

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

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): _____
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

SUMMARY ATTACHMENT

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

The primary goal of the State of Delaware's Volkswagen Environmental Mitigation plan is to improve and protect ambient air quality by implementing eligible mitigation projects that will achieve significant and sustained reductions in NOx emission exposures in areas with poor air quality; areas with historical air quality issues; and areas that receive a disproportionate quantity of air pollution from diesel. The Delaware Department of Natural Resources and Environmental Control (DNREC) is partnering with the Waste Management of Delaware, Inc. (WM) to scrap and replace 10 older diesel solid waste trucks as compressed natural gas units (CNG). All 10 solid waste trucks will be replaced through the FY2021 Clean Diesel Program as a DERA Option under the Volkswagen Environmental Mitigation Plan.

The Delaware CNG Vehicle Deployment Project will serve as an important model for additional heavy-duty trucking companies not only to evaluate cost-effective and clean-burning natural gas vehicles in WM's fleet, but also to serve as an example for how to successfully implement advanced technology alternative fuel programs in large commercial and residential waste collection programs.

WM is pursuing an aggressive program to deploy CNG vehicles in Delaware, similar to the approach it has taken throughout the country in states including Pennsylvania, Colorado, and California. The project will serve as a method for WM to reduce vehicle emissions and improve air quality in New Castle and Sussex Counties, perfectly in alignment with the mission of WM and of the goals of DNREC's VW Beneficiary Mitigation Plan.

The FY2021 DERA workplan and the Delaware's Volkswagen Environmental Mitigation Plan are attached to further support this funding request.

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

The Delaware Department of Natural Resources and Environmental Control (DNREC) is partnering with the Waste Management of Delaware, Inc. (WM) to scrap and replace 10 older diesel solid waste trucks. All 10 solid waste trucks will be replaced through the FY2021 Clean Diesel Program as a DERA Option under the Volkswagen Environmental Mitigation Plan. The new solid waste trucks will operate in non-attainment areas of the state. The replacement trucks will be fueled by compressed natural gas.

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

This project will have a tremendous positive impact on air quality for nonattainment areas in Delaware. Waste Management's (WM) vehicles will primarily operate in New Castle and Sussex Counties, which were both designated as 8-Hour Ozone nonattainment areas. The CNG technology proposed by WM represents a viable opportunity to significantly improve air quality, particularly with fleet vehicles that often run on diesel. The deployment of these CNG vehicles will replace the operation of diesel vehicles in WM's fleet, resulting in improved air quality in communities disproportionately affected by air pollution and more susceptible to health risks associated with diesel emissions.

The lifetime emission reductions are (in short tons) for the 10 replacements under the FY2021 Diesel Emission Reduction grant and Volkswagen Environmental Mitigation Plan:

NO_x – 14.745
PM_{2.5} - 0.596
HC – 0.652
CO – 3.608

Describe How the Beneficiary will Make Documentation Publicly Available (5.2.7.2)

Subparagraph 5.2.7.2 of the Environmental Mitigation Trust Agreement for State Beneficiaries requires that Beneficiaries include in their funding requests:

A commitment by the Beneficiary to maintain and make publicly available all documentation submitted in support of the 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, together with an explanation of the procedures by which the Beneficiary shall make such documentation publicly available;

The Department of Natural Resources and Environmental Control (DNREC) in the State of Delaware is committed to maintaining and making publicly available all documentation submitted support of the funding requests and all records supporting all expenditures of Eligible Mitigation Action funds.

The public will be able to view funding requests on the DNREC website. DNREC will maintain these records on the Volkswagen (VW) Environmental Mitigation Trust Fund specific webpage. The webpage is designed to support public access and limit burden for the general public. The webpage can currently be found at <https://dnrec.alpha.delaware.gov/air/mobile-sources/vw-mitigation-plan/>.

DNREC has also created an electronic listserv. The Listserv is open to the public, used to communicate news, events, and information related the Environmental Mitigation Trust Fund. The listserv is advertised through the website and at public events related to the Volkswagen Environmental Mitigation Fund.

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

The Delaware Department of Natural Resources and Environmental Control sent emails to the representatives from the U.S. Department of the Interior and the U.S. Department of Agriculture listed in subparagraph 4.2.8 of the State Trust Agreement on February 19, 2018.

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 State of Delaware has been designated by the U.S. Environmental Protection Agency (EPA) as non-attainment for ozone (2008 and 2015 standards) in New Castle County and Sussex (2008 standards). Delaware's New Castle County has also been re-designated as attaining the fine particulate matter standard for both 1997 and 2006. New Castle County has a 10-yr maintenance plan in place.

The Department has recommended that FY2021 Diesel Emission Reduction Act (DERA) funds and Volkswagen Environmental Mitigation Funds be used to replace large local trucks with cleaner vehicles. DNREC's 2014 Emissions Inventory has concluded that up to 72% of in-state NOx emissions can be attributed to the transportation sector. Delaware's emissions from heavy and medium duty vehicles (which include solid waste trucks) are becoming an increasingly larger source of overall mobile source emissions for nitrogen oxides (NOx).

Natural gas is a clean-burning alternative that reduces substantial smog-forming and cancer-causing emissions. On an annual basis, each vehicle purchased as a part of this project is expected to use a total of 8,500 Diesel Gallon Equivalents (DGE) of CNG. Annually, all ten vehicles combined are expected to displace 85,000 DGE of CNG total annually.

Lastly, replacing refuse trucks with trucks that operate on cleaner burning fuel (compressed natural gas) will assist the Department in reducing emissions in Delaware's environmental justice areas. Environmental Justice is the act of equity among all races, ethnicities, income, and social classes of people and includes any census tract with a poverty level of 20% or higher and where 30% or more are considered minorities.

The Department's mission relative to environmental justice ensures that no particular area receives disproportionate environmental impacts due to air pollution.

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: _____



[NAME] Lisa Borin Ogden
[TITLE] Deputy Secretary

[LEAD AGENCY]

for

[BENEFICIARY]

ATTACHMENT B

Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline

Project Management Plan/ Project Schedule and Milestones

Milestone	Date
Solicitation of Project Partner – Waste Management of Delaware, Inc.	Q1 2021
Waste Management of Delaware, Inc. identifies 10 solid waste trucks for replacement	Q2 2021
EPA Granted Award	Q3 2021
DNREC/Waste Management of Delaware Inc. contract signed for DERA Option & VW.	Q4 2021/Q1 2022
Waste Management of Delaware orders/replaces solid waste trucks	Q1/Q3 2022
DNREC/Waste Management of Delaware destroys older solid waste trucks.	Q3 2022
Trustee Receives Funding Request - Funding Approved and Issued to DNREC	Q3 2022
DNREC reimburses Waste Management for DERA Option	Q4 2022

Project Budget

Waste Management of Delaware Class 8 Truck Vehicle Identification Number	Make/Model	Model Year	Federal DERA Grant Funds	Share of Total Budget Funded by the Trust	Cost Share (Paid by Project Partner)	Total
1M2AV02C09M002765	Mack MRU613	2009		\$50,000.00	\$353,621.32	\$403,621.32
1M2AV04C68M00121	Mack MRU613	2008		\$50,000.00	\$353,621.32	\$403,621.32
3BPZL0EX29F719107	Peterbilt 320	2009		\$50,000.00	\$353,621.32	\$403,621.32
1M2AG11C97M05834	Mack MR688S	2007		\$50,000.00	\$353,621.32	\$403,621.32
1M2AU0C9AM004487	Mack LEU613	2009	\$50,000.00		\$388,117.76	\$438,117.76
1M2AU02AM004489	Mack LEU613	2009	\$50,000.00		\$388,117.76	\$438,117.76
1M2P267C73M066680	Mack MR688S	2002	\$50,000.00		\$239,312.36	\$289,312.36
1M2AG11CX5M03378	Mack MR688S	2007		\$50,000.00	\$438,117.76	\$438,117.76
1M2K195C17M034962	Mack MR688S	2006	\$19,099.00	\$30,901.00	\$353,621.32	\$403,621.32
1M2AV02C18M00171	Mack RD688S	2001		\$50,000.00	\$239,312.36	\$289,312.36
Project Totals			\$169,099.00	\$330,901.00	\$3,461,084.60	\$3,911,084.60
Percentage			4%	8%	88%	100%

PROJECTED TRUST ALLOCATIONS

	2022
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$330,901.00
2. Anticipated Annual Cost Share	\$3,461,084.60
3. Anticipated Total Project Funding by Year (line 1 plus line 2)	\$3,761,985.60
4. Cumulative Trustee Payments Requested/Made to Date Against Cumulative Approved Beneficiary Allocation	\$0
5. Current Beneficiary Project Funding to be paid through the Trust (line 1)	\$330,901.00
6. Total Funding Allocated to for Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$330,901.00
7. Beneficiary Share of Estimated Funds Remaining in Trust	\$5,861,694.07
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 7 minus line 6)	\$5,530,793.07

ATTACHMENT C

Detailed Plan for Reporting On Eligible Mitigation Action Implementation

The Delaware Department of Natural Resources and Environmental Control (DNREC) will provide detailed reporting on Volkswagen Phase 2 CNG Deployment Project and the Category 10 – FY2021 DERA grant option for large truck replacements in the following ways:

- Timely updates to DNREC Volkswagen (VW) Environmental Mitigation Plan webpage.
- Delaware’s semiannual reporting obligations to Wilmington Trust (the “Trustee”); and
- Quarterly reports submitted to the Environmental Protection Agency (EPA).

DNREC maintains a Volkswagen (VW) Environmental Mitigation specific webpage that has been designed to support public access and limit burden for the general public. DNREC’s VW specific webpage can be found at <https://dnrec.alpha.delaware.gov/air/mobile-sources/vw-mitigation-plan/>. Timely updates to the webpage will inform the general public on each project’s status.

DNREC 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 per 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries. 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.

Finally, one of the requirements of the FY 2021 Diesel Emission Reduction Act (DERA) State Clean Diesel Grant Program is the timely submission of quarterly reports to the EPA. DNREC will submit timely reports to the EPA. They will also be included in the semiannual reports that DNREC provides to the Trustee.

ATTACHMENT D

Detailed Cost Estimates From Selected or Potential Vendors For Each Proposed Expenditure Exceeding \$25,000.

The Delaware Department of Natural Resources and Environmental Control (DNREC) has provided a detailed cost estimate from the application received from Waste Management of Delaware, Inc.

APPENDIX B

The Volkswagen Environmental Mitigation Trust Program

APPLICATION FORM

Project Title:

Waste Management Delaware CNG Vehicle Deployment Project

General Information:

Applicant: Waste Management of Delaware, Inc.

Mailing Address: 11323 Trussum Pond Rd.

City: Laurel

State: DE

Zip: 19956

County: Sussex

Daytime Phone: 609-434-5609

Alternate Phone: 609-352-8117

Email: jpryor1@wm.com

Equipment Owner (if different from Applicant): N/A

Mailing Address: N/A

City: N/A

State: N/A

Zip: N/A

County: N/A

Daytime Phone: N/A

Alternate Phone: N/A

Email: N/A

The following table lists **eligible mitigation actions** pursuant to the Environmental Mitigation Trust. Please select the eligible mitigation action(s) for which you are applying (Check all that apply).

Project Title: Waste Management Delaware CNG Vehicle Deployment Project	
Type of Mitigation Action: Vehicle Replacement: <input checked="" type="checkbox"/> Engine Repower: <input type="checkbox"/>	
Type of Entity: Government: <input type="checkbox"/> Non-government: <input checked="" type="checkbox"/>	
Quantity	Vehicle Replacement: 10 Engine Repower: N/A
Check all that apply	Eligible Mitigation Actions
<input checked="" type="checkbox"/>	Class 8 Local Freight Trucks and Port Drayage Trucks (engine model year 2009-1992) repowered with any new diesel or alternate fueled engine or all-electric engine, or replaced with any new diesel or alternate fueled or all-electric vehicle, with the engine model year in which the eligible large trucks mitigation action occurs or newer.
<input type="checkbox"/>	Class 4-8 school buses, shuttle buses, or transit buses (engine model year 2009 to 1992) repowered with any new diesel or alternate fueled or all-electric engine, or replaced with any new diesel or all-electric vehicle, with the engine model year in which the eligible bus mitigation action occurs or newer.
<input type="checkbox"/>	Freight switchers that operate 1000 or more hours per year repowered with any new diesel or alternate fueled or all-electric freight switcher certified to meet the applicable EPA emissions.
<input type="checkbox"/>	Ferries/Tugs - Unregulated, Tier 1 or Tier 2 marine engines repowered with Tier 3, Tier 4, alternate fueled, or all-electric engine, or upgraded with an EPA certified remanufacture system or an EPA verified engine upgrade.
<input type="checkbox"/>	Ocean Going Vessels - Marine shore power systems or components of such systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth.
<input type="checkbox"/>	Class 4-7 local freight trucks (engine model year 1992-2009) repowered with a new diesel, alternate fueled or all-electric engine, or replaced with any new diesel, alternate fueled or all-electric vehicle, with the engine model year in which the eligible medium trucks mitigation action occurs.
<input type="checkbox"/>	Airport Ground Support Equipment - (Tier 0, Tier 1, or Tier 2 diesel powered) uncertified or certified to 3 g/bhp-hr. or higher emissions spark ignition engine powered airport ground support equipment repowered with an all-electric engine, or replaced with the same airport ground support equipment or newer in an all-electric form.
<input type="checkbox"/>	Forklifts and Port Cargo Handling Equipment - Forklifts with greater than 8000 pounds (lbs.) of lift capacity and port cargo handling equipment repowered with an all-electric engine, or replaced with the same equipment or newer in an all-electric form.

Mitigation Action Description

Please provide a brief narrative describing how the project relates to Delaware’s VW Environmental Mitigation Plan by reducing NOx emissions and how this project will benefit the State of Delaware. If additional space is needed please label (no more than one page) in your application “Title of Project, Mitigation Action Description.”

Please see attached narrative under “Waste Management Delaware CNG Vehicle Deployment Project, Mitigation Action Description.”

Estimated NOx Reductions

Please describe and calculate the NOx reductions achieved for this project using the Diesel Emission Quantifier (DEQ) on the EPA website. Estimate the NOx emission reductions from the project in terms of dollar per ton of NOx using the DEQ found at <https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq>. Attach a separate summary calculation worksheet generated by the DEQ for each vehicle or piece of equipment and label pages in your application "Title of Project, Estimated NOx Reductions."

Please see attached narrative under "Waste Management Delaware CNG Vehicle Deployment Project, Estimated NOx Reductions"

Please identify the Inputs entered into the DEQ for Vehicles and/or Equipment proposed for replacement or repower under this application. Copy this form if more space is needed.

Diesel Emission Quantifier Inputs	Vehicles & equipment proposed for replacement or repower.			
	(Leave fields blank that do not apply)			
Vehicle or Engine Group	211051	211058	264711	208668
VIN	1M2AV02C09M00 2765	1M2AV04C68M00 1213	3BPZL0EX29F71910 7	1M2AG11C97M0583 46
Engine Serial Number	515649	509489	35225563	6G2208
Propulsion Engine (marine)	N/A	N/A	N/A	N/A
Total Auxiliary Engines (Marine)	N/A	N/A	N/A	N/A
Vehicle Make	Mack	Mack	Peterbilt	Mack
Vehicle Model	MRU613	MRU613	320	MR688S
Vehicle Model Year	2009	2008	2009	2007
Engine Make	Mack	Mack	Cummins	Mack
Engine Model	MP 7325M	MP7325	ISM	AI300A
Engine Model Year	2008	2007	2008	2006
Engine Cylinder Displacement	5.0<= size <15.0	5.0<= size <15.0	5.0<= size <15.0	5.0<= size <15.0
Number of Engine Cylinders	6	6	6	6
Retrofit Year	2022	2022	2022	2022
Engine Tier	N/A	N/A	N/A	N/A
Engine Horsepower	300-350	300-350	300-350	300-350
Annual Fuel Used (gal/yr)	9,295	4,719	7,313	7,475
Annual Usage Rate (hrs)	N/A	N/A	N/A	N/A
Annual Miles	27,885	14,158	21,939	22,424
Annual Idling Hours				
Fuel Type	Diesel	Diesel	Diesel	Diesel
Remaining Life	7	6	7	5
Normal Attrition Year	2029	2028	2029	2027
Proposed Fuel Type	CNG	CNG	CNG	CNG
Technology Cost	\$403,621.32	\$403,621.32	\$403,621.32	\$403,621.32

Diesel Emission Quantifier Inputs	Vehicles & equipment proposed for replacement or repower. (Leave fields blank that do not apply)			
Vehicle or Engine Group	103478	103480	409352	208670
VIN	1M2AU02C9AM00 4487	1M2AU02C2AM00 4489	1M2P267C73M066 680	1M2AG11CX5M0337 89
Engine Serial Number	523602	523623		6G2841
Propulsion Engine (marine)	N/A	N/A	N/A	N/A
Total Auxiliary Engines (Marine)	N/A	N/A	N/A	N/A
Vehicle Make	Mack	Mack	Mack	Mack
Vehicle Model	LEU613	LEU613	RD688S	MR688S
Vehicle Model Year	2010	2010	2002	2007
Engine Make	Mack	Mack	Mack	Mack
Engine Model	MP7325M	MP7325M	E7350	A1300A
Engine Model Year	2009	2009	2000	2006
Engine Cylinder Displacement	5.0<= size <15.0	5.0<= size <15.0	5.0<= size <15.0	5.0<= size <15.0
Number of Engine Cylinders	6	6	6	6
Retrofit Year	2022	2022	2022	2022
Engine Tier	N/A	N/A	N/A	N/A
Engine Horsepower	300-350	300-350	300-350	300-350
Annual Fuel Used (gal/yr)	8,488	8,525	7,031	4,586
Annual Usage Rate (hrs)	N/A	N/A	N/A	N/A
Annual Miles	25,463	25,576	21,094	13,757
Annual Idling Hours				
Fuel Type	Diesel	Diesel	Diesel	Diesel
Remaining Life	8	8	3	5
Normal Attrition Year	2030	2030	2025	2027
Proposed Fuel Type	CNG	CNG	CNG	CNG
Technology Cost	\$438,117.76	\$438,117.76	\$289,312.36	\$438,117.76

Diesel Emission Quantifier Inputs	Vehicles & equipment proposed for replacement or repower (Leave fields blank that do not apply)		
Vehicle or Engine Group	208277	408143	
VIN	1M2K195C17M03 4962	1M2AV02C18M00 1719	
Engine Serial Number	AI300A5g1823	000648	
Propulsion Engine (marine)	N/A	N/A	
Total Auxiliary Engines (Marine)	N/A	N/A	
Vehicle Make	Mack	Mack	
Vehicle Model	MR688S	RD688S	
Vehicle Model Year	2006	2001	
Engine Make	Mack	Mack	
Engine Model	AI300A	MP7	
Engine Model Year	2005	2005	
Engine Cylinder Displacement	5.0<= size <15.0	5.0<= size <15.0	
Number of Engine Cylinders	6	6	
Retrofit Year	2022	2022	
Engine Tier	NA	NA	
Engine Horsepower	300-350	300-350	
Annual Fuel Used (gal/yr)	8,856	6,847	
Annual Usage Rate (hrs)	N/A	N/A	
Annual Miles	26,567	20,541	
Annual Idling Hours			
Fuel Type	Diesel	Diesel	
Remaining Life	4	3	
Normal Attrition Year	2026	2024	
Proposed Fuel Type	CNG	CNG	
Technology Cost	\$403,621.32	\$289,312.36	

Project Budget

All projects require a cost share. Please be as detailed as possible when completing your budget. The applicant is responsible for detailing the proposed budget associated with the project. This includes “eligible mitigation actions” which includes the equipment necessary for the project while the “ineligible mitigation action expenditures” includes all administrative expenses related to the project.

Eligible Mitigation Actions are those projects that qualify for funding under this RFP. See Section 6 “Eligible Mitigation Actions” in the RFP for additional information. Copy this form if more space is needed.

Eligible Mitigation Actions					
Eligible Item	Make and Model	VIN or Serial	# of Each Item	Cost per Item	Estimated Costs
Class 8 LFT	Autocar ACX64 DFEL	TBD	3	\$438,117.76	\$1,314,353.28
Class 8 LFT	Autocar ACX64 SFEL	TBD	5	\$403,621.32	\$2,018,106.60
Class 8 LFT	Peterbilt 567 RO	TBD	2	\$289,312.36	\$578,624.72
Total Eligible Mitigation Action Costs					\$3,911,084.60

Ineligible Mitigation Action Expenditures are those administrative expenses that do not qualify for funding under this announcement. See Section 8 “Ineligible Mitigation Action Expenditures” under this RFP for additional information. If additional space is needed please label pages in your application “Title of Project, Proposed Budget”

Ineligible Mitigation Action Expenditures				
Ineligible Item	Description	Number of Each Item	Cost per Item	Estimated Costs
Total Ineligible Mitigation Action Expenditures (no match requirement)				\$

Total Budget Summary	
Total Eligible Mitigation Actions (from above)	\$3,911,084.60
Total Ineligible Projects Mitigation Action Expenditures (from above)	\$
Total Costs	\$3,911,084.60
Cost Share Percentage (See Section 7 “Cost Share” of the RFP)	87.2%
Total Cost share required from VW Mitigation Funds (matching funds)	\$3,411,084.60
Are you willing to accept funds from the DERA grant? If no, please explain below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Please see attached narrative under “Waste Management Delaware CNG Vehicle Deployment Project, Proposed Budget.”	

Proposed Project Location

Define the project area. Please note the following:

1. if the project is sited near a major highway or transportation corridor, shipping route, or near a shipping logistics center,
2. is the project in an environmental justice (EJ) area or related location that receives a disparate proportion of environmental impacts,
3. if the project avoids environmentally sensitive areas or areas containing critical habitats.

Indicate if the proposed project is located in a non-attainment and air quality maintenance areas. If additional space is needed please label page (no more than one) in your application "Title of Project, Proposed Project Location."

Please see attached narrative under "Waste Management Delaware CNG Vehicle Deployment Project, Proposed Project Location."

Project Timeline

All projects must be completed within one (1) year of signing a final contract or MOU. The milestones included in this template are provided as guidance. Applicants may substitute other milestones that suit their purpose, please be as detailed as possible.

Project Timeline		
Milestone	Responsible Party	Estimated Completion Date
Complete Contract Documents	Waste Management and DNREC	June 1, 2021
Pay for/Receive New Vehicles	Waste Management	April 30, 2022
Scrap Old Vehicles	Waste Management	July 30, 2022
Submit Monthly Reports	Waste Management	Within 15 days of the end of the previous month
Submit Quarterly Report	Waste Management	Within 15 days of September 30, 2021; December 30, 2021; March 31, 2022; June 30, 2022; and September 30, 2022
Project Period End Date	Waste Management	September 30, 2022
Submit Annual Follow Up Report	Waste Management	Within 15 days of September 30, 2023

Ability to be Replicated throughout the State

Provide a brief narrative to explain how the proposed project has the ability to be replicated throughout the state with other fleets or for public access. If additional space is needed please label (no more than one page) in your application "Title of Project, Replication."

Please see attached narrative under "Waste Management Delaware CNG Vehicle Deployment Project, Replication."

Collaboration with Other Entities in the State

Provide a brief narrative to demonstrate that the project includes collaborative efforts between the applicant and project team. If additional space is needed please label the narrative (no more than one page) in your application "Title of Project, Collaboration."

Please see attached narrative under "Waste Management Delaware CNG Vehicle Deployment Project, Collaboration."

Economic Development

Provide a brief narrative to explain how the project creates and/or retains local jobs for Delawareans and serves as an economic development engine for local Delaware based companies. If additional space is needed label the narrative (no more than one page) in your application "Title of Project, Economic Development."

Please see attached narrative under "Waste Management Delaware CNG Vehicle Deployment Project, Economic Development."

Attachments Checklist

Check if attached	Score (DNREC use)	Attachment Description
<input checked="" type="checkbox"/>	N/A	Mitigation Action Description: Attach a brief narrative (no more than two-pages) describing the project and how it relates to Delaware’s Environmental Mitigation Plan and label as “ Project Title, Mitigation Action Description. ”
<input checked="" type="checkbox"/>		NOx Emission Reduction: Estimate the NOx emission reductions from the project in terms of dollar per ton of NOx using EPA’s Diesel Emission Quantifier found at https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq . Attach a <u>separate</u> summary calculation worksheet generated by the DEQ for <u>each</u> vehicle or piece of equipment and label as “ Project Title, NOx Emission Reduction. ”
<input checked="" type="checkbox"/>		Project Budget: The proposed budget must be thorough, robust, realistic, and cost effective. The applicant must show a detailed budget with all cost shares explained and label as “ Project Title, Proposed Budget. ”
<input checked="" type="checkbox"/>		Proposed Project Location: Define the project area with a description. Please note (1) if the project is sited near a major highway or transportation corridor, shipping route, or near a shipping logistics center, (2) is the project in an environmental justice (EJ) area or related location that receives a disparate proportion of environmental impacts, (3) if the project avoids environmentally sensitive areas or areas containing critical habitats. Please note if the proposed project is located in a non-attainment and air quality maintenance areas. Label as “ Project Title, Proposed Project Location. ”
<input type="checkbox"/>		Project Timeline: Provide a summary table that defines when the proposed project will commence, major milestones that will be accomplished, and when the project end. Label the timeline “ Project Title, Project Timeline. ”
<input checked="" type="checkbox"/>		Ability to be Replicated Throughout the State: Provide a brief narrative (no more than one page) to explain how the proposed project has the ability to be replicated throughout the state with other fleets or for public access. Label the narrative as “ Project Title, Replication. ”
<input checked="" type="checkbox"/>		Collaboration with Other Entities in the State: Provide a brief narrative (no more than one page) to demonstrate that the project includes collaborative efforts between the applicant and project team. Label this narrative as “ Project Title, Collaboration. ”
<input checked="" type="checkbox"/>		Economic Development: Provide a brief narrative (no more than two pages) to explain how the project creates and/or retains local jobs for Delawareans and serves as an economic development engine for local Delaware based companies. Label this narrative as “ Project Title, Economic Development. ”
<input checked="" type="checkbox"/>	N/A	Applicants must also submit copies of required insurance for repowers and replacements and a valid State of Delaware Title (noting VIN) for each vehicle replacement.



January 26, 2022

Deanna M. Cuccinello, Engineer
Delaware Department of Natural Resources and Environmental Control Division of Air Quality
100 W. Water Street, Suite 6A Dover, DE 19904
Main: (302) 739-9402 Direct: (302) 739-9429
Fax: (302) 739-3106
Email: deanna.morozowich@delaware.gov

RE: Waste Management Grant Agreement: School Bus & Solid Waste Vehicle Replacements

Dear Ms. Cuccinello,

Waste Management of Delaware, Inc. (WM) would like to inform that WM owns the vehicles for replacement for the School Bus & Solid Waste Vehicle Replacements Project. The new vehicles from the project will also be operated and maintained in the state of Delaware for their entire lifetime.

WM is strongly committed to improving the air quality and quality of life for all communities in which we work and live, and as such we look forward to partnering with the DEP on this exciting project. Should you have any questions or concerns regarding our company, sustainability policies, or commitment toward this project, please do not hesitate to contact me using the information below.

Sincerely,

A handwritten signature in blue ink that reads "Jim Pryor".

Jim Pryor
Fleet Manager, Greater Mid Atlantic
107 Silvia St.
Ewing, NJ 08628
Phone: 609-434-5609
Fax: 609-882-8690
Email: jpryor1@wm.com

Waste Management Delaware CNG Vehicle Deployment Project, Mitigation Action Description

Waste Management of Delaware, Inc. (WM) requests grant support from the Delaware Department of Natural Resources and Environmental Council (DNREC) in the amount of \$500,000 to purchase and deploy ten (10) near-zero-emission heavy-duty compressed natural gas (CNG) vehicles in Laurel, Delaware. This project is a critical step for WM to provide alternative fuel waste collection services to its customer base throughout the state. The vehicles will be deployed at WM's new CNG facility in Laurel. WM will operate the vehicles in its local refuse collection and recycling routes from each respective location, and in return for a grant award, WM will commit matching funds more than 87% of the entire project cost. The Delaware CNG Vehicle Deployment Project will serve as an important model for additional heavy-duty trucking companies not only to evaluate cost-effective and clean-burning natural gas vehicles in WM's fleet, but also to serve as an example for how to successfully implement advanced technology alternative fuel programs in large commercial and residential waste collection programs.

WM is pursuing an aggressive program to deploy CNG vehicles in Delaware, like the approach it has taken throughout the country in states including Pennsylvania, Colorado, and California. The project will serve as a method for WM to reduce vehicle emissions and improve air quality in Sussex County, perfectly in alignment with the mission of WM and of the goals of DNREC's VW Beneficiary Mitigation Plan. By design, the project will accomplish the following:

- *Project Budget:* As mentioned above, WM will provide cost-share more than the 75% required for an alternative fuel vehicle replacement project.
- *Proposed Project Location:* This project will have a tremendous positive impact on air quality for nonattainment areas in Delaware. WM's vehicles will primarily operate in Sussex County, and in the 2008 evaluation of air pollutants, Sussex County was designated as 8-Hour Ozone nonattainment area. The CNG technology proposed by WM represents a viable opportunity to significantly improve air quality, particularly with fleet vehicles that often run on diesel. The deployment of these CNG vehicles will replace the operation of diesel vehicles in WM's fleet, resulting in improved air quality in communities disproportionately affected by air pollution and more susceptible to health risks associated with diesel emissions.
- *Project Timeline:* This project is a critical step for WM to retire its engine model year (EMY) 1992-2009 year diesel vehicles in order expand its natural gas-fueled waste collection services to its customer base in the Laurel area. WM is eager and prepared to move forward with ordering and purchasing the new vehicles, upon receiving authorization to do so from the DNREC. WM will complete the project within a year, as required by the guidelines, with an estimated completion date in the third quarter of 2022.
- *Ability to be Replicated throughout the State:* WM has years of experience and a proven track record of implementing CNG vehicle deployment projects. WM understands the level of detail required to ensure that projects are completed within the defined timeline and budget. WM has previously executed CNG deployments and looks forward to executing more based off this project's success. Further, upon vehicle deployment, WM will provide the data to the extent requested by the DNREC to allow DNREC to leverage WM's experience. Creating case studies and completing other forms of outreach can help other fleets adopt WM's practices for further replication of CNG projects.

- *Collaboration with Other Entities:* Completing a CNG deployment project requires exhaustive collaboration between WM's internal leadership ships and external stakeholders including but not limited to its dealership network, utility partners, residential and commercial customers, state and local agencies, and members of the local community. By successfully navigating communications with each entity, WM has been able to commission over 145 CNG stations and deploy over 10,000 CNG units. WM is confident in its ability to work with its project partners to successfully deploy the ten vehicles included in this project.
- *Economic Development:* This project will directly benefit local companies and workers with expertise in vehicle servicing and advanced technology sales. As the natural gas market in Delaware continues to expand, there are several Delaware-based companies that will have to increase their own capacities to serve these growing demands. As more users are exposed to natural gas operations, the market for construction labor will increase, specifically for skilled construction and design firms familiar with natural gas station needs and maintenance bay retrofits for natural gas vehicle repairs. Similarly, vehicle technicians skilled in natural gas repairs will be in high demand, as will be the firms that employ them. OEM and dealer networks will also benefit as business develops.

Waste Management Delaware CNG Vehicle Deployment Project, Proposed Budget

Project Costs

Natural gas solid waste collection vehicles have significant emission reduction benefits but are more expensive than their diesel counterparts. WM seeks to purchase a total of ten CNG vehicles for its refuse collection and recycling operations in Laurel. To partially defray the incremental or added cost of transitioning part of its refuse fleet to natural gas vehicles, WM is requesting \$500,000 total or \$50,000 per vehicle in grant funding support from the DNREC. The tables below display a breakdown of the vehicle costs by component. The prices displayed do not include taxes or freight.

For the Laurel location, WM proposes to purchase two (2) Peterbilt roll-off units, five (5) Autocar commercial front end loaders, and three (3) residential front end loaders.

Roll-Off Vehicle being ordered

Component	Make	Model	Cost (one unit)	Cost (two units)
Chassis	Peterbilt	567	\$169,742.00	\$339,484.00
Body	Galbreath	U-EX-214-SPL	\$45,677.00	\$91,354.00
Fuel System	Agility	90 DGE	\$33,402.00	\$66,804.00
Freight & Taxes			\$40,491.36	\$80,982.72
TOTAL			\$289,312.36	\$578,624.72

Commercial Front Loader Vehicle being ordered

Component	Make	Model	Cost (one unit)	Cost (five units)
Chassis	Autocar	ACX64	\$203,711.00	\$1,018,555.00
Body	Heil	Half/Pack	\$106,056.00	\$530,280.00
Fuel System	Heil	90 DGE	\$37,910.00	\$189,550.00
Freight & Taxes			\$55,944.32	\$279,721.60
TOTAL			\$403,621.32	\$2,018,106.60

Residential Front Loader Vehicle being ordered

Component	Make	Model	Cost (one unit)	Cost (three)
Chassis	Autocar	ACX64	\$209,997.00	\$629,991.00
Body	Heil	Half/Pack	\$132,853.00	\$398,559.00
Fuel System	Heil	90 DGE	\$37,910.00	\$113,730.00
Freight & Taxes			\$57,357.76	\$172,073.28
TOTAL			\$438,117.76	\$1,314,353.28

Total Project Costs

WM will provide the match for the remaining vehicle purchase costs through its private capital. The total project cost, minimum cost-share required, and actual cost-shared provided are demonstrated in the table below:

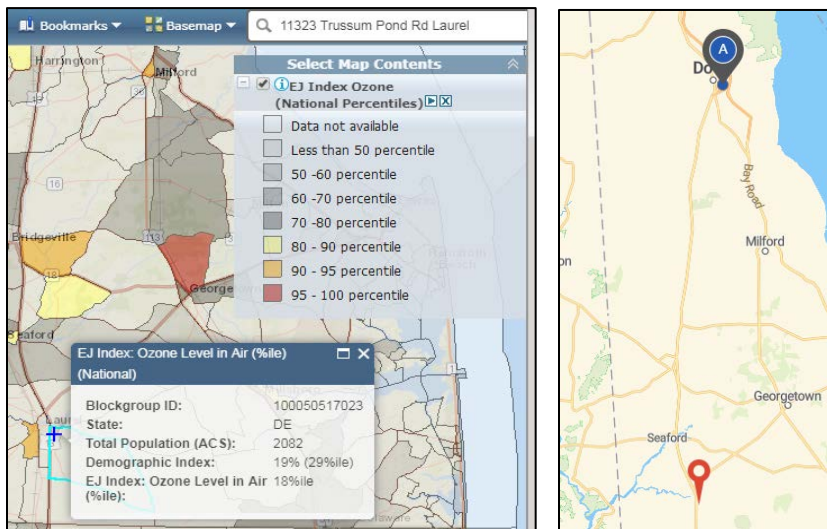
Total Project Cost	\$3,911,084.60
Required Cost-share	\$2,933,313.45
Actual Cost-Share	\$3,411,084.60
Actual Cost-Share (%)	87.22%

Waste Management Delaware CNG Vehicle Deployment Project, Proposed Project Location

WM’s Delaware CNG Vehicle Deployment Project will occur at one of WM’s sites within the state of Delaware in Laurel. The following tables include information about the site including its address, county, nearby corridors, EJ Screen demographic index and ozone percentiles, attainment status, and closest CNG fueling station(s). The site is near regional transportation corridors and is in a nonattainment area. Given the nature of WM’s operations in neighborhoods and commercial areas, the cleaner CNG vehicles will provide direct air quality benefits to the populations that live and work in WM’s service areas.

Location	11323 Trussum Pond Rd. Laurel, DE 19956 (Sussex County)
Proximal Corridors	US-13 / US-9
EJ Demographic Index	29%ile
EJ Ozone	18%ile
NAAQS Attainment Status	8-Hour Ozone (2008)
Nearest Fueling Station(s)	Chesapeake Utilities – Dover, DE (41.8mi)

Images: Laurel EJ Screen Map (left); closest CNG station to Laurel (right)



Waste Management Delaware CNG Vehicle Deployment Project, Replication

WM's plans to deploy CNG vehicles in Delaware go beyond the scope of this project. WM is committed to developing sustainable waste and recycling solutions, products, and services in its fleet of solid waste collection vehicles. WM began using natural gas refuse haulers in 1992, and today WM runs the largest fleet of natural gas refuse trucks in North America. WM's long-term vision is to use natural gas across all its operations, and preferably renewable natural gas from its own landfills. Looking ahead, 90% of WM's entire corporate-wide truck purchases will be natural gas vehicles; an investment surpassing \$1 billion. The deployment of more than 7,250 clean burning NGVs is significant not only in magnitude, but, more importantly, it is proof of a deliberate and comprehensive effort to incorporate a cleaner burning vehicle fuel technology into an essential service for the communities and businesses in the state of Delaware. By switching to natural gas, WM is reducing dependence on imported petroleum and significantly improving the air quality in its areas of operations.

WM's Delaware CNG Vehicle Deployment Project will play a key role in strategically expanding the market for natural gas vehicles as well as the network of natural gas fueling infrastructure. WM's requested vehicles in Laurel will fuel at the company's existing station. To provide long-term access to the greatest number of heavy-duty vehicles, it is critical that natural gas fueling infrastructure be available in the vicinity of major transportation corridors. For the fueling network in Delaware to become robust enough to support large numbers of natural gas vehicles, more CNG stations will be required. This project will serve as a critical first step toward initiating demand and creating momentum for natural gas fueling infrastructure in Delaware and provide a tangible example of successful CNG operations in the state. With increased rates of technology adoption, economies of scale and associated production costs improve, setting examples for and providing encouragement to even more technology adopters. This applies in both the vehicle and station markets; with increased adoption, design processes become streamlined, component prices fall, workers and permitting officials become better educated about alternative fuel operations and project development needs, there is increased market competition overall, and prices continue to drop. Therefore, this CNG deployment project will improve the regional knowledge base and is part of the overall incentive that Delaware truly requires to see similar projects replicated throughout the state.

Waste Management Delaware CNG Vehicle Deployment Project, Collaboration

WM has the expertise and experience to deploy, operate, and maintain the vehicles in this application, and it will do so through the collaborative support of several entities. WM's internal teams, vendors, and customers are key stakeholders in the project, and information about each is provided below.

Waste Management Key Personnel: The decision to apply for funding for Laurel's fleet was directed by Marty Tufte. Tufte is the corporate fleet director for WM, located in Phoenix, Arizona. Tufte has served for over 33 years in progressively responsible positions within the company and presently oversees the Natural Gas and Equipment Performance programs at the enterprise level. Tufte and his team have pioneered WM's use of CNG and LNG vehicles and fueling infrastructure, as well as use of renewable natural gas (RNG) in their CNG and LNG vehicles.

Outside of the corporate office, Jim Pryor and Richard St. John were central to the development of the application and will continue to play a critical role in the project's success. Pryor is the Area Fleet Director and St. John is the District Fleet Manager. They will be responsible for the timely deployment of the new vehicles and communications with drivers and technicians. Their roles involve the day to day functional management and providing collaborative assistance to local council and stakeholders.

Vendors: WM has a well-established network of dealerships and direct OEM support that enables it to keep up with the company's growth and ventures in the alternative fuel space. WM has already discussed the project with its vendors to secure documentation required for the grant's submittal. For this project, the preferred chassis providers are Peterbilt and Autocar; the preferred body providers are McNeilus, Galbreath, and Heil; and the preferred fuel system provider is Agility Fuel Solutions.

For years, Peterbilt has offered CNG and LNG options for its environmentally-conscious customers. As displayed in the references form (Attachment 6), WM's main point of contact for purchasing Peterbilt Trucks is Jesse Fullilove from Rush Truck Centers. Autocar remains both the oldest vehicle nameplate in America and the only truck manufacturer dedicated to severe-duty vocational applications. For Autocar, WM's main point of contact is Lisa Ringger, and she can be reached at lringer@autocarturck.com. McNeilus has been a leading producer of CNG powered trucks since 2006. McNeilus produces route-ready, fully tested CNG vehicle systems directly from its factory off its moving assembly line. WM's main point of contact at McNeilus is Michael Derr, and he can be reached at MDerr@mcneilusco.com. With an extensive line of quality mobile products for the waste industry, Galbreath offers products for the safe, reliable transport of waste and other products. WM's main point of contact at Galbreath is Steven Hartwick, and he can be reached at shartwick@wastequip.com. Lastly, heil has been a leader in the refuse industry since 1901, offering durable and innovated body manufacturing services. For Heil, WM's point of contact is Jared Lauritsen, and he can be reached at jlauritsen@doversg.com.

Community: WM's customers are its priority, and WM actively engages with the communities it operates in to educate them about natural gas and its benefits. WM has a long and consistent track record of conducting public outreach and educational campaigns to share the benefits of recycling throughout North America. To bring awareness to this project, WM can conduct outreach while simultaneously deploying the proposed units. WM would enjoy the opportunity to work directly with the DNREC around this effort, which could include advertising in local newspapers and radio, event sponsorships, and direct meetings with civic and business organizations.

Waste Management Delaware CNG Vehicle Deployment Project, Economic Development

Today, shale gas and renewable natural gas are revolutionizing the economy of Mid-Atlantic States, with many new and existing businesses growing thanks to lower fuel prices and jobs in alternative fuel supply chain. CNG is a reliable, low-cost, low-emission, and locally-sourced alternative to highly-emitting diesel. In addition to reducing diesel emissions and fuel run-off into local rivers and waterways, this project will further demonstrate the demand for locally-produced gas and create many lucrative green-collar jobs necessary to support the new vehicles and accompanying station.

There will be many CNG companies that will benefit from the proliferation of CNG vehicles and infrastructure in the state. The proliferation of the natural gas market in Delaware's neighboring state, Pennsylvania, will directly relate to the success of Delaware-based companies that are fully entrenched in the industry. Large numbers of vehicle-related jobs will be created in Delaware due to the deployment of the CNG vehicles proposed under the scope of this project. The jobs will include positions related to workforce training, service, parts manufacturing, delivery, and truck operation. Local maintenance and service-support jobs will be created to service and support the CNG trucks; special on-the-job training will be provided to fleet-maintenance personnel and fleet drivers so they will have the skills to maintain and service the low-emission natural gas engines and tanks, as well as to operate the trucks. WM's fleet drivers and maintenance personnel will also be trained to understand the operation of the on-board natural gas fuel tank and methane detection system so that they are well-prepared in the event of an accident or emergency.

The Delaware CNG Deployment Project is the ultimate example of a project that provides an efficient, proven, and necessary step in transitioning Delaware's commercial and residential waste hauling away from petroleum-based fuels to clean-burning natural gas. Natural gas allows the heavy-duty operational requirements and high-fuel demands of Delaware fleets to be met using a supply that is plentiful, sourced domestically, low-carbon, and that provides exceptional long-term cost savings. Therefore, deploying these CNG vehicles would provide enormous benefits to WM and the surrounding residential and commercial communities. This project will have significant immediate and long-term economic impacts that will benefit both the local economies and the State of Delaware. WM will invest in vehicle maintenance and will also continue to invest in the cost of equipment, construction, site improvements, and contract labor required to develop new CNG stations to support its growing fleet. These investments will inject immediate capital into the local economies at both locations in Delaware. Thus, this project will also create ongoing opportunities for highly skilled green jobs necessary to support the advanced technology vehicle and station operations and Delaware's transition into a market-leading clean technology economy.

ATTACHMENT E

DERA Option

The State of Delaware FY2021 Clean Diesel Work plan is attached. The State of Delaware is seeking Volkswagen Environmental Mitigation Funds as a DERA-Option 10 cost share for the deployment of CNG replacement vehicles under the FY2021 work plan. The State of Delaware lists 10 Class 8 Local Freight Trucks to be replaced as compressed natural gas.

2021 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative - State of Delaware (Version 6 - 05/25/2021)

SUMMARY PAGE

Project Title: School Bus & Solid Waste Vehicle Replacements

Project Manager and Contact Information

Organization Name: Department of Natural Resources and Environmental Control

Project Manager: Deanna M. Cuccinello

Mailing Address: 100 West Water Street, Suite 6A Dover, DE 19904

Phone: (302) 739 - 9402

Fax: (302) 739 - 3106

Email: Deanna.morozowich@delaware.gov

Project Budget Overview:

	2021
EPA Base Allocation	\$ 338,198.00
EPA Match Bonus (if applicable)	\$ 169,099.00
Voluntary Matching Funds (if applicable)	\$ 423,388.00
Mandatory Cost-Share	\$ 4,698,574.00
TOTAL Project Cost	\$ 5,629,259.00

Project Period

October 1, 2021 – September 30, 2023

Summary Statement

The FY2021 Diesel Emission Reduction Act grant funds will be used to replace:

- 19 diesel school buses with Advanced Student Transport (13), Asa Transportation (1), Lehane's Bus Service, Inc. (3), and School Mule, Inc. (2); and

- 10 diesel solid waste haulers replaced as compressed natural units with Waste Management of Delaware, Inc.

The equipment will be replaced with the mandatory project partner funds along with DERA or Volkswagen Environmental Mitigation Funds as the cost share.

SCOPE OF WORK

The projects presented in the FY2021 work plan will be administered by the Delaware Department of Natural Resources and Environmental Control – Division of Air Quality staff and our project partners. The purpose of the projects is to reduce diesel emissions in the State of Delaware.

STATE/TERRITORY GOALS AND PRIORITIES:

The following narrative describes how the project:

1. Will maximize public health benefits;
2. Is the most cost-effective;
3. Is in areas with high population density, that are poor air quality areas (including nonattainment or maintenance of national ambient air quality standards for a criteria pollutant; Federal Class I areas; or areas with toxic air pollutant concerns);
4. Is in areas that receive a disproportionate quantity of air pollution from diesel fleets, including truck stops, ports, rail yards, terminals, and distribution centers or that use a community-based multi-stakeholder collaborative process to reduce toxic emissions;
5. Includes a certified engine configuration or verified technology that has a long expected useful life;
6. Maximizes the useful life of any certified engine configuration or verified technology used or funded by the eligible entity; and
7. Conserves diesel fuel.

Poor air quality is a critical issue in the region. For Delaware, New Castle and Sussex County are still in non-attainment for the ozone standard. However, the state has attained the standard for fine particulate pollution. The state’s air quality monitors show clean data for the new annual fine particulate standard and the state is part of the PM Advance Program. New Castle County is an approved PM2.5 maintenance area. Diesel emission reduction projects are still important to support Delaware’s efforts to maintain good air quality relative to particulate pollution.

Table 1 Statewide Emission Inventory (2017) below compares emissions (VOC, NO_x, PM2.5-Primary, PM10-primary, SO₂, NH₃, and CO) of On-Road and Non-Road Equipment with the entire Non-Road Sector (Aircraft, Commercial Marine Vessels, and Locomotives).

TABLE 1 STATEWIDE EMISSION INVENTORY (2017)							
Source	Pollutant (tons/year)						
	VOC	NOx	PM2.5- PRI	PM10- PRI	SO2	NH3	CO
ONROAD Equipment	4,286.1	9,967.6	280.3	309.2	40.8	311.3	52,988.2
NONROAD Equipment	6,680.9	3,609.7	276.5	294.1	4.6	6.9	52,411.6
Aircraft	137.7	243.5	29.5	33.9	24.4	NA	1,098.9
Commercial Marine Vessels	240.8	3,728.6	75.5	80.4	103.3	1.5	492.9
Locomotives	33.0	532.7	16.2	16.4	3.1	0.3	85.6
Total	11,378.5	18,082.1	678	734	176.2	320	107,077.2

VEHICLES AND TECHNOLOGIES:

Advance Student Transport, Asa Transportation, Lehane's Bus Service, Inc. and School Mule Inc. propose to replace a total of nineteen (19) diesel school buses. The school buses range in age from model year 2004 to 2009. The replacements are eligible for a 25% cost share in Clean Diesel or Volkswagen Environmental Mitigation funds, the remaining 75% will be paid by the transportation provider. All school buses will be replaced with clean diesel buses and will directly support the Department's goals to improve air quality and reduce diesel emissions.

Additionally, Waste Management of Delaware, Inc. proposes to replace ten diesel solid waste collection vehicles with ten near-zero-emission vehicles that operate on compressed natural gas (CNG). The vehicles range in age from model year 2001 to 2009 and the vehicles are eligible for a 25% cost share in Clean Diesel or Volkswagen Environmental Mitigation funds, however, they will use \$500,000 (12.8% of the funds needed) in combined EPA bonus and Volkswagen funds to complete their project. They will deploy the new vehicles in Wilmington and Laurel and operate them on local refuse collection and recycling routes.

All transportation providers will be required to complete an Eligibility Statement. The Eligibility Statement confirms the vehicles are fully operational, have been owned/operated two years prior to the replacement, have at least three years of remaining life at the time of replacement, and have accumulated at least 7,000 miles/year for the past two years.

The vehicles listed in Table 2 are being considered for replacement in FY2021:

TABLE 2 – Diesel Vehicles for Replacement.			
Transportation Provider	Model Year	Make/Model	VIN
Advanced Student Transport (Krapf Bus Company)	2009	Bluebird Vision	1BAKGCPA09F262500
	2009	Bluebird Vision	1BAKGCPA39F264291
	2009	Bluebird Vision	1BAKGCPA59F262492
	2009	Bluebird Vision	1BAKGCPA79F262493
	2009	Bluebird Vision	1BAKGCPA99F262494
	2009	Bluebird Vision	1BAKGCPA39F262507
	2009	Bluebird Vision	1BAKGCPA79F262509

	2009	Bluebird Vision	1BAKGCPA39F262510
	2009	Bluebird Vision	1BAKGCPA19F262490
	2009	Bluebird Vision	1BAKGCPA29F262496
	2009	Bluebird Vision	1BAKGCPA49F262497
	2009	Bluebird Vision	1BAKGCPA49F262498
	2009	Bluebird Vision	1BAKGCPA49F262503
Asa Transportation	2006	Bluebird Vision	1BAKGCKA76F234275
Lehane's Bus Service, Inc.	2004	International	4DRBRABN44A966585
	2004	International	4DRBRABNX4A966705
	2004	International	1HVBBABP64H655896
School Mule, Inc.	2009	Bluebird Vision	1BAKGCPH39F260740
	2009	Bluebird Vision	1BAKGCPA69F260749
Waste Management of Delaware, Inc.	2009	Mack MRU613	1M2AV02C09M002765
	2008	Mack MRU613	1M2AV04C68M001213
	2009	Peterbilt 320	3BPZL0EX29F719107
	2007	Mack MR688S	1M2AG11C97M058346
	2009	Mack LEU613	1M2AU0C9AM004487
	2009	Mack LEU613	1M2AU02AM004489
	2002	Mack MR688S	1M2P267C73M066680
	2007	Mack MR688S	1M2AG11CX5M033789
	2006	Mack MR688S	1M2K195C17M034962
2001	Mack RD688S	1M2AV02C18M001719	

ROLES AND RESPONSIBILITIES:

The Division of Air Quality will issue a contract to each project partner that requires each partner to administer the entire replacement project, as well as, oversee the delivery of the new equipment and scrappage and destruction of the old. Each project partner is responsible for submitting an eligibility statement, scrappage documentation and required reporting. The contract will also provide a process by which the Department will release funds for the partial purchase of the replacement equipment. DERA and Volkswagen Environmental Mitigation funds will be issued on a reimbursement basis once all grant obligations are complete.

TIMELINE AND MILESTONES:

- October 2021 – DERA award granted.
- November 2021 – Contracts written between the Department of Natural Resources and Environmental Control and each project partner memorializing an agreement that requires each transportation provider to administer the purchase and replacement of each piece of equipment, complete a monthly status report, as well as oversee the replacement and scrappage requirements. The contracts will provide a process by which the Department will release the funds to purchase and replace the equipment.
- February/August 2022 – New equipment ordered and purchased.

- July/September 2022 – Existing equipment scrapped and destroyed.
- September 2023 – Each equipment owner/transportation provider will supply fuel usage data to the Department.
- All quarterly reports and a final report will be submitted according to the outlined schedule in the FFY2021 State Clean Diesel Program Guide.

DERA PROGRAMMATIC PRIORITIES:

The 19 school buses and 10 solid waste collection vehicles listed by model year in Table 2 – Diesel Vehicles for Replacement meet all the programmatic goals and priorities set forth under DERA. Diesel exhaust and air pollution from diesel vehicles has health implications for everyone. A major reason for implementing these replacement projects is to reduce the impact that the diesel emitting sources have on air quality.

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

The emission reductions for the projects were calculated using the Diesel Emission Quantifier on the EPA website. Table 3 Projected Emission Reductions provides the emissions reductions (in shorts tons) and cost effectiveness for vehicle replacements.

TABLE 3 Projected Emission Reductions								
Source	Annual Reductions (tons/year)				Lifetime Reductions (tons/year)			
	NOx	PM2.5	HC	CO	NOx	PM2.5	HC	CO
Advanced Student Transport	0.497	0.002	0.018	0.068	1.490	0.006	0.054	0.205
Asa Transportation	0.087	0.008	0.112	0.044	0.260	0.023	0.036	0.131
Lehane’s Bus Service, Inc.	0.026	0.023	0.036	0.131	0.780	0.070	0.107	0.394
School Mule, Inc.	0.076	0.000	0.003	0.010	0.229	0.001	0.008	0.031
Waste Management of Delaware, Inc.	4.915	0.199	0.217	1.203	14.745	0.596	0.652	3.608
Total	5.077	0.232	0.386	1.456	17.504	0.696	0.857	4.369

SUSTAINABILITY OF THE PROGRAM:

The Department will issue agreements that state that all equipment will be strictly maintained and serviced, as needed. If the equipment fails to perform in accordance with the manufacturer’s conditions, the equipment will be repaired or replaced under the warranty provisions.

The Division of Air Quality maintains a website for Mobile Sources which includes the status and progress of DERA projects. See

<http://www.dnrec.delaware.gov/Air/Pages/MobileSourcesLinks.aspx>

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	-	-	-	-	-
2. Fringe Benefits	-	-	-	-	-
3. Travel	-	-	-	-	-
4. Equipment	-	-	-	-	-
5. Supplies	-	-	-	-	-
6. Contractual	-	-	-	-	-
7. Other	\$507,297.00	\$4,698,574.00	\$423,388.00	-	\$5,629,259.00
8. Total Direct Charges (sum 1-7)	\$507,297.00	\$4,698,574.00	\$423,388.00		\$5,629,259.00
9. Indirect Charges	-	-	-	-	-
10. Total (Indirect + Direct)	\$507,297.00	\$4,698,574.00	\$423,388.00	-	\$5,629,259.00
11. Program Income	-	-	-	-	-

Explanation of Budget Framework

- **Personnel** – No grant funds will be used.
- **Fringe Benefits** – No grant funds will be used.
- **Travel** – No grant funds will be used.
- **Supplies** – No grant funds will be used.
- **Equipment** – No grant funds will be used.
- **Contractual** – No grant funds will be used.
- **Other** – The Department has identified the following Other costs and fees:

Project Partner	Existing VIN	EPA	Volkswagen Mitigation Funds	Project Partner	Total
Advanced Student Transport	1BAKGCPA09F262500	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA39F264291	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA59F262492	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA79F262493	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA99F262494	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA39F262507	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA79F262509	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA39F262510	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA19F262490	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA29F262496	\$22,773.75	-	\$68,321.25	\$91,095.00

	1BAKGCPA49F262497	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA49F262498	\$22,773.75	-	\$68,321.25	\$91,095.00
	1BAKGCPA49F262503	\$6,588.00	\$16,185.75	\$68,321.25	\$91,095.00
Asa Transportation	1BAKGCKA76F234275	\$10,978.00	\$11,147.00	\$66,375.00	\$88,500.00
Lehane's Bus Service, Inc.	4DRBRABN44A966585	-	\$21,425.00	\$64,275.00	\$85,700.00
	4DRBRABNX4A966705	-	\$21,425.00	\$64,275.00	\$85,700.00
	1HVBBABP64H655896	-	\$22,304.25	\$66,912.75	\$89,217.00
School Mule, Inc.	1BAKGCPH39F260740	\$22,912.50	-	\$68,737.50	\$91,650.00
	1BAKGCPA69F260749	\$22,912.50	-	\$68,737.50	\$91,650.00
Total		\$336,676.00	\$92,487.00	\$1,287,489.00	\$1,716,652.00

TABLE 5 - FY2021 OTHER Cost associated with Waste Management of Delaware, Inc					
Project Partner	Existing VIN	EPA	Volkswagen Mitigation Funds	Project Partner	Total
Waste Management of Delaware, Inc.	1M2AV02C09M002765	-	\$50,000.00	\$353,621.32	\$403,621.32
	1M2AV04C68M001213	-	\$50,000.00	\$353,621.32	\$403,621.32
	3BPZL0EX29F719107	-	\$50,000.00	\$353,621.32	\$403,621.32
	1M2AG11C97M058346	-	\$50,000.00	\$353,621.32	\$403,621.32
	1M2AU0C9AM004487	\$50,000.00	-	\$388,117.76	\$438,117.76
	1M2AU02AM004489	\$50,000.00	-	\$388,117.76	\$438,117.76
	1M2P267C73M066680	\$50,000.00	-	\$239,312.36	\$289,312.36
	1M2AG11CX5M033789	-	\$50,000.00	\$388,117.76	\$438,117.76
	1M2K195C17M034962	\$19,099.00	\$30,901.00	\$353,621.32	\$403,621.32
	1M2AV02C18M001719	-	\$50,000.00	\$239,312.76	\$289,312.76
Total		\$169,099.00	\$330,901.00	\$3,411,085.00	\$3,911,085.00

TABLE 6 - FY2021 OTHER COSTS associated with Audit Fees				
Category	EPA	Volkswagen Mitigation Funds	Project Partner	Total
Audit Fees (0.3% of EPA Funding \$507,297.00)	\$1,522.00	-	-	\$1,522.00
Total	\$1,522.00	-	-	\$1,522.00

TABLE 7 - FY2021 Summary of OTHER COSTS				
Category	EPA	Volkswagen Mitigation Funds	Project Partner	Total
School Bus Replacements (Table 4 Totals)	\$336,676.00	\$92,487.00	\$1,287,489.00	\$1,716,652.00
Waste Management of Delaware (Table 5 Totals)	\$169,099.00	\$330,901.00	\$3,411,085.00	\$3,911,085.00
Audit Fees (Table 6 Totals)	\$1,522.00	-	-	\$1,522.00
Total	\$507,297.00	\$423,388.00	\$4,698,574.00	\$5,629,259.00

- **Indirect Charges** - No grant funds will be used.

Administrative Costs Expense Cap

No grant funds will be used towards Administrative Expenses.

Matching Funds and Cost-Share Funds

The DERA program is a reimbursement program. The Department will provide Volkswagen Environmental Mitigation Funds as the state cost-share. Once all costs for a particular project are expended and itemized receipts, pictures, and certificates of destruction are received, the Department will reimburse each project partner for the appropriate cost-share. These funds are shown in the Itemized Project Budget and Explanation of Budget Framework above.

Funding Partnerships

The DERA program is a reimbursement program. DERA grant funds are only to be used toward equipment replacement costs for each project partner. The Department would like to avoid extensive subaward monitoring and management requirements.

Other Leveraged Funds

No other leveraged funds are identified.

ENVIRONMENTAL MITIGATION PLAN ATTACHMENT

A Copy of Delaware's Environmental Mitigation Plan is attached.



DELAWARE DEPARTMENT OF
**NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

Volkswagen Environmental Mitigation Plan

**December 2018
As amended on
February 2020
June 2021**

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I. BACKGROUND

On October 18, 2016, an initial Partial Consent Decree was finalized between the U.S. Justice Department, the Volkswagen (VW) Corporation, and its subsidiaries regarding the installation and use of emissions testing defeat devices in approximately 590,000 2.0 and 3.0 liter engine vehicles sold and operated in the United States beginning with model 2009 through 2014. A second partial settlement was approved for the 3.0 liter engine class of vehicles on May 17, 2017. Use of these defeat devices has increased air emissions of nitrogen oxide (NOx), resulting in adverse impacts to air quality and violating the federal Clean Air Act. NOx emissions contribute to the formation of ground-level ozone, which impairs lung function and cardiovascular health.

The Environmental Mitigation Trust Agreement for State Beneficiaries (Trust) dated October 2, 2017 has been established as part of the Partial Consent Decrees. Funds are to be used for environmental mitigation projects that reduce emissions of nitrogen oxides (“NOx”) where the Subject Vehicles were, are, or will be operated. The Trust Agreement is intended to fully mitigate the total, lifetime excess NOx emissions from the Subject Vehicles where the Subject Vehicles were, are, or will be operated.

The State of Delaware has been allocated approximately \$9.6 million from the Environmental Mitigation Trust based on the number of affected vehicles in Delaware. Delaware applied for Beneficiary status on November 27, 2017 and officially became eligible to receive funds on January 29, 2018. Wilmington Trust, as the court appointed Trustee, holds all funds and will disburse the funds upon receiving a state submitted work plan and budget. The Trust establishes a process to administer and receive the funds, including the development of a mitigation plan, and the types of mitigation projects eligible for funding¹.

¹ Appendix D of the Partial Consent Decree MDL No. 2672 CRB (JSC)

In addition to projects that reduce NO_x emissions, under the partial consent decree, states may allocate up to 15% of the funds towards zero emission vehicle fueling and charging infrastructure (i.e. Hydrogen fueling and electric vehicle charging stations).

II. OVERVIEW, OBJECTIVES AND FUNDING PRIORITIES

On behalf of the State of Delaware, the Department of Natural Resources & Environmental Control (DNREC) has developed this Proposed Environmental Mitigation Plan to provide the public with insight into the state's vision and overall approach to use the mitigation trust funds. The primary goal of the State of Delaware's mitigation plan is to improve and protect ambient air quality by implementing eligible mitigation projects that will achieve significant and sustained reductions in NO_x emission exposures in the following:

- Areas with poor air quality;
- Areas with historical air quality issues; and
- Areas that receive a disproportionate quantity of air pollution from diesel vehicles.

In accordance with Appendix D of the Partial Consent Decree,² this Proposed Environmental Mitigation Plan specifically describes:

- The funding priorities established to guide the planning, solicitation, and project selection processes,

² Section 4.1 Beneficiary Mitigation Plan, Appendix D of the Partial Consent Decree MDL No. 2672 CRB (JSC).

-
- The categories of eligible mitigation projects anticipated to be appropriate to achieve the stated goals and the assessment of the allocation of funds anticipated to be used for each type of eligible mitigation project,
 - How the state may consider the potential beneficial impact of the selected eligible mitigation projects on air quality in areas that historically bear a disproportionate share of the air pollution burden, and
 - The anticipated ranges of emission benefits that would be realized by implementation of the eligible mitigation projects identified in the Environmental Mitigation Plan.

In addition to the above listed Environmental Mitigation Plan components, DNREC will seek and consider public comments on the State of Delaware's Proposed Environmental Mitigation Plan, which will be included in the final plan as required by the Consent Decree³.

The State of Delaware has the discretion to adjust its objectives and specific spending plan when necessary to achieve the plan's goal; for that reason, this plan is a living document. The State of Delaware will provide updates of the mitigation plan to the Trustee and on DNREC's public webpage about Delaware's actions for meeting the requirements of the Partial Consent Decree and the Mitigation Trust, at:

<http://www.dnrec.delaware.gov/air/Pages/VWMitigationPlan.aspx>

This Proposed Environmental Mitigation Plan is not a solicitation for projects. As such, this plan does not include details on the competitive application.

³ <https://www.epa.gov/enforcement/third-partial-and-30l-second-partial-and-20l-partial-and-amended-consent-decree>

III. PHASED FUNDING APPROACH AND ELIGIBLE APPLICANTS

DNREC is proposing a phased-in plan for the State of Delaware's allocation of funding. A phased plan will allow the state to:

- Build transparency and involve the public in reviewing and revising the plan between phases;
- Learn which projects work best, and modify requests for proposals in subsequent phases to focus on the most effective projects;
- Allow the state to identify environmental justice areas; and
- Allow the state to adjust priorities and investments based on the newest and most up-to-date vehicle technology.

The first phase of funding will be the first step in achieving our goals for the program. The phases of funding are:

- **Phase 1: \$3,225,560.99 (2018-2023)** – DNREC proposes to replace old diesel school buses with new cleaner school buses over a five year period.
- **Phase 2: \$361,374.75 (2019-2020)** – DNREC offered a competitive RFP for projects in all categories. Two projects were determined by eligibility criteria set forth in the plan. These projects are described in Phase 2.
- **Phase 3: \$2,234,590 (2020-2021)** – DNREC will allocate 15% of the funds for electric vehicle supply equipment. Projects will consist of the replacement of five (5) government-owned dump trucks and a competitive RFP where applications will be accepted for projects in all categories as well as school bus replacements

with private transportations providers. Projects will be determined by the eligibility criteria set forth in the plan.

- **Phase 4: Up to \$3.8 million (2022-2023)** – Projects will consist of a competitive RFP where applications will be accepted for projects in all categories as well as school bus replacements with private transportations providers. Projects will be determined by the eligibility criteria set forth in the plan.

Delaware’s allocation of Trust funds is \$9,676,682.97 (0.33% of the total \$2.9 billion in Trust funds made available to states and Tribes). DNREC has proposed that Trust funds will be requested and made available for mitigation projects. A detailed project timeline can be found in **Table 1**.

Table 1 - Tentative Timeline of Events

Event	Time Frame
Court approves the partial settlement	October 25, 2016
Court Approves Trustee	March 15, 2017
Court Approves Trust	October 2, 2017
Delaware files Beneficiary Certification Application	November 27, 2017
Trustee Certifies Delaware as a Beneficiary	January 29, 2018
Public Comment on the draft Mitigation Plan	March 28, 2018
Delaware finalizes preliminary Mitigation Plan	December 2018
Delaware initiates Phase 1 – year 1 projects	Quarter 4 2018
Delaware releases RFP – Phase 2	January 28, 2019
Delaware selects Phase 2 projects	Quarter 3 2019
Delaware finalizes Phase 1 – year 1 projects	Quarter 4 2019
Public Comment opens on Draft Phase 3 Plan	December 2019
Delaware initiates Phase 1 – year 2 projects	Quarter 1 2020
Delaware initiates Phase 2 projects	Quarter 1 2020
Delaware releases an RFP on Phase 3 projects.	Quarter 1 2020
Delaware selects Phase 3 projects	Quarter 3 2020
Delaware finalizes Phase 1 – year 2 projects	Quarter 4 2020
Delaware finalizes Phase 2 projects	Quarter 4 2020*
Delaware initiates Phase 1 – year 3 projects	Quarter 1 2020*
Delaware initiates Phase 3 projects	Quarter 1 2020*
Delaware finalizes Phase 1 – year 3 projects	Quarter 4 2021*
Delaware finalizes Phase 3 projects	Quarter 4 2021*
Delaware releases an RFP on Phase 4 projects	Quarter 1 2022*
Delaware initiates Phase 1 – year 4 projects	Quarter 1 2022*
Delaware selects Phase 3 projects	Quarter 3 2022*
Delaware finalizes Phase 1 – year 4 projects	Quarter 4 2022*

Event	Time Frame
Delaware initiates Phase 4 projects	Quarter 1 2023*
Delaware finalizes Phase 3 projects	Quarter 4 2023*

*Dates are estimates and are subject to change.

DNREC will maintain and make publically available all documentation submitted in the support of each funding request on the VW Settlement project website⁴.

IV. SUMMARY OF PHASED SPENDING APPROACH

Phase 1 - School Bus Replacement Program:

The Department has recommended that Phase 1 funding be used to replace diesel school buses with cleaner school buses. DNREC's 2014 Emissions Inventory has concluded that up to 72% of in-state NO_x emissions can be attributed to the transportation sector. Delaware's emissions from heavy and medium duty vehicles (which include school buses) are becoming an increasingly larger source of overall mobile source emissions for nitrogen oxides (NO_x), as shown in Figure 1.

Research shows NO_x emissions will be reduced by 11 percent just by replacing a diesel school bus with a new propane school bus⁵.

⁴DNREC Website: <http://www.dnrec.delaware.gov/air/Pages/VWMitigationPlan.aspx>

⁵ Propane education and Research Council - <https://www.propanecouncil.org/>

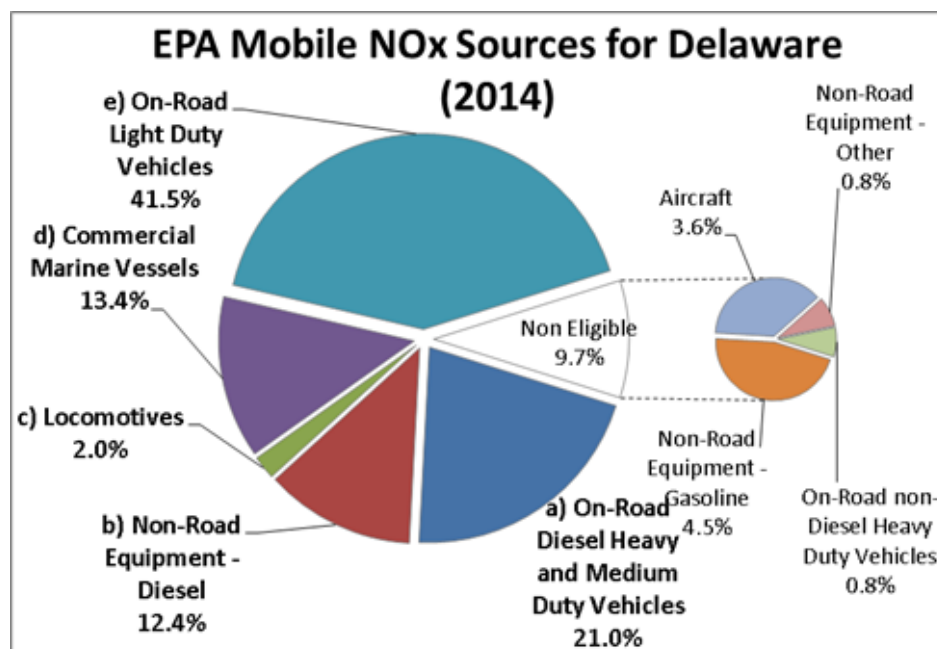


Figure 1 - Mobile NOx Sources for Delaware (Source 2014 NEI v1)

Studies have demonstrated that older, more polluting diesel school buses present significant health risks for the students who typically ride the bus. This includes the exacerbation of pre-existing pulmonary disorders such as asthma. Asthma is the most common long-term childhood disease, making newer and cleaner buses an urgent priority. Additionally, children are more susceptible to air pollution because their respiratory systems are still developing and they have faster breathing rates than do adults⁶.

Lastly, replacing school buses with buses that operate on cleaner burning fuel will assist the Department in reducing emissions in Delaware's environmental justice (EJ) areas. Environmental Justice is the act of equity among all races, ethnicities, income, and social classes of people and includes any census tract with a poverty level of 20% or higher and where 30% or more are considered minorities. The Department's mission relative to environmental justice ensures that no particular area receives disproportionate environmental impacts due to air pollution.

⁶ American Lung Association – <http://www.ala.org>

Phase 1 - Program Requirements:

In Phase 1, the Department proposes and continues to use up to 1/3 of the allocated Trust funds or \$3,225,560.99 to provide funds to the Department of Education for the replacement of school buses with cleaner burning fuel. The Department is proposing a cost share of 30% for government-owned school bus replacements.

To be eligible, each school bus being replaced must be:

- 1) Scrapped and destroyed at the time of replacement;
- 2) Owned and operated in Delaware;
- 3) Equipped with a model year 1992 to 2009 engine;
- 4) Serve a public school district or a charter school in Delaware where at least 40% of the students are disparately impacted as shown in **Table 2 and 3**;
- 5) Each new bus purchased must be of equivalent size as the bus being replaced;
- 6) The bus must be replaced with a current model year or newer; and
- 7) The replaced school bus must be fueled by propane or clean diesel.

Table 2 - Percentage of Disparately Impacted Students by School District

County	School District	Disparately Impacted (%)
New Castle	Appoquinimink	13.2
	Brandywine	29.8

County	Christina	42.9
	Colonial	39.8
	New Castle Co. Vo-Tech	27.6
	Red Clay	34.1
	Smyrna	24.9
Kent County	Caesar Rodney	30.5
	Capital	48.9
	Lake Forest	39.4
	Milford	41.2
	Polytech Vo-Tech	17.0
Sussex County	Cape Henlopen	29.0
	Delmar	14.2
	Indian River	36.0
	Laurel	47.4
	Seaford	47.7
	Sussex Technical	16.6
	Woodbridge	41.9

Table 3 - Percentage of Disparately Impacted Students by Charter School

County	Charter School	Disparately Impacted (%)
New Castle County	Academia Antonia Alonso	57.3
	Charter School of New Castle	51.4
	Delaware Academy of Public Safety and Security	39.9
	Delaware Design-Lab High School	29.9
	East Side Charter School	79.3
	First State Montessori Academy	11.6
	Freire Charter School	48.9
	Gateway Lab School	42.3
	Great Oaks Charter School	55.8
	Kuumba Academy Charter School	62.2
	Las Americas Aspira Academy	25.4
	MOT Charter School	5.3
	Moyer (Maurice J.) Academy	20.0
	Newark Charter School	8.0
Odyssey Charter School	14.4	
Prestige Academy	73.4	
Kent County	Academy of Dover	67.8
	Campus Community Charter School	40.0
	Early College High School at Delaware State University	33.1
	First State Military Academy	24.9
	Positive Outcomes Charter School	30.2
	Providence Creek Academy Charter School	18.0
Sussex County	Sussex Academy	9.0

Phase 2 - Competitive RFP Program:

In phase 2 of the plan, the Department proposed to provide up to 1/3 of the allocated Trust funds or \$3,225,560.99 in 2019 for the replacement of eligible mitigation

actions⁷. The Department will issue a competitive request for proposals (RFP) for projects that reduce nitrogen oxide (NOx) emissions from the transportation sector.

The following mitigation project types will be eligible for use of the VW Settlement Funds per the Trust Agreement found in Appendix D-2:

- 1.) Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)**
- 2.) Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)**
- 3.) Freight Switchers**
- 4.) Ferries/Tugs**
- 5.) Ocean Going Vessels (OGV) Shorepower**
- 6.) Class 4-7 Local Freight Trucks (Medium Trucks)**
- 7.) Airport Ground Support Equipment**
- 8.) Forklifts and Port Cargo Handling Equipment**

Environmental Benefits:

The retrofit, repower, or replacement of eligible vehicles and equipment may provide a wide range of emission benefits based on many variables, including the type of vehicle or engine replaced, the initial age of the engine, and the engine power rating.

⁷ The Department anticipates spending \$361,674.75 in Volkswagen Environmental Mitigation Trust Funds for Phase 2. The remaining \$2.8M will rollover to Phase 3 which will provide approximately \$6.0M to spend.

Each of the 8 project categories outlined in the VW Settlement Environmental Mitigation Plan will result in the following combined environmental benefits:

- Tons of pollution reduced or avoided over the lifetime of the zero emissions vehicle supply equipment, specifically, NO_x, PM_{2.5}, GHGs such as CO₂ and black carbon,
- Net reduction in gallons of diesel fuel and/or other fossil fuels used,
- Improved ambient air quality and human health in communities located in nonattainment areas, areas with historical air quality issues, or in areas that bear a disproportionate share of the air pollution burden, as well as benefits to the local economy, and the welfare of residents in such communities, and
- Reduced public exposure to diesel particulate matter, which the U.S. EPA has classified as a likely human carcinogen.

Additionally, based on current EPA exhaust emission standards for NO_x:⁸

- Heavy duty highway vehicles may provide up to a 96% reduction in NO_x emissions per vehicle, based on replacing a model year 1992 engine with a model year 2007 engine,
- Non-road equipment replacements, depending on the type of equipment and engine power rating, may provide between a 20% and 95% reduction in NO_x emissions per engine,
- In locomotives, replacing the oldest (Tier 0) engine with the newest (Tier 4) engine may provide up to an 89% NO_x reduction per engine,

⁸ EPA exhaust emission standard data retrieved from: <https://www.epa.gov/emission-standards-reference-guide>.

- In commercial marine vessels, an upgrade or repower of a ferry or tug engine may provide up to an 80% NOx reduction for each vessel, and
- Shorepower projects may reduce all NOx exhaust emissions from many ocean-going vessels.

These anticipated ranges of emission benefits were used to inform the plan's funding priorities, categories of eligible mitigation projects, and funding allocation considerations for each category of eligible mitigation projects. It is important to note that the range of emission benefits mentioned above are for individual engines and actual NOx emissions reductions will vary based on the type of projects received for funding consideration and the eligible mitigation projects ultimately funded. However, in order to achieve the goal of the state mitigation plan, it is a priority to fund sizeable projects designed to achieve the greatest emission reduction for the dollar (i.e., capital cost effectiveness in dollars/ton).

The cost shares and requirements involved for each vehicle or equipment repower or replacement will be equivalent to the terms of the Diesel Emission Reduction (DERA)⁹ grant. Cost shares identified in **Table 4** are based on the FY2017 State Clean Diesel Program Guide¹⁰.

⁹ The DERA program is a Congressionally-authorized project that enables the U.S. EPA to offer assistance for actions reducing diesel emissions. Thirty percent of the annual DERA funds are allocated to the DERA Clean Diesel State Grant Program. States and territories that match the base amount dollar per dollar receive an additional amount of EPA DERA funding to add to the grant (50% of the base amount). Trust funds can be used for states or territories non-federal match on a 1:1 basis.

¹⁰ 2017 FY2017 State Clean Diesel Program Guide - <https://www.epa.gov/sites/production/files/2017-02/documents/fy17-state-program-guide-2017-02.pdf>

Table 4 - Cost Shares for Eligible Mitigation Actions

Eligible Mitigation Action	Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	VW Funding	Cost Share Required
Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks) & Class 4-7 Local Freight Trucks (Eligible Medium Trucks)	Engine replacement with new diesel or alternate fueled engine	1992-2009	40%	60%
	Engine replacement with new all-electric engine	1992-2009	60%	40%
	Vehicle replacement with new diesel or alternate fueled vehicle	1992-2009	25% (50% for Drayage)	75% (50% for Drayage)
	Vehicle Replacement with all-electric vehicle	1992-2009	45%	55%
Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)	Engine replacement with new diesel or alternate fueled engine	2009 and older	40%	60%
	Engine replacement with new all-electric engine	2009 and older	60%	40%
	Vehicle replacement with new diesel or alternate fueled vehicle	2009 and older	25%	75%
	Vehicle Replacement with all-electric vehicle	2009 and older	45%	55%
Freight Switchers	Engine replacement with new diesel or alternate fueled engine or generator sets that are EPA certified	Pre-Tier 4	40%	60%
	Engine replacement with new all-electric engine	Pre-Tier 4	60%	40%
	Locomotive replacement with new diesel or alternate fueled freight switcher that is EPA certified	Pre-Tier 4	25%	75%
	Locomotive replacement with	Pre-Tier 4	45%	55%

Eligible Mitigation Action	Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	VW Funding	Cost Share Required
	new all-electric freight switcher			
Ferries/Tugs	Engine replacement with new Tier 3 or 4 diesel or alternate fueled engine	Pre-Tier 3	40%	60%
	Engine replacement with new all-electric engine	Pre-Tier 3	60%	40%
	Certified Remanufacture System or Verified Engine Upgrade	Pre-Tier 3	40%	60%
Ocean Going Vessels	Costs associated with shore-side system	n/a	25%	75%
Airport Ground Support Equipment	Engine replacement with new all-electric engine	Pre-Tier 3	60%	40%
Forklifts and Port Cargo Handling Equipment	Equipment replacement with new all-electric equipment	8000+ lbs lift capacity	45%	55%

Non-government and government entities are eligible to apply for funding to implement mitigation projects. Project funding will be awarded through a competitive process in accordance with Delaware's procurement laws¹¹. Any unspent funds remaining at the end of Phase 2 will be rolled into a subsequent Phase.

Diesel Emission Reduction Act (DERA):

The Department may leverage the projects in all phases in order to received additional Diesel Emission Reduction Act (DERA) grant funding. Any source type applying for grant funding will be subject to the requirements of the DERA State Clean

¹¹ Delaware Procurement laws can be found at <http://mymarketplace.delaware.gov/>

Diesel Grant Program, including but not limited to general eligibility, project evaluation criteria, eligible project and administrative expenditures, cost-share, and funding restrictions.

The projects submitted via the RFP will be reviewed by a Department established Project Selection Committee. The committee will select and rank project applications based on a set “Project Scoring Criteria/Matrix” developed by the Department as shown in **Table 5** expressly for this purpose.

Phase 2, Phase 3, and Phase 4 Program Requirements:

To be eligible, each vehicle or piece of equipment to be repowered or replaced must be:

- 1) Scrapped and destroyed at the time of replacement;
- 2) Owned and operated in Delaware;
- 3) Equipped with an eligible model year engine or Tier level;
- 4) Serve an environmental justice area;
- 5) Each new vehicle or engine purchased must be of appropriate /equivalent size as the vehicle or engine being replaced; and
- 6) The new vehicle must be replaced with a current model year or newer.

Volkswagen RFP Scoring Matrix:

The Department has developed a project RFP scoring criteria/matrix. Each application submitted will be scored based on the factors outlined in the matrix in **Table 5**. The number of projects that are selected for funding in each phase will depend on the applications received and interest by vehicle and equipment owners.

The following criteria will be used by the grant Review Committee to review and score applications received for the VW Mitigation Funds:

Table 5 - VW Settlement RFP Award Criteria

Project Award Criteria	Points Possible	Points Awarded	Comments
<p>Measurable, verifiable reduction in NOx emissions</p> <ul style="list-style-type: none"> - The project will produce a net reduction in NOx emissions in the State and result in a measurable, verifiable reduction in NOx per ton of emissions using the Diesel Emission Quantifier. - Projects must meet eligibility requirements of Appendix D-2 of the VW Mitigation Plan 	30		
<p>Project Budget</p> <ul style="list-style-type: none"> -The proposed budget is thorough, robust, realistic and cost effective. - The applicant must show a detailed budget with all cost shares explained. 	15		
<p>Proposed Project Location</p> <ul style="list-style-type: none"> - The project is sited near a major highway or transportation corridor, shipping route, or near a shipping logistics center. - This project will address an environmental justice (EJ) area or related location that receives a disparate proportion of environmental impacts. - The project avoids environmentally sensitive areas or areas containing critical habitats. -Priority will be given to projects in non-attainment and air quality maintenance areas. 	15		
<p>Project Timeline</p> <p>The proposed project must define when the project will commence and will end.</p>	15		

Project Award Criteria	Points Possible	Points Awarded	Comments
Ability to be Replicated throughout the State - The proposed project has the ability to be replicated throughout the state with other fleets or for public access.	10		
Collaboration with other Entities in the State - The project includes collaborative efforts between the applicant and project team (an anchor fleet or fleets, utility/fuel provider, vehicle dealer, or manufacturer).	10		
Economic Development - The project creates and/or retains local jobs for Delawareans. - The project serves as an economic development engine for local Delaware based companies.	5		
Total Points	100		

Status Update of Phase 2 Program:

The Department selected two projects for replacement in 2020 under the Request for Proposal NAT19001-VWEMTFP. The Department is partnering with Waste Management, Inc. of Delaware in the replacement of ten (10) solid waste collection units as compressed natural gas (CNG) for the first project. The waste collection units will serve in New Castle and Sussex County, which are both designated as non-attainment areas. This project will use combined Diesel Emission Reduction Act (DERA) grant funds (\$316,019.00) and Volkswagen Mitigation Trust Funds (\$183,981.00).

For the second project, the Department is partnering with The Teens Warehouse, Inc. to replace one diesel school bus with new, electric school bus with associated electric vehicle supply equipment. The electric bus will serve New Castle County. Funds shall cover up to 45% of the cost of an eligible replacement vehicle powered by an engine certified to the 2019 model year or newer standards and the charging infrastructure associated with the new all-electric vehicle. The project will cost \$177,693.75. As previously described, any funds remaining from Phase 2 will rollover

to Phase 3. The Department estimates that \$2.8M will remain in Phase 2 so Phase 3 will have approximately \$6.0M available.

Status Update of Phase 3 Program:

The Department selected two projects for replacement in 2021 under the Request for Proposal NAT20002-VWEMTFP. The Department is partnering with Sutton Bus & Truck Company in the replacement of eight (8) diesel school buses with propane buses. The school buses will serve in New Castle County, which is a designated non-attainment area. This project will use combined Diesel Emission Reduction Act (DERA) grant funds (\$57,143.00) and Volkswagen Mitigation Trust Funds (\$128,857.00).

For the second project, the Department is partnering with Bowman Bus Service to replace one diesel school bus with new, clean diesel school bus that will serve Kent County. The project will cost \$25,750.00. Funds shall cover up to 25% of the cost of an eligible replacement bus powered by an engine certified to the 2019 model year or newer. Any funds remaining from Phase 3 will rollover to Phase 4.

During Phase 3 of this funding, DNREC's Division of Climate, Coastal, and Energy will receive 15% (\$1.45M) of the Trust funds to administer a competitive grant program for the deployment of electric vehicle supply equipment (EVSE). Specifically, these funds will be utilized to incentivize the construction and operation of DC Fast Charging stations in the state to provide residents and travelers with convenient and consistent access to electric vehicle supply equipment. Grant funding will be provided for the material costs of publically available DC Fast Charging Stations installed within the state of Delaware. Eligible entities for grant funding will include Delaware-based businesses, not-for-profit organizations, government entities, and educational institutions. Project proposals will be submitted through competitive Request for Proposal process and will be evaluated based on criteria in the categories of:

- Estimated greenhouse gas reductions

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- Proximity to Alternative Fuel Corridors and proximity to high traffic volume routes
 - Accessibility regarding payment options
 - Thoroughness of the Operations and Maintenance Plan
 - Overall project budget and cost effectiveness

The RFP for Electric vehicle supply equipment will be released in Quarter 4 of 2021. Additionally, the Department will allocate up to \$700,000 to replace five (5) Class 8 government-owned dump trucks with the Division of Fish and Wildlife. These vehicles will be used around the state.

Phase 4 - A Hybrid Program:

The Department estimates that \$3.8M remains from all spending for Phase 4. A competitive request for proposals (RFP) will be released in Quarter 1 2022. In the Competitive RFP, the Department will pursue the following projects:

- School bus replacements with the privately-owned school bus contractors. In Delaware, private school bus contractors provide 2/3 of transportation services to Delaware schools. The Department will allocate funds in the replacement of propane or clean diesel school buses. The contractors are eligible for a 25% cost share and school bus replacements must match the criteria established in Phase 1 - Program Requirements and Phase 2 – Competitive RFP Program.
- All other eligible mitigation actions. The remaining Trust funds will be used for the replacement of eligible mitigation actions listed in Phase 2 – Competitive RFP Program.