCA will administer during Phase 2.

Clean heavy-duty on-road vehicles grant program – 15% (\$3,525,000)

Estimated emissions reductions: NO_x: 142-187 tons; PM_{2.5}: 6-9 tons; GHGs 4,467-9,616 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, up to 25% of the overall cost of the vehicle. 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 because delivery trucks and transit buses travel two to six times further per year than school buses, and their estimated lifespan is 10 years longer (see Appendix 7).

EXCERPT

Clean heavy-duty off-road equipment grant program – 10% (\$2,350,000)

Estimated emissions reductions: NO_x: 3,707-6,368 tons; PM_{2.5}: 132-385 tons; GHGs: 22,292-31,567 tons

This program will fund the replacement or improvement of heavy-duty off-road equipment that is eligible under the Diesel Emission Reduction Act (DERA), such as marine engines, locomotives, trailer refrigeration units, terminal tractors, drayage trucks, 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 2019, which are subject to change annually:

Table 3: DERA funding limits

DERA eligible activities	Grant funding limits	Minimum mandatory cost-share (Fleet owner contribution)
Exhaust control retrofit	100%	0%
Engine upgrade / remanufacture	40%	60%
Locomotive idle reduction	40%	60%
Marine shore power	25%	75%
Engine replacement – diesel or alternative fuel	40%	60%
Engine replacement – zero emission	60%	40%
Vehicle/equipment replacement – diesel or alternative fuel	25%	75%
Vehicle/equipment replacement – zero emission	45%	55%
Vehicle replacement – drayage	50%	50%

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 (see Appendix 1). 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.

School bus (non-electric) grant program – 10% (\$2,350,000)

Estimated emissions reductions: NO_x: 26-30 tons; PM_{2.5}: 1.8-2.2 tons; GHGs: 1,985-2,643 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. MPCA will provide a list of districts eligible for additional funding.

EXCERPT

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 for both Phase 1 and Phase 2, prioritizing projects that reduce pollution exposures for children and replacing aging school buses emerged as a main theme. Minnesota previously invested more than \$3 million in Project Green Fleet, retrofitting 3,500 diesel school buses with diesel oxidation catalysts, which reduced fine particle emissions by 20% on buses model years 2006 and older. Replacing those buses with new ones now would provide a 95% reduction in emissions.

Phase 1 Supplemental Bus Program: Late in Phase 1, MPCA released an additional school bus request for proposals to increase the number of replacement projects funded in Greater Minnesota. This supplemental school bus funding came out of the Phase 2 school bus grant program. The total amount for the Phase 2 school bus grant program will still be \$2,350,000; however, \$645,000 has already been released to accommodate the additional school bus needs in Greater Minnesota. (See Appendix 11)

Electric school bus grant program – 20% (\$4,700,000)

Estimated emissions reductions: NO_x: 4-10 tons; PM_{2.5}: 0.194-0.542 tons; GHGs: 554-1,405 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 2020 the MPCA will create a pilot project to fund a limited number of electric school buses throughout MN. 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.

Once we have analyzed the data from the pilot project, the MPCA intends to release an additional RFP with the remainder of the funds for electric school bus adoption in MN. 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 Phase 2 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 (see Figure 5).

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 MN pilot project as well as additional pilot projects from other cold-weather states like North Dakota, Massachusetts, and Vermont will provide much-needed information on electric school bus implementation, including operator training needs, cost-effectiveness, and geographical considerations. MPCA anticipates using results from these pilots 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.

School buses: Cleaning up the fleet

Old school buses are very polluting.
Newer, cleaner options exist.

