

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary State of Montana

Lead Agency Authorized to Act on Behalf of the Beneficiary Montana Department of Environmental Quality
(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:	Montana 2019-2021 Diesel Emission Reduction Act Option
Beneficiary's Project ID:	VWT2021-05
Funding Request No.	<i>(sequential)</i> 5
Request Type: (select one or more)	<input type="checkbox"/> Reimbursement <input checked="" type="checkbox"/> Advance <input type="checkbox"/> Other (specify): _____
Payment to be made to: (select one or more)	<input checked="" type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify): _____
Funding Request & Direction (Attachment A)	<input checked="" 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 checked="" 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): See attached Summary Supplement	
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2): See attached Summary Supplement	
Estimate of Anticipated NOx Reductions (5.2.3): See attached Summary Supplement	
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): Montana Legislative Audit Division	
Describe how the Beneficiary will make documentation publicly available (5.2.7.2). See attached Summary Supplement	
Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8). See attached Summary Supplement	
Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).	

On February 27, 2018 MTDEQ sent e-mail notices of availability of funds to representatives of the U.S. Department of Interior and U.S. Department of Agriculture listed in subparagraph 4.2.8

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 Summary Supplement

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.]

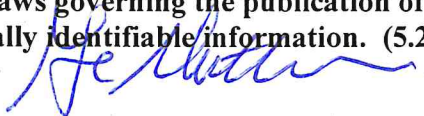
CERTIFICATIONS

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

1. This application is submitted on behalf of Beneficiary State of Montana, 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: 02/25/2021


GEORGE MATHIEUS, Deputy Director

[NAME]

[TITLE]

Department of Environmental Quality

[LEAD AGENCY]

for

State of Montana

[BENEFICIARY]

SUMMARY Supplement Appendix D-4

<p>Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1)</p> <p>Montana's Beneficiary Mitigation Plan posted in November 2018 proposed to use 5% of Montana's initial allocation, or approximately \$630,000 in funding necessary for, and directly connected to, the Diesel Emissions Reduction Act (DERA) Option as authorized under Eligible Mitigation Action 10.</p>
<p>Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2)</p> <p>Montana DEQ received applications from school districts across Montana to partially reimburse the replacement of four model years 1999-2009 diesel school buses.</p>
<p>Estimate of Anticipated NOx Reductions (5.2.3)</p> <p>Montana DEQ estimated NOx emission reductions using the Diesel Emissions Quantifier provided by the EPA (https://cfpub.epa.gov/quantifier/index.cfm?action=main.home) We calculated lifetime NOx reductions for the four new school buses to be 1,628 pounds.</p>
<p>Describe how the Beneficiary will make documentation publicly available (5.2.7.2)</p> <p>MTDEQ maintains a webpage describing the Montana's Volkswagen Environmental Mitigation Program for State Beneficiaries. The Volkswagen Mitigation Trust webpage can be found at: http://deq.mt.gov/Energy/transportation/VW-Settlement-Page. Copies of the funding request certifications to the Trustee will be available through links on this web page.</p> <p>Application materials, reimbursement requests, and other documentation submitted by applicants and funding recipients for Montana's Volkswagen Environmental Mitigation Program are available to the public either through the website, or upon request pursuant to Montana Code Annotated Title 2, chapter 6, part 10.</p>
<p>Describe any cost-share requirement to be placed on each NOx source proposed to be mitigated (5.2.8):</p> <p>Applicants are required to provide:</p> <ul style="list-style-type: none">• 75% match for propane or new diesel school bus with emissions model year 2016 or newer
<p>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)</p> <p>Of the four total school bus replacement projects, all will be located in a top 10 county based on annual mobile sources of onroad NOx emissions (1. Yellowstone).</p>

ATTACHMENT B

PROJECT MANAGEMENT PLAN INCLUDING DETAILED BUDGET AND IMPLEMENTATION AND EXPENDITURES TIMELINE (5.2.4)

This funding request will provide advance funds to the Montana Department of Environmental Quality (DEQ) for purchasing cost-shared cleaner diesel school buses powered by a 2016 model year or newer engine certified to EPA emission standards. The actions covered by this funding request are consistent with Eligible Mitigation Action 10 (Diesel Emission Reduction Act (DERA) Option) of the State Trust Agreement and with Montana’s Beneficiary Mitigation Plan (pages 8-9), which anticipated allocating five percent of Montana’s Volkswagen EMT funding.

SCHOOL BUS REPLACEMENTS TO BE FUNDED THROUGH THIS REQUEST

Four school bus replacements will be funded through this request. Successful school district applicants include:

- Billings – four new diesels

PROJECT SCHEDULE AND TIMELINE, MONTANA CLEAN SCHOOL BUS PROGRAM

Project Milestone	Date
Montana DEQ posts information and application materials on agency website; e-mail notification to Volkswagen Mitigation stakeholders list	26 October, 2020
Deadline for submission of applications	11 January, 2021
Review of applications	18 January, 2021
Formal notification to successful applicants	3 February, 2021
Montana DEQ submits Project Certification and Funding Direction for Advanced Funding	February 2021
Trustee allocates Advanced Funding to MTDEQ	March 2021
Finalization of contracts with funding recipients	March 2021
Montana DEQ reports on project progress	July 2021
Montana DEQ reports on project progress	January 2022
Montana DEQ reports on project progress	July 2022
Montana DEQ reports on project progress	January 2023
Montana DEQ reviews reimbursement requests from recipients and provides payments for projects completed.	Q4 2021 – Q3 2022
Deadline for completion of clean school bus replacements	30 September, 2022
MTDEQ reports project completion	October 2022

Project Budget

Period of Performance: March 2020 – September 2022			
Budget Category	Share of Total Budget to be Funded by the Trust	Cost-Share to be Paid by Project Recipient	Total Budget Amount
Costs associated with purchase of school buses	\$71,171	\$324,996	\$396,167
Contractor Support	\$0	\$0	\$0
Subrecipient support	\$0	\$0	\$0
Administrative Costs Program planning, development, outreach, and administration	\$17,785	\$0	\$17,785
Project Totals	\$88,956	\$324,996	\$413,952
Percentage	21%	79%	100%

PROJECTED ANNUAL TRUST ALLOCATIONS

	2021	2022	2023
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$2,385,594.50	\$2,869,000.00	\$2,600,000.00
2. Anticipated Annual Cost Share	\$1,418,902.00	\$808,800.00	\$1,220,000.00
3. Anticipated Total Project Funding by Year (line 1 plus line 2)	\$3,804,496.50	\$3,677,800.00	\$3,820,000.00
4. Cumulative Trustee Payments Made in Previous Years Against Cumulative Approved Beneficiary Allocation	\$1,608,929.00	\$3,994,523.50	\$6,863,523.50
5. Current Beneficiary Project Funding to be paid through the Trust (line 1)	\$2,385,594.50	\$2,869,000.00	\$2,600,000.00
6. Total Funding Allocated to Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$3,994,523.50	\$6,863,523.50	\$9,463,523.50
7. Beneficiary Share of Estimated Funds Remaining in Trust at Start of Year	\$10,993,495.88	\$8,607,901.38	\$5,738,901.38
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 7 minus line 5)	\$8,607,901.38	\$5,738,901.38	\$3,138,901.38

ATTACHMENT C

DETAILED PLAN FOR REPORTING ON ELIGIBLE MITIGATION ACTION IMPLEMENTATION (5.2.11)

The Montana Department of Environmental Quality (DEQ) will provide detailed reporting on this funding request under Eligible Mitigation Action 10 (Diesel Emission Reduction Act Option) in two ways: 1) timely updates to DEQ's Volkswagen Environmental Mitigation Program web page and 2) semi-annual reports to the Trustee as required by subparagraph 5.3 of the Environmental Mitigation Trust for State Beneficiaries.

DEQ Website

DEQ has a webpage dedicated to the Volkswagen Environmental Mitigation Program that includes projects and actions that are eligible for funding and the status of funding. The website is found at:

<http://deq.mt.gov/Energy/transportation/VW-Settlement-Page>. Copies of funding request certifications to the Trustee will be available through this web page. This page will link to current and past projects and categories funded through the Trust.

Application materials, reimbursement requests, and other documentation for Montana's Volkswagen Environmental Mitigation Program are available to the public either through the website, or upon request pursuant to Montana Code Annotated Title 2, chapter 6, part 10.

Semi-Annual Reports to the Trustee

As required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries, DEQ will submit a report to the Trustee within six months of the first disbursement and thereafter no later than January 31 and July 31 for preceding six-month periods. These reports will describe the progress implementing current and any other Eligible Mitigation Action ongoing during the reporting period. These reports will include a summary of all costs expended and a complete description of the status (including actual or projected termination date), development implementation, and any modification of the Eligible Mitigation Action. These semi-annual reports to the Trustee will be available for public access through links on the main Volkswagen Trust page on the DEQ website.

ATTACHMENT D

**DETAILED COST ESTIMATES FROM SELECTED VENDORS FOR EACH PROPOSED EXPENDITURE
EXCEEDING \$25,000 (5.2.6)**

School District	Equipment	Manufacturer	Fuel	Expected Purchase Price
Billings	School bus	Thomas	Diesel	\$103,749
Billings	School bus	Thomas	Diesel	\$103,749
Billings	School bus	Thomas	Diesel	\$103,749
Billings	School bus	Thomas	Diesel	\$103,749

Each applicant for the 2019-2020 Montana Clean School Bus Program was required to seek at least three price quotes for school buses and submit them with their application. The bids are attached below.

ATTACHMENT E



Office of Transportation and Air Quality

February 2020

2020 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative Template

INSTRUCTIONS: States and territories applying for 2020 DERA State Grant funds must use this template to prepare their Work Plan and Budget Narrative.

Please refer to the 2019-2020 DERA State Grants Program Guide full program details, eligibility criteria and funding restrictions, and application instructions.

SUMMARY PAGE

Project Title: Montana Clean School Bus Program

Project Manager and Contact Information

Organization Name: Montana Department of Environmental Quality

Project Manager: Neal Ullman

Mailing Address: PO Box 200901, Helena, MT 59620-0901

Phone: 406-444-6582

Fax: 406-444-6836

Email: neal.ullman@mt.gov

Project Budget Overview:

	2019*	2020
EPA Base Allocation	\$315,931	\$328,444
EPA Match Bonus (if applicable)	\$157,966	\$0
State or Territory Voluntary Matching Funds (if applicable)	\$315,931	\$0
Mandatory Cost-Share	\$1,842,000	\$974,385
TOTAL Project Cost	\$2,631,828	\$1,302,829

*If state participated in 2019

Project Period

October 1, 2019 – September 30, 2021

Summary Statement

The Montana Department of Environmental Quality (DEQ) proposes to replace approximately 12 model year (MY) 1996-2009 diesel school buses with model year 2016 or newer diesel and propane buses. Priority will be given to projects located in at-risk air quality areas listed in EPA's FY19 Priority County List, EPA's Green Book of Nonattainment Areas for Criteria Pollutants, and/or DEQ's Communities at-risk list. DEQ has experience with bus replacement through the cost-shared replacement of a total of 87 buses in 29 school districts located in 10 at-risk air quality counties between 2008 and 2018. DEQ will also continue to promote the Clean Air Zone Montana (no idle) Program, and provide training to school bus drivers and school

districts statewide.

The Montana DEQ maintains a webpage that details past DERA State Clean Diesel Program projects here: <http://deq.mt.gov/Energy/transportation/alttransportation>.

SCOPE OF WORK

DEQ will operate the Montana Clean School Bus program to meet the priorities of the FY2020 EPA State Grant Clean Diesel Program by initiating activities that maximize public health benefits by reducing diesel emissions and diesel emissions exposure. DEQ will give priority to projects that reduce the exposure of susceptible human populations: young children, the elderly, and people with respiratory diseases that are exacerbated by air pollution. DEQ will build on the experience gained with bus replacements over the last 11 years through the cost-shared replacement of 87 school buses in 29 school districts in 10 at-risk air quality counties. These previous replacements were made during the American Recovery and Reinvestment Act timeframe and State FY2008-2013, 2016-2018 DERA programs. All schools receiving buses join the Montana Clean Air Zone-No-Idle School Bus Program. Since 2008, 127 of 356 school districts in the state have participated in this No-idle outreach project. For outreach, DEQ will partner with the Office of Public Instruction (OPI) and the Montana Association of Pupil Transportation (MAPT) to educate school bus drivers, school transportation directors, and others to reduce diesel bus emissions by using various technologies and training of no-idle equipment and methods. All State DERA FY2020 activities will be completed by September 30, 2021.

STATE/TERRITORY GOALS AND PRIORITIES: DEQ's Clean School Bus Replacement Project will prioritize model year 1996-2009 and 1996-2010 diesel bus replacements (depending on replacement fuel/technology) based on several factors, as in DEQ's past programs. Priority will be given to projects located in counties listed in EPA's Green Book of Nonattainment Areas for Criteria Pollutants, the DEQ's Communities At-Risk document, and the top 10 counties for mobile on-road NOx emissions, per the EPA 2014 Emissions Inventory data. These counties include Big Horn, Cascade, Flathead, Gallatin, Jefferson, Lake, Lewis & Clark, Lincoln, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, and Yellowstone counties.

Using EPA 2014 National Emissions Inventory data, DEQ has determined the sources of diesel pollution and mobile sources of NOx emissions in Montana. Heavy duty diesel vehicles account for 22 percent of the state's mobile source NOx emissions. This is the third largest category following non-road vehicles and equipment and light duty gas vehicles. Vehicles in the heavy-duty category include transit buses, school buses, garbage trucks, delivery trucks, etc.

The Montana OPI bus fleet data shows over 2,100 (1996-2009) eligible diesel C&D class buses, and 226 additional eligible 2010 diesel C&D class buses in districts statewide.

VEHICLES AND TECHNOLOGIES:

The Montana OPI oversees all activities associated with public K-12 education in Montana, including pupil transport. The OPI FY2018-2019 school bus fleet data show that public schools operate 3,392 school buses which transport 64,477 students and travel over 20 million miles annually. Route information for Class C and D buses from the FY17 and FY18 replacement

projects and latest school bus fleet data showed buses travel on average 10,458 miles annually. About 60 percent of the diesel school bus fleet in the state are 1996-2009 model years.

The OPI 2018-2019 bus and fleet data were used to estimate fuel use and miles for Emission Model Year (EMY) 1996-2009 buses. The Montana school year is 180 days, and average miles driven do not include driver training or use for other school activities and summer school. The average route miles of 10,458 are for Class C and D buses that carry over 80 percent of the students. Each bus uses about 1,648 gallons of diesel fuel annually and has an average idle time estimated at 107 hours a year (based on experience and the EPA Diesel Emissions Quantifier). Ownership of the school buses is divided between school districts and district contractors at 39 percent and 61 percent, respectively. Regardless of ownership, DEQ will work with the school districts for bus replacements.

Emissions Technology Analysis

Based on past analysis of various emission technology options and alternative fuel for school buses, DEQ examined the following technology options to replace EMY 1996-2009 diesel buses:

- Replacement with an EMY 2018 battery electric engine/school bus
- Replacement with an EMY 2018 propane bus
- Replacement with EMY 2018 diesel bus idle reduction technology

The EPA’s Diesel Emissions Quantifier does not have an input option for low NOx propane buses, so DEQ did not analyze those separately.

Table 1. Emissions Technology Analysis

Technology	2018 Propane		2018 Diesel & idle reduction		2018 Battery Electric	
	<u>Tons/ gallons reduced /Year</u>	<u>Lifetime tons/gallons reduced</u>	<u>Tons/gallons reduced/Year</u>	<u>Lifetime tons/gallons reduced</u>	<u>Tons/gallons reduced/ Year</u>	<u>Lifetime tons/gallons reduced</u>
NOx	0.079	1.027	0.079	1.027	0.085	1.105
PM2.5	0.006	0.078	0.006	0.078	0.006	0.078
HC	0.016	0.208	0.016	0.208	0.017	0.221
CO	0.037	0.481	0.037	0.481	0.040	0.52
CO ₂	15.8	205.4	0.037	11.8	15.8	205.4
Diesel Gallon equivalent	1,401 gallons	18,213 gallons	71 gallons	923 gallons	1,401 gallons	18,213 gallons
1 st yr. Health Benefits	\$840		\$850		\$860	

ROLES AND RESPONSIBILITIES: DEQ will partner with OPI and school districts to share the following roles and responsibilities. DEQ will provide fiscal management, reporting to EPA, and oversight of program requirements to ensure that the project is completed as described in the work plan. DEQ will issue the request for applications, rank them through a team review, and determine the final selections. OPI will work with the local school districts to identify monies from available funds to be used as a 75 percent match for diesel and regular propane buses, 65 percent match for low NOx buses, and 55 percent match for battery electric buses for school bus purchases. OPI will also participate in the team review of school bus applications and selecting schools to receive funding. Each selected school district will provide matching funds and deliverables including the scrapping/recycling of old vehicles. DEQ's deliverables checklist provides the bus data used in EPA Diesel Emissions Quantifier to develop the comparison between proposed and actual results. DEQ will submit quarterly and final reports to EPA.

TIMELINE AND MILESTONES: DEQ's timeline and work plan are described in detail in Table 2. Briefly, DEQ will update its existing request for applications (RFA), bus deliverables checklist, and emissions verification form to meet the requirements of this EPA program. The deliverables checklist includes details for the bus purchase, order, title, commitment of match, bill of lading, bus vendor invoice, pictures, verification of new bus, verification of existing bus and engine recycling/scrapping, and more. The emissions verification form ensures that each bus engine VIN, serial numbers, engine emissions, and mileage are recorded in a readable format. DEQ and OPI will advertise the RFA electronically and by hard copy, sending notice to all schools and districts. DEQ and its review team will rank complete applications. Highest ranking applications will be selected for reimbursement until all available funds are committed. DEQ will send letters of acceptance and rejection, and conduct debriefings as requested by schools. A contract will be signed between the school district and DEQ for each vehicle. Deliverables will be reviewed, tracked and approved by DEQ before payments are made to recipients. All contract payments go through program, fiscal, and financial services for approval before payment is made to the recipient by DEQ Financial Services.

Table 2. FY2020 Work Plan and Time Line

Month	Activity
October 1-16, 2020	DEQ completes award with EPA and updates the Request for Applications to develop a list of interested school districts with matching funds. DEQ and OPI team develop internal processes for outreach and evaluation of applications.
October 16, 2020	DEQ and OPI distribute Request for Applications.
October 16-December 14, 2020	Application period for local school districts. DEQ responds to questions and provides technical support for the process. Advertised cut-off date for questions. Responses posted on website.
December 14-31, 2020	Applications checked for completeness (letter of commitments for match); team evaluates applications, identifies needed clarifications; determines consensus on application ranking. DEQ submits quarterly report.
January-February 2021	DEQ to notify successful and unsuccessful applicants; de-brief unsuccessful applicants as needed; initiate the rebate/contracting process of successful applicants. Signed contracts are due by the end of February.
March-July 2021	Schools to order buses in early March. DEQ submits quarterly report.
June 2021	Work with schools and bus drivers through the Montana Association of Pupil Transportation to implement No-idle program and outreach.
July-December 2021	Use Bus Deliverables checklist to track; purchase orders; emissions equipment on replacement bus; mileage and fuel use of existing bus; recycling and scrapping of old bus; and final deliverables for new buses. Track and verify recycling of old buses. Generate reports for EPA. Maintain administrative records. DEQ submits quarterly reports.
January-May 2021	Complete reimbursement and close out contracts for replacement of school buses. DEQ submits quarterly report.
June 2021	Work with schools and bus drivers through the Montana Association of Pupil Transportation to implement No-idle program and outreach.
July-September 2021	Gather final bus data (fuel and miles) to develop the quantifier outputs (health benefits) and draft final report.
December 2021	Complete accounting and reporting to EPA; submit final report.

DERA PROGRAMMATIC PRIORITIES: DEQ’s Clean School Bus program will make funding available to school districts statewide. The school bus application ranking criteria prioritizes replacing buses in areas of at-risk air quality and those that have the highest mobile sources of on-road NOx emissions. These areas include school districts in Big Horn, Cascade, Flathead, Gallatin, Jefferson, Lake, Lewis & Clark, Lincoln, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, and Yellowstone counties. Many of these counties contain many of Montana’s larger urban areas, have greater populations at risk from diesel emissions exposure including children, and those with respiratory diseases such as asthma. Many of these priority air quality areas have a high number of acute asthma incidents in school-age children. DEQ’s ranking criteria will focus on replacement of school buses in areas with known air quality problems as submitted to EPA in 2018; in areas of EPA’s Green Book of Nonattainment Areas for Criteria Pollutants; in the DEQ Communities At-Risk document and

those counties that are in the top 10 highest mobile sources of on-road NOx emissions. DEQ’s previous criteria and experience guarantee that the at-risk air quality areas are addressed.

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

This project supports EPA’s FY2018-22 Strategic Plan. Goal 1: “Core Mission: Deliver real results to provide Americans with clean air, land, and water and ensure chemical safety, Objective 1.1, “Improve Air Quality.” DEQ’s output will be the replacement of approximately 12 EMY 1996-2009 diesel school buses with six EMY 2016 or newer diesel, four EMY 2018 low NOx buses, and two EMY 2018 propane buses.

For low NOx buses, since the Diesel Emissions Quantifier does not include a low NOx input for vehicle replacement options, DEQ assumed those buses were regular propane buses. The replacement buses with a 2021 delivery date are EMY 2016 or newer, with a direct-fired heater for idle reduction, except for propane, low NOx and electric buses.

Table 3: Summary of EPA Diesel Emissions Quantifier Output Results to replace 12 EMY 1996-2009 diesel school buses with six EMY 2016 diesel emissions or newer; four EMY 2018 low NOx buses; and two EMY 2018 propane buses

Annual	NOx (tons/year)	PM (tons/year)	HC (tons/year)	CO (tons/year)	CO ₂ (tons/year)	Diesel-Equivalent (gallons/year, based on CO ₂)
Baseline of Replaced Buses	0.879	0.074	0.121	0.442	222.5	19,776
Percent Reduced	91.6%	97.2%	85.6%	58.9%	19.7%	19.7%
Tons Reduced Per Year	0.805	0.072	0.103	0.260	43.8	3,889
Lifetime tons reduced	NOx (tons)	PM (tons)	HC (tons)	CO (tons)	CO ₂ (tons)	Diesel-Equivalent (gallons)
Amount Reduced	4.025	0.360	0.516	1.300	218.8	19,445
Capital Cost Effectiveness	NOx (\$/ton reduced)	PM (\$/ton reduced)	HC (\$/ton reduced)	CO (\$/ton reduced)	CO ₂ (\$/ton reduced)	Diesel-Equivalent (\$/gallons)
	\$338,299	\$3,781,384	\$2,636,896	\$1,047,088	\$6,225	\$338,299
	EPA Cost Effectiveness (EPA \$/total tons pollutants)		Total Lifetime Tons			
	\$1,459.75		225.001			
Health Benefits County and State	Annual Diesel PM Reduced(tons)	Annual Benefits				
Flathead Co., Montana	0.018	\$2,500				
Missoula Co., Montana	0.018	\$3,300				

Yellowstone Co., Montana	0.018	\$3,100
Lewis & Clark Co., Montana	0.018	\$1,700
Total	0.072	\$11,000

Table 4. Anticipated Outputs and Outcomes

Activity: replace 12 EMY 1996-2009 diesel school buses with six EMY 2016 diesel emissions or newer; four EMY 2018 Low NOx buses; and two EMY 2018 propane buses

Outputs	Outcomes
1) Over 1,200 hours of idling reduced annually 2) Increased outreach of Clean Air Zone/No-Idle school bus (Clean Air Zone Montana to new districts)	Short term
	1) Improved fuel economy from 6 mpg to 9 mpg or better for diesel and propane buses 2) Additional schools participate in the Clean Air Zone – No Idle program
3) 12 EMY 1996-2009 diesel school buses with six EMY 2016 diesel emissions or newer; four EMY 2018 Low NOx buses; and two EMY 2018 propane buses	Medium term
	1) Dollars and gallons of diesel saved for schools selected to participate 2) Riders experience reduced exposure to emissions annually (See Appendix) 3) Estimated annual net reduction of: <ul style="list-style-type: none"> ▪ 0.879 tons NOx /yr. ▪ 0.074 tons PM 2.5/yr. ▪ 0.121tons HC/yr. ▪ 0.442 tons CO/yr. ▪ 222.5 tons CO₂/yr. ▪ 224.01 total pollutant tons/yr. ▪ 3,889diesel gallon equivalents/yr.
4) 12 contracts made to school districts in priority air quality areas and communities at-risk	Long term
5) Final report comparing actual pollution/emission and fuel reductions with proposal	
	1) Estimated bus lifetime reduction of: <ul style="list-style-type: none"> ▪ 4.025 tons NOx/lifetime ▪ 0.36 tons PM 2.5/lifetime ▪ 0.516 tons HC/lifetime ▪ 1.3 tons CO/lifetime ▪ 218.8tons CO₂/lifetime ▪ 225.001 total pollutant tons/lifetime ▪ 19,445 lifetime diesel equivalent gallons reduced 2) Reduced long-term exposure of children to diesel emissions

SUSTAINABILITY OF THE PROGRAM:

DEQ will work towards achieving the environmental outputs and outcomes as described in this work plan. DEQ will meet the priorities, reporting, and other requirements outlined in the Energy Policy Act of 2010, 42 USC 16131 et seq.

DEQ determined that replacing school buses with propane, low NOx, and cleaner diesel would result in cost-effective health benefits for targeted FY2020 funding. Assuming replacements are evenly split between four of the larger priority areas, the EPA Diesel Emissions Quantifier estimated first-year health benefits valuing \$11,000. The buses to be replaced transport school children so the project will provide reduced exposure and health benefits to susceptible populations for the remaining useful life of the buses.

Since 2008, DEQ has worked with state agencies, business organizations, and individual school districts to provide community-type stakeholder input into the Montana Clean School Bus Replacement Project. DEQ works closely with OPI to implement the School Bus Replacement Project and educate school bus drivers about the benefits of reducing idling and of cleaner diesel technology for school buses.

This 2020 Montana Clean School Bus Project is estimated to conserve 3,889 diesel gallon equivalents annually and 19,445 diesel gallon equivalents over the lifetime of the buses (See Table 3). These reductions are due to idle reduction technology and replacement of diesel buses with propane and low NOx buses. The replacement diesel buses will have direct fired heaters installed by the manufacturer. These heaters reduce idling time. Use of new buses ensures updated, energy efficient drive trains integrated with the engines that further reduce diesel consumption. DEQ's experience shows that the fuel economy for EMY 1996-2009 school buses is generally between 6 and 7 miles per gallon (mpg). School bus vendors estimate that EMY 2018 and newer propane and low NOx buses should achieve between 9 to 9.5 mpg, depending on make and engine.

The Clean School Bus Project addresses the EPA Region 8 priority of promoting idle reduction strategies and technologies to reduce diesel emissions. The new diesel buses will arrive with direct-fired heaters. Bus vendors will provide training on the equipment. The new buses help to protect children's health because the cleaner diesel buses will reduce children's exposure to diesel emissions within and along the routes. DEQ will provide additional idle reduction training for school bus drivers at the MAPT training sessions and their annual conference. DEQ's trainings earn school bus drivers credit toward their accreditation to be a qualified bus driver.

BUDGET NARRATIVE

Budget Category	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
			VW Mitigation Trust Funds	Other Funds	
1. Personnel	52,541.00	0.00	19,242.00	0.00	71,783.00
2. Fringe Benefits	18,389.00	0.00	10,360.00	0.00	28,749.00
3. Travel	5,247.00	0.00	0.00	0.00	5,247.00
4. Equipment	0.00	0.00	0.00	0.00	0.00
5. Supplies	935.00	0.00	0.00	0.00	935.00
6. Contractual	0.00	0.00	0.00	0.00	0.00
7. Other	680,797.00	2,816,385.00	268,542.00	0.00	3,765,724.00
8. Total Direct Charges (sum 1-7)	757,909.00	2,816,385.00	298,144.00	0.00	3,872,438.00
9. Indirect Charges	44,432.00	0.00	17,787.00	0.00	62,219.00
10. Total (Indirect + Direct)	802,341.00	2,816,385.00	315,931.00	0.00	3,934,657.00
11. Program Income	0	0	0	0	0

Personnel	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
			VW Mitigation Trust Funds	Other Funds	
Division Administrator, Annual Salary \$110,050	2,212.60	0.00	0.00	0.00	2,212.60
Financial Manager, Annual Salary \$74,864	1,562.74	0.00	0.00	0.00	1,562.74
Fiscal Specialist, Annual Salary \$48,005	957.84	0.00	0.00	0.00	957.84
Public Information Officer, Annual Salary \$46,537	981.60	0.00	0.00	0.00	981.60
Administrative Support, Annual Salary \$38,090	757.90	0.00	0.00	0.00	757.90

Energy Bureau Chief, Annual Salary \$89,837	1,770.46	0.00	1,046.00	0.00	2,816.46
Energy Bureau Section Supervisor, Annual Salary \$73,418	5,672.39	0.00	2,800.00	0.00	8,472.39
Energy Resource Professional, Annual Salary \$69,091	18,055.36	0.00	5,775.00	0.00	23,830.36
Energy Program Specialist, Annual Salary \$61,729	20,570.11	0.00	9,621.00	0.00	30,191.11
Total Personal Services	52,541.00	0.00	19,242.00	0.00	71,783.00
	0	0	0	0	0

Fringe Benefits	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
			VW Mitigation Trust Funds	Other Funds	
Fringe Benefits @ 35% (\$26,661 *35%)	18,389.00	0.00	10,360.00	0.00	28,749.00

Travel	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
			VW Mitigation Trust Funds	Other Funds	
(6) 1-3-day trips for 4 employees	5,247.00	0	0	0	5,247.00

Supplies	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
			VW Mitigation Trust Funds	Other Funds	
General Office Supplies	935.00	-	-	-	935.00

Other / Contractual	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
	Allocation	Allocation	VW Mitigation Trust Funds	Other Funds	
Bus Replacement	-	-			-
Total Other / Contractual	-	-			-

Other	EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
	Allocation	Allocation	VW Mitigation Trust Funds	Other Funds	
Bus Replacement	674,797.00	2,816,385.00	303,780.00	-	3,794,962.00
Leased Vehicle	1,000.00	-	-	-	1,000.00
MAPT Conference	5,000.00	-	-	-	5,000.00
Total Other	680,797.00	2,816,385.00	303,780.00	-	3,800,962.00

Examples of Indirect Cost Rate calculations are shown below:

- **Personnel and Fringe (0.24 x (\$35,992)) = \$8,638) & (.238 x (\$64,540))= \$15,361) = \$23,999.00**
- **Operating Indirects:**
- **EPA Allocation (0.04 x (\$686,979))=\$27,479) & Voluntary Match(.04 x \$268,542)=\$10,741) = \$38,220**
- **Operating Indirects = \$38,220**
- **Total Indirect Charges \$62,219**

Administrative Costs Expense Cap – DEQ will not use more than 15 percent of total project costs to cover administrative expenses.

Matching Funds and Cost-Share Funds – DERA project partners will provide the Mandatory Cost Share funds identified in the Project Budget Overview.

Funding Partnerships

If a DERA grant recipient intends to fund target fleets that they do not own and operate, they have the option to (1) make a **subaward** or (2) provide **participant support costs** to a project partner. Both options can fund a project partner's equipment and installation costs, but only subawards can fund a project partner's direct and indirect costs such as personnel and travel. If the DERA grant recipient is only funding a project partner's equipment and installation costs, they may instead choose to provide participant support costs rather than a subaward to avoid the extensive subaward monitoring and management requirements.

For more information on categorizing costs for funding partnerships, please refer to Section XIII of the Program Guide.