

**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)

<b>Action Title:</b>	
<b>Beneficiary's Project ID:</b>	
<b>Funding Request No.</b>	<i>(sequential)</i>
<b>Request Type: (select one or more)</b>	<input type="checkbox"/> Reimbursement <span style="float: right;"><input type="checkbox"/> Advance</span> <input type="checkbox"/> Other (specify): _____
<b>Payment to be made to: (select one or more)</b>	<input type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify): _____
<b>Funding Request &amp; Direction (Attachment A)</b>	<input type="checkbox"/> Attached to this Certification <input type="checkbox"/> To be Provided Separately

### SUMMARY

<b>Eligible Mitigation Action</b>	<input type="checkbox"/> Appendix D-2 item (specify): _____
<b>Action Type</b>	<input type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal): _____
<b>Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):</b>	
<b>Estimate of Anticipated NOx Reductions (5.2.3):</b>	
<b>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):</b>	
<b>Describe how the Beneficiary will make documentation publicly available (5.2.7.2).</b>	
<b>Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8).</b>	
<b>Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).</b>	

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

**ATTACHMENTS**  
**(CHECK BOX IF ATTACHED)**

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

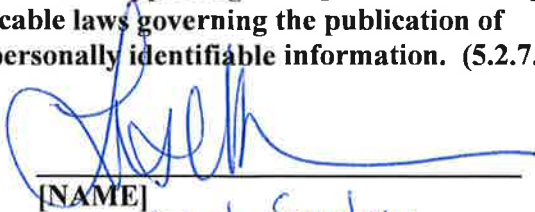
**CERTIFICATIONS**

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

1. This application is submitted on behalf of Beneficiary \_\_\_\_\_, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.
2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.
3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.
4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)
5. Beneficiary will maintain and make publicly available all documentation submitted in

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

DATED: Sept 2, 2020



[NAME]

[TITLE] Deputy Secretary

Department of Natural Resources and Environmental Control

[LEAD AGENCY]

for

**State of Delaware**

[BENEFICIARY]

## 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 Delaware Department of Education (DoEd) and the Teen Warehouse to scrap and replace 25 older diesel school buses. A total of 23 school buses will be replaced as clean diesel and 1 will be replaced as propane through Phase 1 – Year 2 under the Volkswagen Environmental Trust Program. The Teen Warehouse is replacing one diesel bus as electric and will include the electric vehicle supply equipment under Appendix-D-2 under the Volkswagen Environmental Mitigation Plan and the State Clean Diesel Program.

The two agencies, Department of Education and the Teen Warehouse, are committed to providing schools with reliable, innovative, and efficient green transportation solutions. Air pollution from diesel vehicles has health implications for everyone, but children are more susceptible because they breathe more air per pound of body weight than do adults. Children riding older diesel school buses are exposed to significant levels of fine particulate matter and other harmful pollutants. Although school bus engines burn cleaner than those of a decade ago, Delaware is motivated by saving fuel costs and reducing school children’s exposure to cancer-causing and smog forming pollution through the replacement of old diesel school buses in and around the state.

The FY2019 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 Delaware Department of Education (DoEd) to scrap and replace 24 older diesel school buses (Phase 1 Year 2). An additional school bus is being replaced with Teen Warehouse as electric through the FY2019 Clean Diesel Emission Reduction Act grant (DERA) Program with Volkswagen Mitigation Funds as the cost share (Phase 2). These DoEd school buses will serve 5 school districts around the state. The Teen Warehouse school bus will serve the City of Wilmington. The replacement school buses will be fueled by clean diesel, propane or electric under the following replacement schedule:

School Bus Replacement Program	Propane	Diesel	Electric	Total
Appendix D-2 Eligible Mitigation Action Replacement (Phase 1 Year 2)	1	23	-	24
FY2019 DERA Grant/Phase 2 – Teen Warehouse	-	-	1	1
Total	1	23	1	25

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

Air pollution from diesel vehicles has health implications for everyone, but children are more susceptible because they breathe more air per pound of body weight than do adults. Children riding older diesel school buses are exposed to significant levels of fine particulate matter and other harmful pollutants. Although school bus engines burn cleaner than those of a decade ago, Delaware is motivated by saving fuel costs and reducing school children's exposure to cancer-causing and smog forming pollution through the replacement of old diesel school buses.

The lifetime emission reductions are (in short tons) for the 1 school bus replacement under the FY2019 Diesel Emission Reduction grant with the Teen Warehouse:

NO<sub>x</sub> – 0484

PM<sub>2.5</sub> - 0.040

HC – 0.065

CO – 76.5

The lifetime emission reductions are (in short tons) for the 24 school bus replacements under the Appendix D-2 Volkswagen Environmental Mitigation Plan (Phase 1 Year 2):

NO<sub>x</sub> – 4.272

PM<sub>2.5</sub> - 0.244

HC – 0.477

CO – 1.491

**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 FY2019 Diesel Emission Reduction Act (DERA) funds and Volkswagen Environmental Mitigation Funds under Phase 1 and Phase 2 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 NOx 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 (NOx).

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 adults.

Lastly, replacing school buses with buses that operate on cleaner burning fuel and electric 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 Teen Warehouse will serve underprivileged adolescents in the City of Wilmington. The Department of Education buses will serve 5 school districts around the state.

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



## 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 Phase 2 DERA Option Project Partner	Q1 2019
Solicitation of School buses – Department of Education (Phase 1 Year 2)	Q3 2019
Teen Warehouse selected for Phase 2	Q3 2019
EPA Granted Award	Q3 2019
Department of Education submits ITB & selects vendors	Q4 2019 /Q1 2020
Department of Education orders replacement school buses	Q1 2020
DNREC/Teen Warehouse contract signed for Phase 2 and DNREC/Department of Education MOU signed for DERA Option & Phase 1 Year 2.	Q2 2020
DNREC replaces school buses Department of Education& the Teen Warehouse and begin destroying buses.	Q3 2020
Trustee Receives Funding Request - Funding Approved and Issued to DNREC	Q3 2020
DNREC reimburses Department of Education VW Phase 1 Year 2 and the Teen Warehouse for DERA Option/VW replacement	Q4 2020

#### Project Budget

Budget Category	Federal DERA Grant Funds	Share of Total Budget Funded by the Trust	Cost Share (Paid by Project Partner)	Sub-Total
School Bus Replacements – FY 2019 DERA/VW (1 bus replacement w/electric supply equipment)	\$ 0	\$ 177,693.75	\$217,181.25	\$394,875.00
School Bus Replacements – VW Phase 1 Year 2 (24 bus replacements)	\$ 0	\$ 641,758.50	\$1,497,436.50	\$2,139,195.00
Project Totals	\$ 0	\$ 819,452.25	\$ 1,714,617.75	\$2,543,070.00
Percentage		32%	68%	

**PROJECTED TRUST ALLOCATIONS**

	<b>2020</b>
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$ 819,452.25
2. Anticipated Annual Cost Share	\$ 1,714,617.75
3. Anticipated Total Project Funding by Year (line 1 plus line 2)	\$2,543,070.00
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)	\$ 819,452.25
6. Total Funding Allocated to for Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$ 819,452.25
7. Beneficiary Share of Estimated Funds Remaining in Trust	\$ 8,497,474.77
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 7 minus line 6)	\$ 7,678,022.52



## 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 1 – year 2 School Bus Replacements and the Category 10 – FY2019 DERA grant option for all school bus 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 the 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 2019 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 detailed cost estimates from the Delaware Department of Education and the Teen Warehouse. The included budget lists each school bus individually and references the Invitation to Bid (ITB)/Request for Proposal (RFP) number. The Department has included a copy of NAT190001-School Bus Replacement Project for the Teen Warehouse Project and copies costs from IG Burton and Wolfington Body Co. for the Delaware Department of Education school buses.



March 28, 2019

**VIA HAND DELIVERY**

Department of Natural Resources and Environmental Control  
Division of Air Quality  
Attn: Deanna Morozowich  
State Street Commons  
100 W. Water Street, Suite 6A  
Dover, Delaware 19904

Re: State of Delaware Volkswagen Environmental Mitigation Trust Fund Project,  
Contract No. NAT19001-VWEMTFP – Application

Dear Ms. Morozowich,

Enclosed please find the original paper copy of The Teen Warehouse, Inc.'s (the "Warehouse") State of Delaware Volkswagen Environmental Mitigation Trust Fund Project Application, including all attachments and a non-collusion agreement (the "Application"). Also enclosed please find an electronic copy of the Application on CD.

The Warehouse is a collaborative effort to create a physical safe space and network of service providers for Wilmington teens. The Warehouse aims to create a culture of opportunity for teens that can stand in opposition to the culture of poverty and violence they currently encounter in their communities. To accomplish this, the Warehouse will provide a flagship physical location for teens to learn, develop and lead in conjunction with bringing together over 50 youth-serving partner organizations (e.g. health and mental health service providers, career/training programs, academic support, arts, athletics, and after school enrichment programs) who will collaborate to expand their reach, capacity, and effectiveness. Integration of services is a founding premise of the Warehouse.

As a start-up non-profit, the Warehouse has formed a unique partnership around this project that includes key stakeholders who are committed to the success of this effort. As detailed in the application, we have a close and active partnership with Delmarva Power & Light Company, Kingswood Community Center, Eastside Charter School and the University of Delaware as it relates to this application and project. All of these entities have a longstanding history of working successfully on significant projects and are actively involved and committed to this effort. In fact, representatives from these entities worked very closely with the Warehouse in preparing this Application. Going forward, our partners are committed to working with the Warehouse to bring clean energy mobility options to this community. Together they are committed to establishing the infrastructure necessary for the project and otherwise ensuring this project is a success. In addition, the State of Delaware will benefit from the research and

Ms. Morozowich  
March 28, 2019  
pg. 2

development gleaned from this project relative to a Vehicle to Grid application and use case for managing grid impacts and offsetting energy costs using an electric bus. Simply put, whether it is lessons around the grid implications of the increased load produced by an electric bus or the shared interest of providing better support for the Riverside area of Wilmington, there is a close alignment of interest among our partners that justifies considering their collective operational experience and history in this endeavor.

In presenting this Application, the Warehouse would like to note some exceptions to the insurance requirements of the RFP. First, as a start-up non-profit, the Warehouse is in the process of securing the appropriate business licenses and will forward copies thereof upon receipt. The Warehouse is in good standing with the Division of Corporations and we have included a Certificate of Good Standing as proof thereof. Second, while the Warehouse has relevant insurance coverages and we have provided copies thereof as part of the Application, some of the policies do not match precisely the RFP requirements and/or the Warehouse does not currently have all the required coverages. However, the Warehouse is otherwise in the process of reviewing its coverages for possible expansion and will make the modifications as required if the funds under this RFP are awarded.

We greatly appreciate the opportunity to present you with our Application for review and consideration. If you have any questions, please do not hesitate to contact me directly at (302) 540-1698 or via email at [dford@reachriverside.org](mailto:dford@reachriverside.org). We stand ready to address all questions or comments you may have with respect to our Application.

Respectfully submitted,



David J. Ford  
Chairman

#### Enclosures

cc: Logan Herring, Executive Director, Kingswood Community Center, Inc.  
Aaron Bass, CEO, Vision Academies - EastSide Charter School  
Charles S. McDowell, Chairman, REACH Riverside Development Corporation  
Gary R. Stockbridge, President, Delmarva Power & Light Company  
Willett Kempton, Ph.D., University of Delaware, PI EV Project

**TABLE OF CONTENTS**

**THE VOLKSWAGEN ENVIRONMENTAL MITIGATION TRUST PROGRAM**

Contract No. NAT19001-VMEMTFP

Warehouse Electric Bus Pilot

Applicant: The Teen Warehouse, Inc.

Application ..... 1

Eligible Mitigation Actions ..... 2

Mitigation Action Description..... 3

Estimated NOx Reductions ..... 4

Project Budget ..... 7

Proposed Project Location..... 9

Project Timeline ..... 10

Ability to be Replicated throughout the State ..... 11

Collaboration with Other Entities in the State..... 12

Economic Development ..... 13

Attachments Checklist..... 14

Application Scoring Matrix ..... 15

Certification..... 16

Attachment 1 – No Proposal Reply Form – Not Applicable

Attachment 2 – Non-Collusion Statement

Attachment 3 – Exceptions

Attachment 4 – Company Profile and Capabilities

Attachment 5 – Confidentiality and Proprietary Information

Attachment 6 – Business References

Attachment 7 – Subcontractor Information Form

Attachment 8 – Emission Results and Health Benefits for Project

Exhibit 1 – Business License/Certificate of Good Standing

Exhibit 2 – Certificate of Insurance

Exhibit 3 - State of Delaware Title/Registration



**APPENDIX B**

**The Volkswagen Environmental Mitigation Trust Program**

**APPLICATION FORM**

**Contract Number**

**NAT19001-VMEMTFP**

**Project Title:**

Warehouse Electric Bus Pilot

**General Information:**

Applicant: The Teen Warehouse, Inc.			
Mailing Address: 2300 Bowers Street			
City: Wilmington	State: DE	Zip: 19802	County: New Castle
Daytime Phone: (302) 540-1698		Alternate Phone: (302) 764-9022	
Email: dford@reachriverside.org			
Equipment Owner (if different from Applicant):			
Mailing Address:			
City:	State:	Zip:	County:
Daytime Phone:		Alternate Phone:	
Email:			

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:	
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: _____ Engine Repower: _____
Check all that apply	<b>Eligible Mitigation Actions</b>
<input type="checkbox"/>	<b>Class 8 Local Freight Trucks and Port Drayage Trucks</b> (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 checked="" type="checkbox"/>	<b>Class 4-8 school buses, shuttle buses, or transit buses</b> (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"/>	<b>Freight switchers</b> 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"/>	<b>Ferries/Tugs</b> - 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"/>	<b>Ocean Going Vessels</b> - 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"/>	<b>Class 4-7 local freight trucks</b> (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"/>	<b>Airport Ground Support Equipment</b> - (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"/>	<b>Forklifts and Port Cargo Handling Equipment</b> - 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."

Imagine a safe place where Wilmington teens could go after school to learn, keep fit, relax, and socialize. A place that offers hope for the future, with an environmentally sustainable facility that helps provide an example for the clean cities that we all hope will be our future. By offering such a facility and a teen-led and teen-centric program where youth can access services to meet their recreational, social, academic, and wellness needs, the Warehouse is doing just that: giving teens a place of their own after school that will also be a model for environmental sustainability in their community.

Located in the Riverside community of northeast Wilmington, the Warehouse project was conceived in early 2017 and won the coveted Pete du Pont Freedom Foundation's 2017 Reinventing Delaware award. The mission of the Warehouse is to create a collaborative culture to revolutionize teen engagement in Wilmington, with the vision of developing confident, competent, and courageous young adults ready to take the next step in their lives and to stand in opposition to the culture of poverty, violence, and environmental injustice they currently encounter on a regular basis.

To accomplish this, the Warehouse is a model of collaboration, bringing together over 50 youth-serving partner organizations, including health and mental health service providers, career/training programs, academic support, arts, athletics, and after school activities. The purpose is to provide in one location a variety of youth-oriented educational, recreational, social, and health programs during afternoon and evening hours that allow teens to explore, collaborate, discover their passions, and develop skills needed for higher education opportunities and employment in today's economy. The key to this effort is to address the root causes of teen violence, while also enabling teens to make positive connections with successful professionals. Doing so will instill hope for their future and the future of the community.

A clean, healthy, and sustainable environment is about a commitment to our future. Unfortunately, one of the consequences of environmental injustice in a particular community is the reinforcing message that the future of that community is not important. The reality is the location of the Warehouse and the communities it serves suffer from a long history of environmental injustice.

Whether it be the legacy of industrial contamination or the disproportionate impact on air quality from being located so close to one of the most traveled highways in the United States, this community has likely suffered from environmental injustice like no other in Delaware. To that end, if we are going to convince the children of these communities they have a bright future, we need to demonstrate progress on these issues, including providing examples of what a cleaner, more environmentally friendly future looks like.

*Please see continuation at Page 17.*

**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 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 (DEQ) Inputs	Vehicles & equipment proposed for replacement or repower (Leave fields blank that do not apply)			
Vehicle or Engine Group	School Bus			
VIN	4DRBUAFP76B983310			
Engine Serial Number				
Propulsion Engine (marine)				
Total Auxiliary Engines (Marine)				
Vehicle Make	International Bus Company			
Vehicle Model	4x2 bus			
Vehicle Model Year	2006			
Engine Make				
Engine Model				
Engine Model Year				
Engine Cylinder Displacement				
Number of Engine Cylinders				
Retrofit Year				
Engine Tier				
Engine Horsepower				
Annual Fuel Used (gal/yr)	1,360 (DEQ default)			
Annual Usage Rate (hrs)				
Annual Miles	14,084 (DEQ default)			
Annual Idling Hours	107 (DEQ default)			
Fuel Type	ULSD			
Remaining Life	5 years			
Normal Attrition Year				

Proposed Fuel Type	Electric replacement			
Technology Cost	\$374,875			

**Emission Results and Health Benefits for Project:**

**Emission Results**

The estimated remaining life of the current 2006 bus is five years. The combined results for all groups and upgrades entered for the project.<sup>1</sup>

**Annual Results (short tons)<sup>2</sup>**

	<b>NOx</b>	<b>PM2.5</b>	<b>HC</b>	<b>CO</b>	<b>CO2</b>	<b>Fuel<sup>3</sup></b>
Baseline for Upgraded Vehicles	0.097	0.008	0.013	0.048	15.3	1,360
Amount Reduced After Upgrades	0.097	0.008	0.013	0.048	15.3	1,360
Percent Reduced After Upgrades	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Lifetime Results (short tons).<sup>2</sup>**

Baseline for Upgraded Vehicles	0.484	0.040	0.065	0.240	76.5	6,800
Amount Reduced After Upgrades	0.484	0.040	0.065	0.240	76.5	6,800
Percent Reduced After Upgrades	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Lifetime Cost Effectiveness (\$/short ton reduced.)**

**Capital Cost**

Effectiveness <sup>4</sup>	\$816	\$9,958,088	\$6,070,360	\$1,646,214	\$5,162
	699				

(unit & labor costs only)

**Annual Results (short tons)**<sup>2</sup>

**Total Cost Effectiveness**<sup>4</sup>

<b>NOx</b>	<b>PM2.5</b>	<b>HC</b>	<b>CO</b>	<b>CO2</b>	<b>Fuel</b> <sup>3</sup>
\$827,299	\$10,087,332	\$6,149,146	\$1,667,580	\$5,229	

(includes all project costs)

<sup>1</sup> Emissions from the electrical grid are not included in the results.

<sup>2</sup> 1 short ton = 2000 lbs.

<sup>3</sup> In gallons; fuels other than ULSD have been converted to ULSD-equivalent gallons.

<sup>4</sup> Cost effectiveness estimates include only the costs which you have entered.

**Health Benefits**

This section estimates the health benefits resulting from the project’s reduction of PM 2.5, based on the inputs entered. For example, 100% of the emission reductions are estimated to take place in New Castle County, Delaware.

**Results:**

The table below shows the estimated PM2.5 reductions and health benefits for the project. Results are based on the inputs entered.

Annual Benefits represent the dollar value of health benefits resulting from reduced exposure to PM2.5. These benefits include the reduction of premature mortality, chronic bronchitis, asthma attacks, non-fatal heart attacks, and other health problems. The dollar values are based on studies used by EPA when estimating the health benefits of environmental rules.

Annualized Costs are based on unit and labor costs. They have been annualized over the remaining life of the upgraded fleet.

**Health Benefits Results**

<b>County and State</b>	<b>Annual Diesel PM2.5 Reduction (short tons)</b>	<b>Annual Benefits</b>	<b>Annualized Unit &amp; Labor Costs</b>
<b>New Castle, Delaware</b>	0.008	\$11,000	-
<b>Total</b>	0.008	\$11,000	\$86,000

## 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.

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”

Eligible Mitigation Action Expenditure	VIN or Serial Number	Number of Each Item	Cost per Item	Estimated One Time Costs	VW Cost Share	Applicant Cost Share
Make and Model					55%	45%
Vehicle Replacement with all electric Type C Electric Bus with V2G capabilities		1	\$374,875.00	\$374,875.00	\$206,181.25	\$168,693.75
BlueBird Type C Tags and Titling Fees		1	\$18,743.75	\$18,743.75	\$10,309.06	\$8,434.69
Site Preparation		1	\$15,000.00	\$15,000.00	\$8,250.00	\$6,750.00
Service 3 Phase, 480 VAC, 200 AMPS		1	\$7,500.00	\$7,500.00	\$4,125.00	\$3,375.00
V2G Level 2 Charger/with the off-board UL-listed inverter		1	\$20,000.00	\$20,000.00	\$11,000.00	\$9,000.00
(Remote Terminal Unit designed to PJM specification) on the site. PJM will communicate with that panel.		1	\$65,000.00	\$65,000.00	\$35,750.00	\$29,250.00
Decommissioning		1	\$1,500.00	\$1,500.00	\$825.00	\$675.00
<b>Total Eligible Mitigation Action Costs</b>		<b>1</b>	<b>\$502,618.75</b>	<b>\$502,618.75</b>	<b>\$276,440.31</b>	<b>\$226,178.44</b>

Annual Ineligible Mitigation Action Expenditures				
Description		Number of Each Item	Cost per Item	Estimated Costs Per Year
Grant Administration – personnel		1	78,000	78,000
Grant Administration – benefits		1	18,000	18,000
Printing & supplies – grant admin		1	4,500	4,500
Exelon R&D – personnel		1	30,000	30,000

V2G Admin: Nuvee (Revenue Share from PJM Ancillary Market)	1	0	0	
DPL PJM Aggregator	1	15,000	15,000	
DPL Engineering Support	1	10,000	10,000	
Operating and Maintenance Costs(annually)	1	20,000	20,000	
<b>Total Ineligible Mitigation Action Expenditures (no match requirement)</b>			<b>175,500</b>	

<b>Total Budget Summary</b>			
Total Eligible Mitigation Actions (from above)	\$	\$502,618.75	
Total Ineligible Projects Mitigation Action Expenditures (from above)	\$	175,500	
<b>Total Costs</b>		<b>\$678,118.75</b>	
Cost Share Percentage (See Section 7 "Cost Share" of the RFP)	\$	\$226,178.44	45 %
Total Cost share required from VW Mitigation Funds (matching funds)		\$276,440.31	55 %
Are you willing to accept funds from the DERA grant? If no, please explain below.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	



## 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.

The Warehouse is located in the former home of Prestige Academy, a now-closed charter school, at 1121 Thatcher Street in the Riverside community in northeast Wilmington. This location is widely recognized as an Environmental Justice area. Wilmington has been designated by the USEPA as non-attainment for ozone in 2008 and 2015. Riverside is bordered roughly by the Brandywine on the south, Northeast Boulevard on the west, the city line on the north, and railroad tracks and industrial properties on the east. This location does not affect environmentally sensitive areas or areas containing critical habitats.

The facility is being renovated and will be open for operations in September. These renovations will include a charging station for the electric bus, and the Warehouse is working with the Delaware Sustainable Energy Utility on installing 13 energy efficient rooftop HVAC units, as well as installing enhanced energy efficient lighting throughout the facility. With the electric bus and these energy efficiency initiatives, the Warehouse will likely be the most environmentally sustainable operation in the Riverside area.

Riverside has a little more than 4,000 residents, according to 2010 U.S. Census figures, and almost all of them are living in poverty. At the time of the 2010 U.S. Census, per capita income was less than \$9,000, nearly 40% of the adults had not completed high school, and only one in eight adult males were employed.

## 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	Duration	Estimated Date of Completion
Receive DNREC Approval		Sep-19
Order Equipment / Make Purchase	Day 1	Sep-19
Site Preparation	1 month	Oct-19
L2 Charger Make Ready Work / Installation	2 months	Nov-19
Decomission Old Bus*	8 months	May-20
Submit Proof of Scrapping of Replaced Vehicle or Engine (pictures) and Certificate of Destruction, Bill of Sale, and an Invoice to the Department	8 months	May-20
Equipment Delivery	9 months	Jun-20
Install V2G equipment	9 months	Jun-20
Operate Vehicle	10 months	Jul-20
*Old bus will be decommissioned just prior to the delivery of new electric bus		

## 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.

As is discussed in more detail in the Collaboration and Economic Development sections of this application, the Warehouse is part of a larger revitalization effort in the Riverside neighborhood. Led by the REACH Riverside Development Corporation (REACH stands for Redevelopment, Education and Community Health), the project consists of high quality, mixed-income housing, a cradle-to-college education system, and supportive family-oriented health and wellness facilities and programs, all focused on the existing Riverside public housing project and its next-door neighbors, Kingswood Community Center and EastSide Charter School. A critical component of the REACH Riverside strategy is a focus on a limited neighborhood area. Over time, however, the REACH Riverside model contemplates a spillover of benefits to a wider neighborhood from private investment attracted to the area. Ultimately, other neighborhoods could replicate the business model developed by REACH Riverside for this project. In addition, the idea of multiple non-profits utilizing a common electric bus for their transportation needs is something that warrants replication in other areas of the State.

Moreover, the fact that the new electric bus will utilize Vehicle-to-Grid ("V2G") capabilities, will create important opportunities to learn about the potential impact of utilizing battery storage (the bus battery) as a way to conserve energy during peak times with the battery as a reduced cost alternative and a potential for revenues from sharing the unused battery's electrons back to the PJM grid when not in operation. This could be accomplished through the V2G technology and charging during low cost hours and discharging during high cost hours of the day. Furthermore, this may reduce the amount of necessary distribution system investments and may enable consumers to secure cost savings on their energy bill. This is particularly the case with users like schools and community centers, such as the Warehouse, as they provide excellent opportunities to study the benefits of V2G because their buses typically have predictable routes and duty-cycles. For example, the buses are not often utilized during the mid-day hours when peak generation from renewable sources occurs.

To this end, the Warehouse is working closely with Delmarva Power & Light Company ("Delmarva Power") and the University of Delaware in this regard, and is committing to make the electric bus available for V2G during certain agreed-upon time-periods. This will enable Delmarva Power, University of Delaware and State policy makers to gain valuable information about managing increased load and to develop additional use cases around procuring, siting, and scheduling of similar assets on a broader scale within the Delmarva Power service territory. These same teachings will also better enable policy makers and regulators (such as PJM) as they consider laws, regulations and rules around these potentially high-value grid services. Ultimately, these learnings may help reduce barriers (both market and regulatory) to the electrification of these types of vehicles and doing so will create a multiplying effect in terms of the reductions of NOx and other harmful emissions.

## 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."

The Warehouse is part of a larger revitalization effort in the Riverside neighborhood, led by the nationally renowned Purpose Built Communities, a non-profit consulting firm that works side-by-side with community leaders, residents, and others to plan and implement holistic community revitalization efforts. With a goal of breaking the cycle of intergenerational poverty, Purpose Built uses best practices to guide neighborhood revitalization by creating pathways out of poverty for the lowest-income residents and building strong, economically diverse communities.

Numerous organizations, groups, and individuals will be involved in completing the Purpose Built process. Included among them are the following:

- The REACH Riverside Development Corporation is comprised of community leaders who have the skills, connections, and reputation to attract the necessary community partners and funding for the project and who will work with the community and partners to manage the overall process to ensure that all parties are pursuing common goals.
- Kingswood Community Center will play a central role as landowner for new housing as well as other project components, including early learning, senior services, health and wellness services, and other amenities needed to support a robust neighborhood.
- East Side Charter School, which borders the north end of Riverside, will be the foundation of the education pillar and will lead to the establishment of a "cradle to college and career education pipeline" to serve the neighborhood children.
- A comprehensive community revitalization within Riverside could not be accomplished without addressing a virtually ignored segment of the impoverished population: the teens. The Warehouse will focus on teen services and will serve not only Riverside but also the wider area of east and north Wilmington and indeed, the entire city. Because the Warehouse and REACH Riverside are pursuing complementary goals, they are also working in close collaboration, even sharing some administrative leadership under a unique Shared Services Agreement that also includes Kingswood Community Center. This integrated services model permits all three organizations to obtain more high-quality employment services with cost savings for all three resulting from a sharing of costs.

As discussed in the Replication section, the Warehouse has been working closely with Delmarva Power in preparing this application. Delmarva Power recognizes the important environmental, health, and societal benefits of a cleaner transportation system, including the electrification of vehicles. To that end, Delmarva Power is committed to making sure there is sufficient infrastructure to meet the demand to charge such vehicles and that Delmarva Power customers are aware of the most efficient and cost-effective mechanisms by which to do so. For example, Delmarva Power recently entered into a settlement agreement that, if approved by the Delaware Public Service Commission, will allow it to own and operate public charging stations for electric vehicles in locations to be determined throughout its service territory in the state of Delaware. Additionally, under this proposal, Delmarva Power will be studying the benefits of V2G obtained because of charging the new electric bus during off-peak hours and discharging energy back into the grid during peak hours. Delmarva Power will be able to use this information to develop additional use cases around procuring, siting, and scheduling of similar assets on a broader scale within the Delmarva Power service territory.

## 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."

The Warehouse plans to hire six to eight employees, and REACH Riverside plans to hire ten. There will also be employment opportunities for teens at the Warehouse. The Warehouse is also creating a network of teen service providers to help teens gain employment or internships with various providers outside the physical structure of the Warehouse. Transportation is critical in this regard to help the teens access such opportunities. In terms of the specific infrastructure work required for this project, the Warehouse will strive to utilize local contractors where practical. In addition, the current plan is to purchase the electric bus from I.G. Burton, a business located in Delaware that sells commercial buses.

Beyond this project, Delaware State University ("DSU") has agreed to operate their newly-created Center for Neighborhood Revitalization and Research ("CNRR") within the Warehouse. DSU envisions hiring at least six employees for their CNRR. The primary purpose of the CNRR is to understand and promote neighborhood revitalization through research and service partnerships with fragile communities planning or undergoing strategic change. The CNRR offers a unique approach to neighborhood revitalization primarily by examining the impact of revitalization efforts in an integrated and comprehensive method. To effect sustained neighborhood revitalization and resist gentrification, a strategic multi-faceted social action research approach is essential. To that end, the collaboration between the Warehouse and DSU will provide the Warehouse teens with numerous opportunities to visit a highly acclaimed HBCU. Reliable, clean transportation will overcome a major barrier to this treasured opportunity for the Warehouse teens.

The broader goals for Riverside include: (1) the development of a high-quality, mixed-income community of about 400 units to replace an aging 293-unit public housing project; (2) the enhancement and expansion of the Kingswood Community Center's Early Childhood education program; (3) the addition of a high school to the East Side Charter School's current pre-K through grade 8; and (4) the general expansion of the Kingswood Community Center facility to greatly increase access by Riverside residents to health and wellness services. While this particular grant has specific application to the Warehouse and its partners, it is part of this larger effort and it will help foster the resulting economic development.

**Attachments Checklist**

Check if attached	Score (DNREC use)	Attachment Description
<input type="checkbox"/>	N/A	<b>Mitigation Action Description:</b> 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 “ <b>Project Title, Mitigation Action Description.</b> ”
<input type="checkbox"/>		<b>NOx Emission Reduction:</b> Estimate the NOx emission reductions from the project in terms of dollar per ton of NOx using EPA’s Diesel Emission Quantifier found at <a href="https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq">https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq</a> . Attach a <u>separate</u> summary calculation worksheet generated by the DEQ for <u>each</u> vehicle or piece of equipment and label as “ <b>Project Title, NOx Emission Reduction.</b> ”
<input type="checkbox"/>		<b>Project Budget:</b> 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 “ <b>Project Title, Proposed Budget.</b> ”
<input type="checkbox"/>		<b>Proposed Project Location:</b> 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 “ <b>Project Title, Proposed Project Location.</b> ”
<input type="checkbox"/>		<b>Project Timeline:</b> 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 “ <b>Project Title, Project Timeline.</b> ”
<input type="checkbox"/>		<b>Ability to be Replicated Throughout the State:</b> 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 “ <b>Project Title, Replication.</b> ”
<input type="checkbox"/>		<b>Collaboration with Other Entities in the State:</b> 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 “ <b>Project Title, Collaboration.</b> ”
<input type="checkbox"/>		<b>Economic Development:</b> 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 “ <b>Project Title, Economic Development.</b> ”
<input 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

## Application Scoring Matrix

Project Award Criteria	Score	Score Possible
<p><b>Measurable, verifiable reduction in NOx emissions</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Projects must meet eligibility requirements of the VW Mitigation Plan</li> </ul>		Up to 30 points
<p><b>Project Budget</b></p> <ul style="list-style-type: none"> <li>-The proposed budget is thorough, robust, realistic, and cost effective.</li> <li>- The applicant must show a detailed budget with all cost shares explained.</li> </ul>		Up to 15 points
<p><b>Proposed Project Location</b></p> <ul style="list-style-type: none"> <li>- The project is sited near a major highway or transportation corridor, shipping route, or near a shipping logistics center.</li> <li>- This project will address an environmental justice (EJ) area or related location that receives a disparate proportion of environmental impacts.</li> <li>- The project avoids environmentally sensitive areas or areas containing critical habitats.</li> <li>-Priority will be given to projects in non-attainment and air quality maintenance areas.</li> </ul>		Up to 15 points
<p><b>Project Timeline</b></p> <p>The proposed project must define when the project will commence and will end.</p>		Up to 15 points
<p><b>Ability to be Replicated throughout the State</b></p> <ul style="list-style-type: none"> <li>- The proposed project has the ability to be replicated throughout the state.</li> </ul>		Up to 15 points
<p><b>Collaboration with other Entities in the State</b></p> <ul style="list-style-type: none"> <li>- The project includes collaborative efforts between the applicant and project team (an anchor fleet or fleets, utility/fuel provider, vehicle dealer, or manufacturer).</li> </ul>		Up to 10 points
<p><b>Economic Development</b></p> <ul style="list-style-type: none"> <li>- The project creates and/or retains local jobs for Delawareans.</li> <li>- The project serves as an economic development engine for local Delaware based companies.</li> </ul>		Up to 5 points
<p><b>Total Points</b></p>		<b>100 Maximum</b>





### **Continued from Page 3 - Warehouse Electric Bus Pilot, Mitigation Action Description**

At the same time, the two main barriers to social services like those offered by the Warehouse are access and awareness: if someone does not know a service exists, or knows it exists but is unable to get to it, they cannot take advantage of it. There is a thoughtful community engagement plan to create awareness, but the Warehouse has an urgent need for transportation to address the access barrier. Specifically, there is a need to bring teens to the Warehouse and to transport teens to other locations in the community, such as jobs or other teen-focused non-profit partners. While the Warehouse has access to a school bus that is powered by a late-model engine that does not have the benefit of modern environmental controls, a newer, more reliable, efficient, and environmentally-friendly electric bus with vehicle-to-grid (“V2G”) capabilities that will operate daily in these communities will greatly enhance the Warehouse initiative.

First, such a bus will provide measurable and verifiable reductions in NOx emissions, as detailed later in this application. For example, we estimate the reductions in NOx emissions to be .484 short tons, a 100% reduction. The reduction in PM2.5 is estimated at .008 short tons and equates to a 100% reduction. The result being measurable health benefits to the community and a cleaner environment for everyone. Importantly, the bus will also be used by our community partners at Kingswood Community Center and REACH Riverside Development Corporation. Specifically, Kingswood Community Center will use the bus to pick up children every morning and bring them to early learning activities and will also use the bus to transport its Senior Center population to events in the area. REACH Riverside will use the bus for community events outside the Riverside community. In short, an electric bus will dramatically reduce toxic emissions in the communities in which it travels every day, helping to improve health outcomes and reducing dangerous greenhouse gases.

Second, electric buses produce significantly less noise pollution, providing a quieter ride for the teens and seniors riding the buses and less noise for neighbors, which is particularly meaningful in the densely populated areas where this bus will operate. Third, providing a modern, environmentally friendly electric bus provides an important symbolic message that Delaware is investing in the future for this community. This is especially important in a low-income community such as Riverside, which has suffered disproportionately from environmental issues. Fourth, by replacing its current school bus with an electric version, the Warehouse would also contribute to raising the awareness level of members of the Riverside community of the benefits of electric transportation options. Finally, under the V2G approach, electric vehicles connected to the grid would be able to discharge energy back into the grid during peak hours as well as potentially offer a host of ancillary and value-added services.

Because of the collaborative approach of the Warehouse initiative, as detailed later in this application, utilizing a small portion of the VW settlement fund in this fashion allows a very broad swath of the non-profit community in Delaware to benefit from these funds. Additionally, many other teen-serving community partners in the area have their own space and do not need to physically occupy space within the Warehouse, but are eager to actively participate in the network being created. Transportation of teens between all the network partners is essential to the overall success of the Warehouse in revolutionizing the engagement of teens in Wilmington today. In short, the Warehouse is addressing three key concerns of teenagers: violence in the city, supporting academics, and promoting career readiness. Giving teens a place to go after school keeps them off the streets and out of trouble, and a diverse menu of recreational, educational, arts, career, and health programming crafted to meet teens’ interests should keep them coming back and help them grow into responsible young adults. Doing so in a clean and environmentally sustainable manner sends the message that their future and the future of their community is important.

**ATTACHMENT 1**  
**(NOT APPLICABLE)**

STATE OF DELAWARE  
Department of Natural Resources and Environmental Control

Attachment 2

**CONTRACT NO.: NAT19001-VWEMTFP TITLE: Volkswagen Environmental Mitigation Trust Fund project**  
**DEADLINE TO RESPOND: March 28, 2019 at 4:00 PM (local time)**

**NON-COLLUSION STATEMENT**

This is to certify that the undersigned Vendor has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal, and further certifies that it is not a sub-contractor to another Vendor who also submitted a proposal as a primary Vendor in response to this solicitation submitted this date to the State of Delaware, Department of Natural Resources and Environmental Control.

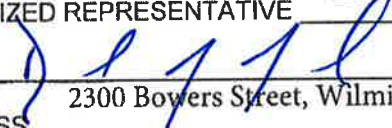
It is agreed by the undersigned Vendor that the signed delivery of this bid represents, subject to any express exceptions set forth at Attachment 3, the Vendor's acceptance of the terms and conditions of this solicitation including all specifications and special provisions.

**NOTE:** Signature of the authorized representative **MUST** be of an individual who legally may enter his/her organization into a formal contract with the State of Delaware, Department of Natural Resources and Environmental Control.

<input checked="" type="checkbox"/>	Corporation
<input type="checkbox"/>	Partnership
<input type="checkbox"/>	Individual

COMPANY NAME The Teen Warehouse, Inc. (Check one)

NAME OF AUTHORIZED REPRESENTATIVE David J. Ford

SIGNATURE  TITLE Chair

COMPANY ADDRESS 2300 Bowers Street, Wilmington, DE 19802

PHONE NUMBER (302) 540 -1698 FAX NUMBER N/A

EMAIL ADDRESS dford@reachriverside.org

FEDERAL E.I. NUMBER 82-3855379 STATE OF DELAWARE LICENSE NUMBER 82-3855379

COMPANY CLASSIFICATIONS:  CERT. NO.:	Certification type(s)	Circle all that apply
		Minority Business Enterprise (MBE)
	Woman Business Enterprise (WBE)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Disadvantaged Business Enterprise (DBE)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Veteran Owned Business Enterprise (VOBE)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Service Disabled Veteran Owned Business Enterprise (SDVOBE)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

[The above table is for informational and statistical use only.]

PURCHASE ORDERS SHOULD BE SENT TO: The Teen Warehouse, Inc.  
(COMPANY NAME)

ADDRESS 2300 Bowers Street, Wilmington, DE 19802

CONTACT David J. Ford

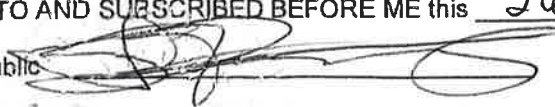
PHONE NUMBER (302) 540-1698 FAX NUMBER N/A

EMAIL ADDRESS dford@reachriverside.org

**AFFIRMATION:** Within the past five years, has your firm, any affiliate, any predecessor company or entity, owner, Director, officer, partner or proprietor been the subject of a Federal, State, Local government suspension or debarment?  
YES  NO  if yes, please explain \_\_\_\_\_

**THIS PAGE SHALL BE SIGNED, NOTARIZED AND RETURNED FOR YOUR BID TO BE CONSIDERED**

SWORN TO AND SUBSCRIBED BEFORE ME this 26 day of March, 2019

Notary Public  My commission expires 4-27-20

STATE OF DELAWARE  
Department of Natural Resources and Environmental Control

City of Wilmington

County of New Castle

State of DE

000000



STATE OF DELAWARE  
Department of Natural Resources and Environmental Control

**Attachment 4**

Contract No.: **NAT19001-VWEMTFP**  
Contract Title: **Volkswagen Environmental Mitigation Trust Fund Project**

**COMPANY PROFILE & CAPABILITIES FORM**

Suppliers are required to provide a reply to each question listed below. Your replies will aid the evaluation committee as part of the overall qualitative evaluation criteria of this Request for Proposal. Your responses should contain sufficient information about your company so evaluators have a clear understanding of your company's background and capabilities. Failure to respond to any of these questions may result in your proposal to be rejected as non-responsive.

<b>1.</b>	<b>Briefly describe how your Volkswagen Environmental Mitigation Trust Fund Project benefits the State of Delaware</b>
	The collaborative approach of the Warehouse Electric Bus Pilot is a win for the service community, as the organizations that serve Wilmington's young people are too often overwhelmed, under-resourced, and isolated – working in silos that limit their full capabilities. Their goal is to help youth thrive. The Warehouse is helping to make that happen, and by utilizing a small portion of the VW settlement fund in this fashion, a very broad swath of the non-profit community in Delaware will benefit from these funds. A critical component of the REACH Riverside strategy is a focus on a limited neighborhood area. Over time, however, the REACH Riverside model contemplates a spillover of benefits to a wider neighborhood from private investment that is attracted to the area. Ultimately, other neighborhoods could replicate the business model developed by REACH Riverside for this project. In addition, the idea of multiple non-profits utilizing a common electric bus for their transportation needs is something that warrants replication in other areas of the State.
<b>2.</b>	<b>Briefly describe your company's organization, structure, and philosophy.</b>
	The Warehouse is part of a larger revitalization effort in the Riverside neighborhood, led by the nationally renowned Purpose Built Communities, a non-profit consulting firm that works side-by-side with community leaders, residents, and others to plan and implement holistic community revitalization efforts. The Warehouse will focus on teen services and will serve not only Riverside but also the wider area of east and north Wilmington and indeed, the entire city. The mission of the Warehouse is to create a collaborative culture to revolutionize teen engagement in Wilmington, with the vision of developing confident, competent, and courageous young adults ready to take the next step in their lives and to stand in opposition to the culture of poverty, violence, and environmental injustice they currently encounter on a regular basis.
<b>3.</b>	<b>Briefly describe your ability to perform your Volkswagen Environmental Mitigation Trust Fund Project in the allotted time.</b>
	As detailed in the Project Timeline section of the Application, the Warehouse is prepared to perform the Warehouse Electric Bus Pilot in the time allotted by the RFP. The RFP provides that the contract awarded would be valid for a one-year period from August 1, 2019 through August 30, 2020. Under the proposed Project Timeline, the new electric bus will be in operation by July 2020.

STATE OF DELAWARE  
Department of Natural Resources and Environmental Control

**Attachment 5**

Contract No.: **NAT19001-VWEMTFP**  
Contract Title: **Volkswagen Environmental Mitigation Trust Fund Project**

**CONFIDENTIALITY FORM**

By checking this box, the Vendor acknowledges that they are not providing any information they declare to be confidential or proprietary for the purpose of production under 29 Del. C. ch. 100, Delaware Freedom of Information Act.

<b>Confidentiality and Proprietary Information</b>

**Note: Vendor may use additional pages as necessary, but the format shall be the same as provided above.**

STATE OF DELAWARE  
Department of Natural Resources and Environmental Control

Attachment 6

Contract No.: NAT19001-VWEMTFP  
Contract Title: Volkswagen Environmental Mitigation Trust Fund Project

**BUSINESS REFERENCES FORM**

List a minimum of three business references, including the following information:

- Business Name and Mailing address
- Contact Name and phone number
- Number of years doing business with
- Type of work performed

Please do not list any State Employee as a business reference. If you have held a State contract within the last 5 years, please list the contract(s).

1.	<b>Contact Name &amp; Title:</b>	There du Pont, Chief Executive Officer
	<b>Business Name:</b>	Longwood Foundation, Inc.
	<b>Address:</b>	100 West 10th Street, Suite 1109 Wilmington, DE 19801
	<b>Email:</b>	theredp@aol.com
	<b>Phone # / Fax #:</b>	(302) 683-8200
	<b>Current Vendor (YES or NO):</b>	No
	<b>Years Associated &amp; Type of Work Performed:</b>	3 years, deeply involved with community revitalization efforts underway in NE Wilmington and financial supporter
2.	<b>Contact Name &amp; Title:</b>	Catherine Lindroth, President & Chief Executive Officer
	<b>Business Name:</b>	Social Contract, LLC
	<b>Address:</b>	1313 Innovation Center 1313 N. Market Street, Wilmington, DE 19801
	<b>Email:</b>	cat@socialcontract.org
	<b>Phone # / Fax #:</b>	(302) 354-8469
	<b>Current Vendor (YES or NO):</b>	Yes
	<b>Years Associated &amp; Type of Work Performed:</b>	3 years, providing collective impact consulting services
3.	<b>Contact Name &amp; Title:</b>	Michael S. Purzycki, Mayor
	<b>Business Name:</b>	City of Wilmington
	<b>Address:</b>	Louis L. Redding City/County Building 800 N. French Street, 9th Floor, Wilmington, DE 19801
	<b>Email:</b>	mspurzycki@wilmingtonde.gov
	<b>Phone # / Fax #:</b>	(302) 576-2100
	<b>Current Vendor (YES or NO):</b>	No
	<b>Years Associated &amp; Type of Work Performed:</b>	5 years, deeply involved with community revitalization efforts underway in NE Wilmington and financial supporter

**STATE OF DELAWARE PERSONNEL MAY NOT BE USED AS REFERENCES.**

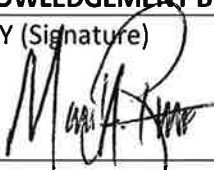


State of Delaware

Department of Natural Resources and Environmental Control

Attachment 7

Subcontractor Information Form

PART 1 – STATEMENT BY PROPOSING VENDOR		
1. Contract No.	2. Proposing Vendor Name	3. Mailing Address
4. SUBCONTRACTOR	Blue Bird Corporation 3920 Arkwright Road, Suite 200, Macon, GA 31210	
a. NAME BlueBird - Marc Riccio	4c. Company OSD Classification: N/A  Certificate Number: N/A	
a. Mailing Address 3920 Arkwright Road Suite 200 Macon, GA 31210	4d. Women Business Enterprise	Yes <input type="radio"/> No <input checked="" type="radio"/>
	4e. Minority Business Enterprise	Yes <input type="radio"/> No <input checked="" type="radio"/>
	4f. Disadvantaged Business Enterprise	Yes <input type="radio"/> No <input checked="" type="radio"/>
	4g. Veteran Owned Business Enterprise	Yes <input type="radio"/> No <input checked="" type="radio"/>
	4h. Service Disabled Veteran Owned Business Enterprise	Yes <input type="radio"/> No <input checked="" type="radio"/>
5. DESCRIPTION OF WORK BY SUBCONTRACTOR Original equipment manufacturer (OEM) of traditional and alternative fuel school buses.		
6a. NAME OF PERSON SIGNING Marc A. Riccio	7. BY Marc A. Riccio	
6b. TITLE OF PERSON SIGNING Alternative Fuels Manager – AK, Northeast & Canada Region	8. DATE SIGNED 3/27/2019	
PART II – ACKNOWLEDGEMENT BY SUBCONTRACTOR		
9a. NAME OF PERSON SIGNING Marc A. Riccio	10. BY (Signature) 	
9b. TITLE OF PERSON SIGNING Alternative Fuels Manager – AK, Northeast & Canada Region	11. DATE SIGNED 3/27/2019	

Use a separate form for each subcontractor

## Emission Results and Health Benefits for Project: Kingswood

### Emission Results

Here are the combined results for all groups and upgrades entered for your project.<sup>1</sup>

<u>Annual Results (short tons)<sup>2</sup></u>	NO <sub>x</sub>	PM2.5	HC	CO	CO <sub>2</sub>	Fuel <sup>3</sup>
Baseline for Upgraded Vehicles	0.097	0.008	0.013	0.048	15.3	1,360
Amount Reduced After Upgrades	0.097	0.008	0.013	0.048	15.3	1,360
Percent Reduced After Upgrades	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

<u>Lifetime Results (short tons)<sup>2</sup></u>	NO <sub>x</sub>	PM2.5	HC	CO	CO <sub>2</sub>	Fuel <sup>3</sup>
Baseline for Upgraded Vehicles	0.484	0.040	0.065	0.240	76.5	6,800
Amount Reduced After Upgrades	0.484	0.040	0.065	0.240	76.5	6,800
Percent Reduced After Upgrades	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

### Lifetime Cost Effectiveness (\$/short ton reduced)

Capital Cost Effectiveness <sup>4</sup> (unit & labor costs only)	\$816,699	\$9,958,088	\$6,070,360	\$1,646,214	\$5,162	
---	-----------	-------------	-------------	-------------	---------	--

<b><u>Annual Results (short tons)<sup>2</sup></u></b>	<b>NO<sub>x</sub></b>	<b>PM2.5</b>	<b>HC</b>	<b>CO</b>	<b>CO<sub>2</sub></b>	<b>Fuel<sup>3</sup></b>
<b>Total Cost</b>						
Effectiveness <sup>4</sup> (includes all project costs)	\$827,299	\$10,087,332	\$6,149,146	\$1,667,580	\$5,229	

<sup>1</sup> Emissions from the electrical grid are not included in the results.

<sup>2</sup> 1 short ton = 2000 lbs.

<sup>3</sup> In gallons; fuels other than ULSD have been converted to ULSD-equivalent gallons.

<sup>4</sup> Cost effectiveness estimates include only the costs which you have entered.

**Remaining Life**      **Eastside: School Bus | School Buses**                      **5 years**

*Note: Your session will time out after 30 minutes of inactivity.  
For best results, do not use your browser's "back" arrow.*

## Emission Results and Health Benefits for Project: Kingswood

### Health Benefits

Note: For comparison purposes only. The Health Benefits module data is out of date and will be updated when resources become available.

This section estimates the health benefits resulting from your project's reduction of PM 2.5, based on the inputs you have entered.

You may select up to five counties where the emission reductions will take place and allocate a percentage of the reductions to each of the counties selected. The percentages must total 100 percent.

State	County	Percent
Delaware ▼	New Castle ▼	100
Select State... ▼	Select County. ▼	
Select State... ▼	Select County. ▼	
Select State... ▼	Select County. ▼	
Select State... ▼	Select County. ▼	
<b>Total</b>		100

## Results

The table below shows the estimated PM2.5 reductions and health benefits by county and as a total for your project. Results are based on the inputs you have entered.

Annual Benefits represent the dollar value of health benefits resulting from reduced exposure to PM2.5. These benefits include the reduction of premature mortality, chronic bronchitis, asthma attacks, non-fatal heart attacks, and other health problems. The dollar values are based on studies used by EPA when estimating the health benefits of environmental rules.

Annualized Costs are based on the unit and labor costs you have entered. They have been annualized over the remaining life of the upgraded fleet.

### Health Benefits Results

<b>County and State</b>	<b>Annual Diesel PM2.5 Reduction (short tons)</b>	<b>Annual Benefits</b>	<b>Annualized Unit &amp; Labor Costs</b>
<b>New Castle, Delaware</b>	0.008	\$11,000	-
<b>Total</b>	0.008	\$11,000	\$86,000

# Delaware

Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "THE TEEN WAREHOUSE, INC." IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWELFTH DAY OF DECEMBER, A.D. 2018.

AND I DO HEREBY FURTHER CERTIFY THAT THE AFORESAID CORPORATION IS AN EXEMPT CORPORATION.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "THE TEEN WAREHOUSE, INC." WAS INCORPORATED ON THE TWELFTH DAY OF DECEMBER, A.D. 2017.



6658256 8300C

SR# 20188099897

You may verify this certificate online at [corp.delaware.gov/authver.shtml](http://corp.delaware.gov/authver.shtml)

A handwritten signature in black ink, appearing to read "JBULLOCK", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Authentication: 204079125

Date: 12-12-18

AGREEMENT BETWEEN THE DEPT. OF EDUCATION AND VENDOR

Agreement made this 17<sup>th</sup> day of December in the year Two Thousand and Nineteen (2019) between the Department of Education and Vendor:

i.g. Burton, Inc.  
793 Bay Road  
Milford, DE 19963

for the following school buses on ITB DOE #2020-07:

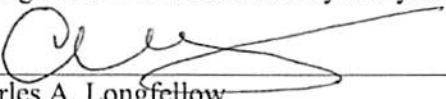
UNIT	TYPE	STATE SHARE	DISTRICT	DISTRICT SHARE	TOTAL COST PER UNIT
11-12	72pass./D/A	\$100,648.00 ea.	Capital	\$2,054.00 ea.	\$102,702.00
13	72 pass. D/L/A	\$102,557.00 ea.	Capital	\$117.00 ea.	\$102,674.00
37-41	84 pass. D	\$93,235.00 ea.	Colonial	\$916.00 ea.	\$94,151.00
42	24 pass. D/L/A	\$79,990.00 ea.	Red Clay	\$855.00 ea.	\$80,845.00
45-52	72 pass. P/A	\$102,835.00 ea.	Red Clay	\$4,091.00 ea.	\$106,926.00

The Department of Education and Vendor agree to the following:

1. The contract consists of this Agreement and the specifications in ITB DOE #2020-07.
2. The work to be performed shall not commence or materials to be supplied shall not be ordered until the vendor receives the State of Delaware purchase order(s) to cover the cost of this contract.
3. All work shall be completed and/or materials delivered by the Vendor on or before August 15, 2020

This Agreement executed the day and year first written above.

Handwritten initials: *CDL*  
*MCB*

  
\_\_\_\_\_  
Charles A. Longfellow  
Associate Secretary, Operations Support

12-17-19  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Vendor

12/17/19  
\_\_\_\_\_  
Date

51-0102421  
\_\_\_\_\_  
Federal Employer's Identification Number

1989012552  
\_\_\_\_\_  
Delaware Business License Number

AGREEMENT BETWEEN THE DEPT. OF EDUCATION AND VENDOR

S20-608

Agreement made this 17<sup>th</sup> day of December in the year Two Thousand and Nineteen (2019) between the Department of Education and Vendor:

Wolfington Body Co., Inc.  
 PO Box 218  
 Exton, PA 19341

for the following school buses on ITB DOE #2020-07

UNIT	TYPE	STATE SHARE	DISTRICT	DISTRICT SHARE	TOTAL COST PER UNIT
1	72 pass.P/L/A	\$103,107.00 ea.	Caesar Rodney	\$2,439.00 ea.	\$105,546.00
2-4	48 pass. D/A	\$85,649.00 ea.	Cape Henlopen	\$947.00 ea.	\$86,596.00
5-8	48 pass. D/L/A	\$88,776.00 ea.	Cape Henlopen	\$947.00 ea.	\$89,723.00
9-10	72 pass.D	\$74,298.00 ea.	Cape Henlopen	\$723.00 ea.	\$75,021.00
14-22	36 pass. D/L/A	\$87,129.00 ea.	Christina	\$582.00 ea.	\$87,711.00
23-31	48 pass. D/L/A	\$90,971.00 ea.	Christina	\$657.00 ea.	\$91,628.00
32-35	72 pass. D	\$74,906.00 ea.	Christina	\$257.00 ea.	\$75,163.00
36	72 pass. D	\$74,906.00 ea.	Colonial	\$873.00 ea.	\$75,779.00
43-44	48 pass. P/L/A	\$96,625.00 ea.	Red Clay	\$1,123.00 ea.	\$97,748.00
53	72 pass. D	0.00	Woodbridge	\$75,056.00 ea.	\$75,056.00

The Department of Education and Vendor agree to the following:

1. The contract consists of this Agreement and the specifications in ITB DOE #2020-07
2. The work to be performed shall not commence or materials to be supplied shall not be ordered until the vendor receives the State of Delaware purchase order(s) to cover the cost of this contract.
3. All work shall be completed and/or materials delivered by the Vendor on or before August 15, 2020.

This Agreement executed the day and year first written above.

*CL*  
 \_\_\_\_\_  
 Charles A. Longfellow  
 Associate Secretary, Operations Support  
 Date 12-17-19

*[Signature]*  
 \_\_\_\_\_  
 Vendor  
 Date 12/18/19  
23-1230582  
 Federal Employer's Identification Number  
1989003913  
 Delaware Business License Number



AGREEMENT BETWEEN THE DEPT. OF EDUCATION AND VENDOR

S20-68

Agreement made this 17<sup>th</sup> day of December in the year Two Thousand and Nineteen (2019) between the Department of Education and Vendor:

Wolfington Body Co., Inc.  
 PO Box 218  
 Exton, PA 19341

for the following school buses on ITB DOE #2020-07

UNIT	TYPE	STATE SHARE	DISTRICT	DISTRICT SHARE	TOTAL COST PER UNIT
1	72 pass.P/L/A	\$103,107.00 ea.	Caesar Rodney	\$2,439.00 ea.	\$105,546.00
2-4	48 pass. D/A	\$85,649.00 ea.	Cape Henlopen	\$947.00 ea.	\$86,596.00
5-8	48 pass. D/L/A	\$88,776.00 ea.	Cape Henlopen	\$947.00 ea.	\$89,723.00
9-10	72 pass.D	\$74,298.00 ea.	Cape Henlopen	\$723.00 ea.	\$75,021.00
14-22	36 pass. D/L/A	\$87,129.00 ea.	Christina	\$582.00 ea.	\$87,711.00
23-31	48 pass. D/L/A	\$90,971.00 ea.	Christina	\$657.00 ea.	\$91,628.00
32-35	72 pass. D	\$74,906.00 ea.	Christina	\$257.00 ea.	\$75,163.00
36	72 pass. D	\$74,906.00 ea.	Colonial	\$873.00 ea.	\$75,779.00
43-44	48 pass. P/L/A	\$96,625.00 ea.	Red Clay	\$1,123.00 ea.	\$97,748.00
53	72 pass. D	0.00	Woodbridge	\$75,056.00 ea.	\$75,056.00

The Department of Education and Vendor agree to the following:

1. The contract consists of this Agreement and the specifications in ITB DOE #2020-07
2. The work to be performed shall not commence or materials to be supplied shall not be ordered until the vendor receives the State of Delaware purchase order(s) to cover the cost of this contract.
3. All work shall be completed and/or materials delivered by the Vendor on or before August 15, 2020.

This Agreement executed the day and year first written above.

*CL*  
 \_\_\_\_\_  
 Charles A. Longfellow  
 Associate Secretary, Operations Support  
 Date 12-17-19

*[Signature]*  
 \_\_\_\_\_  
 Vendor  
 Date 12/18/19  
 \_\_\_\_\_  
 Federal Employer's Identification Number 23-1230582  
 \_\_\_\_\_  
 Delaware Business License Number 1989003913

## **ATTACHMENT E**

### **DERA Option**

The State of Delaware FY2019 Clean Diesel Work plan is attached. The State of Delaware is seeking Volkswagen Environmental Mitigation Funds as a DERA-Option 10 cost share for one school bus replacement under the FY2019 work plan with the Teen Warehouse. This replacement will be an electric bus and will include the electric vehicle supply equipment. The State of Delaware is additionally seeking Volkswagen Environmental Mitigation Funds for 24 state-owned school buses to be replaced as clean diesel or propane.

**FISCAL YEAR 2019**

**STATE CLEAN DIESEL GRANT PROGRAM**

**WORK PLAN AND BUDGET NARRATIVE – State of Delaware**

---

\*\*\*\*

**SUMMARY PAGE**

**Project Title: Solid Waste Collection Vehicles & School Bus & Excavator Replacements**

**Project Manager and Contact Information**

**Organization Name: Department of Natural Resources and Environmental Control**

**Project Manager: Deanna M. Cuccinello**

**Mailing Address: 100 W. Water Street Dover, DE 19904**

**Phone: 302-739-9402**

**Fax: 302-739-3106**

**Email: Deanna.morozowich@delaware.gov**

**Project Budget Overview:**

	<b>FY 2019</b>
EPA Base Allocation	\$315,793.00
State or Territory Voluntary Matching Funds (if applicable)	\$361,675.00
EPA Match Incentive (Bonus) (if applicable)	\$157,897.00
Mandatory Cost-Share	\$2,782,381.00
<b>TOTAL Project Cost</b>	<b>\$3,617,746.00</b>
Other Leveraged Funds	-

**Project Period**

October 1, 2019 – September 30, 2021

## **Summary Statement**

The FY2019 Diesel Emission Reduction Act grant funds will be used to replace:

- 10 older diesel solid waste collection vehicles around the state with Waste Management,
- 1 school bus with The Teen Warehouse as an electric school bus in Wilmington, and
- 1 excavator owned and operated by the Division of Fish and Wildlife for Department of Natural Resources and Environmental Control.

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

Clean diesel project information can be found on the following page:

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

\*\*\*\*

## **SCOPE OF WORK**

The projects presented in the FY2019 work plan will be administered by the Delaware Department of Natural Resources and Environmental Control – Division of Air Quality staff and the following project partners: Waste Management, Inc., the Teens Warehouse, the Division of Fish & Wildlife. The purpose of these projects is to reduce diesel emissions in the State of Delaware through the replacement of 10 diesel solid waste collection vehicles as compressed natural gas (CNG), a diesel school bus as electric school bus, and a excavator replacement.

## **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 (2014) below compares emissions (NOx, PM, SO2) of Non-Road Equipment with the entire Non-Road Sector (NR Equipment, Aircraft, Locomotives, and Commercial Marine Vessels).

TABLE 1 STATEWIDE EMISSION INVENTORY (2014)					
STATEWIDE ANNUAL	VOC	NOx	PM2.5-PRI	SO2	NH3
NONROAD Equipment	4,303.32	3,677.64	342.10	8.97	6.14
Aircraft	375.41	756.87	53.61	72.38	NA
Commercial Marine Vessels	107.72	2,795.64	79.99	466.74	0.82
Locomotives	21.32	406.09	13.07	4.24	0.19
Total	4,807.77	7,636.24	488.77	552.33	7.15

**VEHICLES AND TECHNOLOGIES:**

Waste Management, Inc. proposes to replace ten diesel on-road solid waste collection vehicles with ten near-zero-emission vehicles that operate on compressed natural gas (CNG). The existing waste collection vehicles are equipped with engines between model years 1992-2009. Waste Management Inc. will deploy the new vehicles in Wilmington (New Castle County) and Laurel (Sussex County) and operate them on local refuse collection and recycling routes. The project will directly support the Department's goals to improve air quality and reduce diesel emissions. The solid waste collection vehicles are noted in Table 2.

TABLE 2 – Waste Management Equipment to be Replaced in 2019.				
Fuel	Model Year	Make	Model	VIN
D	2005	Mack	MR 688S	1M2K195C55M026974
D	2006	Mack	MR 688S	1M2K195C36M029633
D	2007	Mack	MR 688S	1M2K195C67M034357
D	2007	Mack	MR 688S	1M2K195C47M039234
D	2009	Peterbilt	ISM	3BPZL00X49F718905
D	2006	Mack	AI 350	1M2AG11C06M039456
D	2006	Mack	AI 350	1M2AG11C96M034868
D	2006	Mack	AI 350	1M2AG11C66M035508
D	2007	Freightliner	M2112	1FVHC7C47HX47871
D	2007	Freightliner	M2106	1FVHC7C47HX47878

Additionally, transportation providers in Delaware are seeking cleaner-burning alternatives to diesel and are motivated by saving fuel costs and reducing school children’s exposure to cancer-

causing and smog forming pollution through the replacement of old school buses with new lower emission diesel and propane school buses. Transportation providers are committed to providing Delaware schools with reliable, innovative, and efficient green transportation solutions. The following is a list of the transportation providers and the buses that are being considered for replacement in FY2019:

- Teens Warehouse is a nonprofit activity center for children in the City of Wilmington. They are replacing 1 diesel bus with an electric school bus.

TABLE 3 – Teens Warehouse Equipment to be Replaced in 2019.				
Fuel	Model Year	Manufacturer	Chassis	VIN
D	2006	International	International	4DRBUAFP76B983310

Finally, the Division of Fish and Wildlife would like to replace an aging excavator. The information of the excavator is provided below.

TABLE 4 – Division of Fish and Wildlife to be Replaced in 2019.				
Fuel	Model Year	Manufacturer	Engine	Serial
D	2003	Kobelco SK160LC	4D34- TLUZA	YM03-U0626

**ROLES AND RESPONSIBILITIES:**

DERA and Volkswagen Environmental Mitigation funds will be used on a reimbursement basis. The Division of Air Quality will issue a contract to each project partner that requires each of them to administer the entire replacement project, purchase order, and invoice processing, as well as, overseeing the delivery of the new equipment and scrapping and destruction of the old. The contract will also provide a process by which the Department will release funds for the partial purchase of the replacement equipment. Any funds remaining from the FY2019 DERA grant will be returned to the EPA.

**TIMELINE AND MILESTONES:**

- October 2019 – DERA award Granted
- November 2019 – 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, as well as oversee the replacement and scrapping requirements. The contracts will provide a process by which the Department will release the funds to purchase and replace the equipment.
- February/August 2020– New equipment will be purchased.
- July/September 2020 – Existing equipment will be scrapped and destroyed.
- September 2021 – Each equipment owner/transportation provider will supply fuel usage data to the Department.

**DERA PROGRAMMATIC PRIORITIES:**

The solid waste collection vehicles, school bus replacement project, and excavator replacement project meets all the programmatic goals and priorities set forth under DERA. Diesel exhaust from solid waste collection vehicles, school buses, and excavators contain significant levels of fine particulate matter. 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 4 Projected Emission Reductions provides the emissions reductions (in shorts tons) and cost effectiveness for the solid waste collection vehicles, school bus replacement, and the excavator replacement.

TABLE 4 PROJECTED EMISSION REDUCTIONS			
Annual Emissions Reduced (tons/yr)	Solid Waste Collection Vehicles (qty. 10)	School Bus (qty. 1)	Excavator (qty. 1)
NOx	1.114	0.097	0.482
PM	0.145	0.008	0.035
HC	0.139	0.013	0.043
CO	0.679	0.048	0.174
Lifetime Emissions Reduced (short tons)			
NOx	17.527	0.484	0.462
PM	0.848	0.040	0.034
HC	0.823	0.065	0.034
CO	3.332	0.240	0.168
Lifetime Cost Effectiveness (\$/ton)			
NOx	\$317,337.31	\$816,699.00	\$1,353,045.00
PM	\$69,361,461.17	\$9,958,088.00	\$18,303,798.00
HC	\$19,321,323.57	\$6,070,360.00	\$18,418,487.00
CO	\$4,499,033.12	\$1,646,214.00	\$3,729,283.00

**SUSTAINABILITY OF THE PROGRAM:**

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**

**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	\$156,250.00	\$468,750.00	-	-	\$625,000.00
5. Supplies	-	-	-	-	-
6. Contractual	\$316,019.00	\$2,313,631.00	\$361,675.00		\$2,991,325.00
7. Other	\$1421.00	-	-	-	\$1421.00
<b>8. Total Direct Charges (sum 1-7)</b>	\$473,690.00	\$2,782,381.00	\$361,675.00		\$3,617,746.00
9. Indirect Charges	-	-	-	-	-
<b>10. Total (Indirect + Direct)</b>	\$473,690.00	\$2,782,381.00	\$361,675.00		\$3,617,746.00
11. Program Income	-	-	-	-	-
12. Other Leveraged Funds*	-	-	-	-	-

\*Do not include Other Leveraged Funds on SF-424 or SF-424A

**Explanation of Budget Framework**

- **Personnel – No grant funds used.**
- **Fringe Benefits – No grant funds used.**
- **Travel – No grant funds used.**
- **Supplies – No grant funds used.**
- **Equipment – The following equipment will be purchased/replaced:**  
 The Division of Fish and Wildlife will be replacing a 2003 Kobelco SK-160 excavator. The total cost of replacement is \$625,000. The DERA grant will cover 25% replacement cost and the Department of Natural Resources will cover 75% as indicated in Table 5.



TABLE 5 - FY2019 EQUIPMENT COSTS						
Project Partner	Identification	EPA	EPA Bonus	Volkswagen Mitigation Funds	Project Partner	Total
Fish & Wildlife	Kobelco SK-160	\$156,250.00	-	-	\$468,750.00	\$625,000.00

- **Contractual - Identify each proposed contract and specify its purpose and estimated cost.**

The Department will issue a contract to each project partner that requires each of them to administer the entire replacement project. The contract will also provide a process by which the Department will release funds for the replacement of equipment. The total cost of the solid waste collection units is \$2,595,729. DERA grant funds and Volkswagen Mitigation funds will be used to replace 19.26% (\$500,000.00) of the total costs of the replacement vehicles. The total cost of replacement for the electric school bus and the required infrastructure is \$394,875.00. The Teens Warehouse is to receive a 45% cost share using Volkswagen Mitigation Trust Funds (\$177,693.75) for their school bus replacement and infrastructure.

TABLE 6 - FY2019 CONTRACTUAL COSTS						
Project Partner	Existing VIN	EPA	EPA Bonus	Volkswagen Mitigation Funds	Project Partner	Total
Waste Management Inc.	1M2K195C55M026974	\$50,000.00	-	-	\$190,988.19	\$240,988.19
	1M2K195C36M029633	\$50,000.00	-	-	\$190,988.19	\$240,988.19
	1M2K195C67M034357	\$50,000.00	-	-	\$190,988.19	\$240,988.19
	1M2K195C47M039234	9,543.00	-	\$40,457.00	\$190,988.19	\$240,988.19
	3BPZL00X49F718905	-	\$50,000.00		\$190,988.19	\$240,988.19
	1M2AG11C06M039456	-	\$50,000.00		\$232,617.19	\$282,617.19
	1M2AG11C96M034868	-	\$50,000.00		\$232,617.19	\$282,617.19
	1M2AG11C66M035508	-	\$6,476.00	\$43,524.00	\$221,718.00	\$271,718.00
	1FVHC7C47HX47871	-		\$50,000.00	\$221,718.00	\$271,718.00
	1FVHC7C47HX47878			\$50,000.00	\$232,838.00	\$282,838.00
Teens Warehouse	4DRBUAFP76B983310			\$168,693.75	\$206,181.25	\$374,875.00
	Infrastructure – Electric bus			\$9,000.00	\$11,000.00	\$20,000.00
Total		<b>159,543.00</b>	<b>\$156,476.00</b>	<b>\$361,675.00</b>	<b>\$2,313,630.00</b>	<b>\$2,991,325.00</b>

- **Other – Audit Fees**

TABLE 7 - FY2019 OTHER COSTS					
Category	EPA Base	EPA Bonus	Volkswagen Mitigation Funds	Project Partner	Total
Total Other Charges	-	-	-	-	-
Audit of Grant (0.003% of EPA Funding) = \$1421	-	\$1,421.00	-	-	-
<b>Total</b>	-	<b>\$1,421.00</b>	-	-	<b>\$1,421.00</b>

- **Indirect Charges – No grant funds 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 also provide Volkswagen Environmental Mitigation Funds that exceed the EPA base funding (\$316,019) 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.



**State of Delaware**

**Department of Natural Resources and  
Environmental Control**

**Volkswagen Environmental Mitigation Plan**

**February 2020**

## **Table of Contents**

I. BACKGROUND .....	1
II. OVERVIEW, OBJECTIVES AND FUNDING PRIORITIES .....	2
III. PHASED FUNDING APPROACH AND ELIGIBLE APPLICANTS .....	4
IV. DETAILED SUMMARY OF THREE-PHASED SPENDING APPROACH .....	7
Phase 1 - School Bus Replacement Program: .....	7
Phase 1 - Program Requirements: .....	8
Phase 2 - Competitive RFP Program: .....	10
Environmental Benefits: .....	11
Diesel Emission Reduction Act (DERA): .....	15
Phase 2 Program Requirements: .....	16
Volkswagen RFP Scoring Matrix: .....	17
Phase 3 - A Hybrid Program: .....	20

## **List of Figures**

<b>Figure 1 - Mobile NOx Sources for Delaware (Source 2014 NEI v1) .....</b>	<b>7</b>
--	----------

## **List of Tables**

<b>Table 1 - Tentative Timeline of Events .....</b>	<b>5</b>
<b>Table 2 - Percentage of Disparately Impacted Students by School District .....</b>	<b>9</b>
<b>Table 3 - Percentage of Disparately Impacted Students by Charter School .....</b>	<b>10</b>
<b>Table 4 - Cost Shares for Eligible Mitigation Actions .....</b>	<b>14</b>
<b>Table 5 - VW Settlement RFP Award Criteria .....</b>	<b>18</b>

---

## 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 funding<sup>1</sup>.

---

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

---

In addition to projects that reduce NO<sub>x</sub> 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<sub>x</sub> 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,<sup>2</sup> this Proposed Environmental Mitigation Plan specifically describes:

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

---

<sup>2</sup> 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 Decree<sup>3</sup>.

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.

---

<sup>3</sup> <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 three-phase 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 three phases of funding are:

- **Phase 1: \$3,225,560.99 (2018-2024)** – DNREC proposes to replace old diesel school buses with new cleaner school buses over a six 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: Up to \$6.0 million (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.

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**

<b>Event</b>	<b>Time Frame</b>
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 Mitigation Plan – Phase 3	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 initiates Phase 1 – year 4 projects	Quarter 1 2022*
Delaware finalizes Phase 1 – year 4 projects	Quarter 4 2022*
Delaware initiates Phase 1 – year 5 projects	Quarter 1 2023*
Delaware finalizes Phase 1 – year 5 projects	Quarter 4 2023*
Delaware initiates Phase 1 – year 6 projects	Quarter 1 2024*
Delaware finalizes Phase 1 – year 6 projects	Quarter 4 2024*

\*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 website<sup>4</sup>.

---

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

## IV. SUMMARY OF THREE-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<sub>x</sub> 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<sub>x</sub>), as shown in Figure 1.

Research shows NO<sub>x</sub> emissions will be reduced by 11 percent just by replacing a diesel school bus with a new propane school bus<sup>5</sup>.

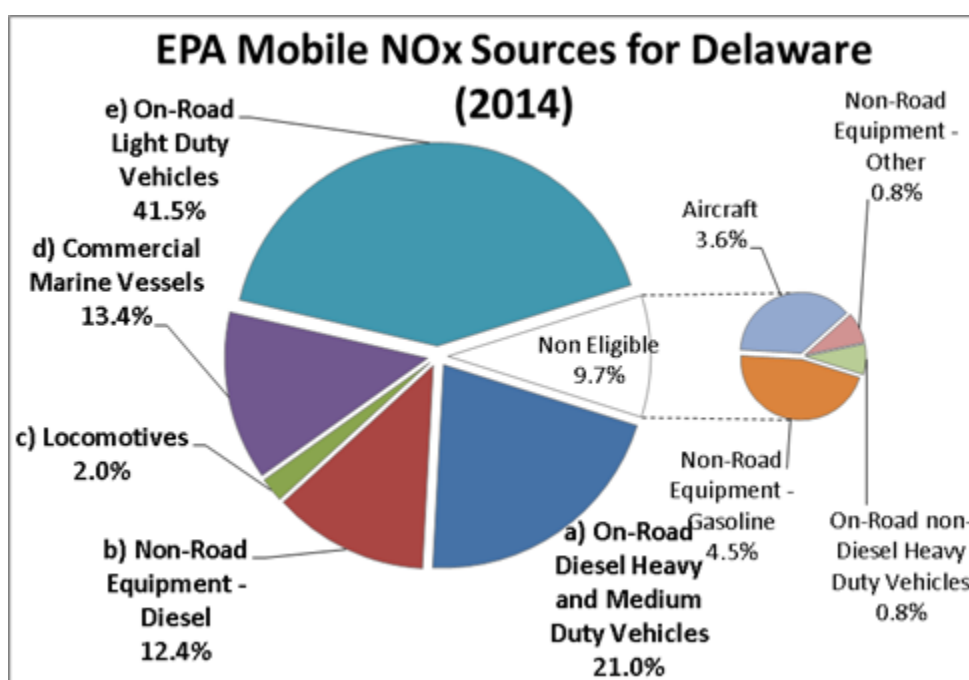


Figure 1 - Mobile NO<sub>x</sub> Sources for Delaware (Source 2014 NEI v1)

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

---

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 adults<sup>6</sup>.

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.

### **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;

---

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

- 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 Table 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**

<b>County</b>	<b>School District</b>	<b>Disparately Impacted (%)</b>
New Castle County	Appoquinimink	13.2
	Brandywine	29.8
	Christina	<b>42.9</b>
	Colonial	39.8
	New Castle Co. Vo-Tech	27.6
	Red Clay	34.1
	Smyrna	24.9
Kent County	Caesar Rodney	30.5
	Capital	<b>48.9</b>
	Lake Forest	<b>39.4</b>
	Milford	<b>41.2</b>
	Polytech Vo-Tech	17.0
Sussex County	Cape Henlopen	29.0
	Delmar	14.2
	Indian River	36.0
	Laurel	<b>47.4</b>
	Seaford	<b>47.7</b>
	Sussex Technical	16.6
	Woodbridge	<b>41.9</b>

**Table 3 - Percentage of Disparately Impacted Students by Charter School**

<b>County</b>	<b>Charter School</b>	<b>Disparately Impacted (%)</b>
New Castle County	Academia Antonia Alonso	<b>57.3</b>
	Charter School of New Castle	<b>51.4</b>
	Delaware Academy of Public Safety and Security	39.9
	Delaware Design-Lab High School	29.9
	East Side Charter School	<b>79.3</b>
	First State Montessori Academy	11.6
	Freire Charter School	<b>48.9</b>
	Gateway Lab School	<b>42.3</b>
	Great Oaks Charter School	<b>55.8</b>
	Kuumba Academy Charter School	<b>62.2</b>
	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	<b>73.4</b>	
Kent County	Academy of Dover	<b>67.8</b>
	Campus Community Charter School	<b>40.0</b>
	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

---

actions<sup>7</sup>. 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.

---

<sup>7</sup> 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<sub>x</sub>, PM<sub>2.5</sub>, GHGs such as CO<sub>2</sub> 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<sub>x</sub>:<sup>8</sup>

- Heavy duty highway vehicles may provide up to a 96% reduction in NO<sub>x</sub> 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<sub>x</sub> emissions per engine,
- In locomotives, replacing the oldest (Tier 0) engine with the newest (Tier 4) engine may provide up to an 89% NO<sub>x</sub> reduction per engine,

---

<sup>8</sup> 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)<sup>9</sup> grant. Cost shares identified in **Table 4** are based on the FY2017 State Clean Diesel Program Guide<sup>10</sup>.

---

<sup>9</sup> 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.

<sup>10</sup> 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 laws<sup>11</sup>. Any unspent funds remaining at the end of Phase 2 will be rolled into Phase 3.

### **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

<sup>11</sup> 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 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 phases 2 and 3 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><b>Measurable, verifiable reduction in NOx emissions</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Projects must meet eligibility requirements of Appendix D-2 of the VW Mitigation Plan</li> </ul>	30		
<p><b>Project Budget</b></p> <ul style="list-style-type: none"> <li>-The proposed budget is thorough, robust, realistic and cost effective.</li> <li>- The applicant must show a detailed budget with all cost shares explained.</li> </ul>	15		
<p><b>Proposed Project Location</b></p> <ul style="list-style-type: none"> <li>- The project is sited near a major highway or transportation corridor, shipping route, or near a shipping logistics center.</li> <li>- This project will address an environmental justice (EJ) area or related location that receives a disparate proportion of environmental impacts.</li> <li>- The project avoids environmentally sensitive areas or areas containing critical habitats.</li> <li>-Priority will be given to projects in non-attainment and air quality maintenance areas.</li> </ul>	15		
<p><b>Project Timeline</b></p> <p>The proposed project must define when the project will commence and will end.</p>	15		

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

### 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.

### Phase 3 - A Hybrid Program:

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
- 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

In addition to the funding for electric vehicle charging stations, the Department will allocate up to \$600,000 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. The Department will also release a competitive request for proposals (RFP) for projects that reduce nitrogen oxide (NOx) emissions from the transportation sector. In the Competitive RFP, the Department will pursue the following:

- 
- 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 up to \$2 million 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, up to \$2 million, will be used for the replacement of eligible mitigation actions listed in Phase 2 – Competitive RFP Program.