

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary State of North Carolina

Lead Agency Authorized to Act on Behalf of the Beneficiary North Carolina Department of Environmental Quality
(Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

| | |
|---|--|
| Action Title: | DERA Award Category - FY 2021 |
| Beneficiary's Project ID: | NCDEQ-DERA-FY-2021-01 |
| Funding Request No. | <i>(sequential)</i> 1 |
| Request Type: (select one or more) | <input type="checkbox"/> Reimbursement <input checked="" type="checkbox"/> Advance <input type="checkbox"/> Other (specify): _____ |
| Payment to be made to: (select one or more) | <input checked="" type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify): _____ |
| Funding Request & Direction (Attachment A) | <input checked="" type="checkbox"/> Attached to this Certification <input type="checkbox"/> To be Provided Separately |

SUMMARY

| | |
|--|--|
| Eligible Mitigation Action | <input type="checkbox"/> Appendix D-2 item (specify): _____ <input checked="" type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal): Attachment E |
| Action Type | |
| Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1): | See attached. |
| Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2): | See attached. |
| Estimate of Anticipated NOx Reductions (5.2.3): | See attached. |
| Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1): | See attached. |
| Describe how the Beneficiary will make documentation publicly available (5.2.7.2). | See attached. |
| Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8). | See attached. |
| Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9). | See attached. |

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

ATTACHMENTS
(CHECK BOX IF ATTACHED)

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

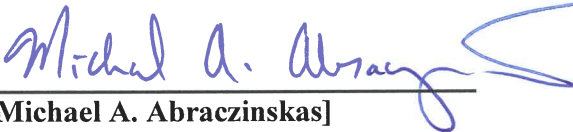
CERTIFICATIONS

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

1. This application is submitted on behalf of Beneficiary ^{North Carolina Department of Environmental Quality} _____, 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: 9/8/21


[Michael A. Abraczinskas]
[Director, Division of Air Quality]

Department of Environmental Quality

[LEAD AGENCY]

for

State of North Carolina

[BENEFICIARY]

D-4 Summary Attachment

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

The North Carolina Department of Environmental Quality (NC DEQ) requests \$357,163.00 in funds to increase funding for North Carolina's DERA Program by using Environmental Mitigation Trust funds as voluntary match per Section V Table 2 of North Carolina's Phase 2 Beneficiary Mitigation Plan for diesel vehicles replacements and repowers. Projects funded under this request will help achieve significant NOx emission reductions. (Page 9, State of North Carolina Volkswagen Mitigation Plan)

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

DEQ anticipates projects in the freight, municipal and private on-road construction/maintenance, school and transit bus sectors, with target fleets including Class 4-8 trucks, refuse trucks, school district school buses and municipal transit buses. DEQ analyzed a sample of the 2020 VW Phase 1 applications and 2020 DERA applications for projects eligible under DERA programmatic requirements. For this work plan DEQ provides an analysis which includes replacing two refuse haulers, one forklift, one transit bus and three school buses see Attachment D. The DEQ recognizes that the actual number of vehicle replacements completed may vary with regard to location and vehicle type, and that this variability could result in changes to the emission reductions proposed within this work plan.

For this project, DEQ's diesel emission reduction program primary will focus on vehicle replacement projects. Ownership of all vehicles purchased with vehicle replacement projects will remain with the entities that own the vehicles being replaced.

North Carolina's work plan and budget for the FY2021 State DERA grant is attached.

Estimate of Anticipated NOx Reductions (5.2.3):

See Attachment D.

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):

NC Department of Environmental Quality, Division of Air Quality

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

The NC DEQ, as lead agency for the state of North Carolina implementing the Environmental Mitigation Plan, has established a web page on the VW Trust and mitigation actions where documents will be made publicly available, deq.nc.gov/VWsettlement.

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

Maximum funding percentages for selected projects depend on the DERA Eligible Project type, however, maximum funding for any project proposal application is not guaranteed. NC DEQ may partially fund a proposal application by funding a portion of a proposed project. Applicants receiving funding will be notified of the actual amount awarded for their project. Applicants awarded funding have the option to accept or decline the award.

DERA Funding Cost Share Amounts

| DERA Eligible Projects | DERA Funding Limits (DERA Funds + Voluntary Match) | Minimum Mandatory Cost-Share (Fleet Owner Contribution) |
|--|--|--|
| Exhaust Control Retrofit | 100% | 0% |
| Engine Upgrade / Remanufacture | 40% | 60% |
| Highway Idle Reduction Bundled with Exhaust Control Retrofit | 100% | 0% |
| Stand-alone Highway Idle Reduction | 25% | 75% |
| Locomotive Idle Reduction | 40% | 60% |
| Marine Shore Power | 25% | 75% |
| Electrified Parking Space | 30% | 70% |
| Engine Replacement – Diesel or Alternative Fuel | 40% | 60% |
| Engine Replacement – Low NOx | 50% | 50% |
| Engine Replacement – Zero Emission | 60% | 40% |
| Vehicle/Equipment Replacement – Diesel or Alternative Fuel | 25% | 75% |
| Vehicle/Equipment Replacement – Low NOx | 35% | 65% |
| Vehicle/Equipment Replacement – Zero Emission | 45% | 55% |
| Vehicle Replacement – Drayage | 50% | 50% |
| Clean Alternative Fuel Conversion | 40% | 60% |

Payments will be made on a reimbursement basis for eligible expenses incurred and paid by the grant recipient. A cost may not be considered incurred until the grant funded goods and services have been received and accepted by the grant recipient. Grant recipients will be required to provide documentation to show that equipment or services have been received and the expenses have been incurred and paid by the grant recipient before reimbursement is provided by the NC DEQ.

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

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

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):

NC DEQ developed a quantifiable Social Vulnerability Index (SVI) using statistical and geographic information system (GIS) methods to show which counties in North Carolina have the highest concentrations of particularly vulnerable populations. This SVI was developed using datasets from the US Census Bureau and the NC Department of Commerce.

The American Community Survey data was reclassified by creating four “bin” ranges for each demographic group. This was done by separating the data into quartiles and assigning a value of 1 to 4. The NC Department of Commerce sorts counties into three distinct county tiers based on average

unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita. The forty most distressed counties are considered Tier 1, the 40 counties which are identified as mildly distressed are Tier 2, and 20 least distressed counties are Tier 3. To add this data into the overall vulnerability index in a meaningful way, the inverse of the county tier number designations was used to give Tier 1 (most distressed) a designation of “3”, and so on and so forth. To create the final vulnerability index, the American Community Survey data was summed (1, 2, 3 or 4) for each county along with the inverse of the NC Department of Commerce County Tier rankings to create resulting totals for each county. Then the resulting totals were placed into their own quartile bins and assigned a final Environmental Justice (EJ) Score of 1 to 4.

Mobile NOx emissions in tons per year from the 2017 National Emissions Inventory were arranged from highest to lowest and divided in the quintiles and points were assigned to each of the quintiles.

There are a few incidences where the SVI did not accurately correspond to the tier county designations and the concentration of some demographic groups in the region. Therefore, to assign a score, the final SVI scores were weighted at 1.5 and the Mobile NOx Bin scores weighted at 1. The scores were summed by county as the EJ Score. The EJ Score is a component of the project scoring criteria used to evaluate project.

EPA has identified the following areas as priority locations for the DERA program.

EPA 2021 Priority County List for North Carolina

| | | | |
|-------------|--------|---------|---------|
| Cabarrus | Gaston | Iredell | Lincoln |
| Mecklenburg | Rowan | Union | |

Attachment B

Project Budget

| Period of Performance: FY 2021 - FY2022 | | | | |
|--|------------------------------|--|---|--|
| Budget Category | Total Approved Budget | Share of Total Budget to be Funded by the Trust | Share of Total Budget paid by Federal DERA program | Cost-Share paid by fleet owners |
| 1. Equipment Expenditure | \$3,476,084.00 | \$357,163.00 | \$535,745.00 | \$2,583,176.00 |
| 2. Contractor Support <i>(provide list of Approved Contractors as Attachment with approved funding ceilings)</i> | \$0 | \$0 | \$0 | \$0 |
| 3. Subrecipient Support <i>(Provide List of Approved Subrecipients or Grant Awardees as Attachment with approved funding ceilings)</i> | \$0 | \$0 | \$0 | \$0 |
| 4. Administrative ¹ | \$0 | \$0 | \$0 | \$0 |
| Project Totals | \$3,476,084.00 | \$357,163.00 | \$535,745.00 | \$2,583,176.00 |
| Percentage | 100% | 10.3% | 15.4% | 74.3% |

¹ Subject to Appendix D-2 15% administrative cap.

TIMELINE AND MILESTONES:

| Task | Date Completed |
|--|-----------------------------------|
| DERA application submittal due on www.Grants.gov | May 24, 2021 |
| VW D-4 submittal to VW Trustee | September 15, 2021 |
| DERA RFP released, and applications accepted until November 30, 2021 | September 15, 2021 |
| State Clean Diesel Award received from EPA | October 1, 2021 |
| NCDEQ selects grant recipients | December 2021 – January 2022 |
| NCDEQ notification of awarded projects to awardees | January 2022 – February 2022 |
| Trustee acknowledges receipt of funding request | Receipt from Trustee |
| Trustee acknowledges receipt of project certification and funding direction | Transfer Date |
| NCDEQ sends contracts to awardees for signature | February 2022 – March 2022 |
| NCDEQ submits reports to the Trustee on the status of and expenditures with Mitigation Actions completed and underway. | January 30 and July 30 thereafter |
| Monitoring and oversight of project implementation | March 2022 to October 2022 |
| Subgrantee submits final reports to with proof of invoice destruction to NCDEQ | September 30, 2022 |
| NCDEQ submits final report to EPA | No later than 90 days after |

ATTACHMENT C
Detailed Plan for Reporting on Eligible Mitigation Action
Implementation (5.2.11)

The NC Department of Environmental Quality (NC DEQ) will provide detailed reporting on this funding request in two ways:

1. Timely updates to the NC DEQ's Volkswagen Diesel Settlement websites,
2. Quarterly Reports submitted to the Environmental Protection Agency on the FY 2021 Clean Diesel State Grant, and
3. Semi-annual reporting to the Trustee as required by subparagraph 5.3 of the Environmental Mitigation Trust for State Beneficiaries.

NC DEQ Website

NC DEQ maintains a website describing the NC DEQ's activities associated with the Volkswagen Diesel Emissions Environmental Mitigation Trust for State Beneficiaries. The website may be found here: deq.nc.gov/VWsettlement. Information associated with NC DEQ's VW programs, applications, and application guides, as well as a description of the VW Beneficiary Mitigation Plan, community outreach activities and copies of award decisions will be posted here. This website will also be used to track the status, progress, and results for projects under this funding category.

All application materials, reimbursement requests and other required documentation submitted by applicants will be available to the public through the NC DEQ Volkswagen webpage or upon request. Funding recipients' executed contracts for the NC DEQ's Diesel Emission Reduction Act Program are archived in the NC DEQ Grant Management System.

DERA Quarterly Reports

DEQ has and will continue to submit quarterly report to the EPA on the progress of projects under the 2021 Clean Diesel State Grant (DERA). These reports include technical details of the individual diesel emission reduction projects (vehicles and equipment being replaced as well as the replacement vehicles and equipment), estimates of emissions reductions, project progress and timelines, and financial reporting.

Semi-Annual Reports to the Trustee

As required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries, DEQ will submit a report to the Trustee within 6 months of the first disbursement and thereafter no later than January 30 and July 30 for the preceding 6-month periods. These reports will describe the progress implementing this and any other Eligible Mitigation Action ongoing during the reporting period. These reports will include a summary of all costs expended and a complete description of the status (including the actual or projected termination date), development, implementation, and any modification of the Eligible Mitigation Action. Reports covering the DERA program actions described in this funding request will include the quarterly reports to EPA described above. These semi-annual reports to the Trustee will be posted on the DEQ website for public access.

ATTACHMENT E
DERA Option (5.2.12)

Attachment D

Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6)

Projected Funded Vehicle Costs

| Projected Vehicles | Vehicle/Equipment Replacement Cost | Infrastructure Cost | DERA/VW Funded Amount | Cost Share Amount | Total Project Cost | Estimated Annual NOx Emission Reductions |
|--|---|----------------------------|------------------------------|--------------------------|---------------------------|---|
| Refuse hauler replacement-CNG | \$334,000 | \$0.00 | \$83,500 | \$250,500 | \$334,000 | 1.27 |
| Refuse hauler replacement-All-electric | \$573,321 | \$28,000 | \$270,594 | \$330,727 | \$601,321 | 0.08 |
| Forklift equipment replacement | \$75,596 | \$0.00 | \$18,899 | \$56,697 | \$75,596 | 1.5 |
| Transit Bus replacement-Electric | \$867,127 | \$30,000 | \$403,707 | \$493,420 | \$897,127 | 0.28 |
| School Bus Replacement-Diesel | \$100,898 | \$0.00 | \$25,224 | \$75,674 | \$100,898 | 0.13 |
| School Bus Replacement-Diesel | \$100,898 | \$0.00 | \$25,224 | \$75,674 | \$100,898 | 0.13 |
| School Bus Replacement-Diesel | \$100,898 | \$0.00 | \$25,224 | \$75,674 | \$100,898 | 0.13 |
| Total | \$2,152,738 | \$58,000 | \$852,373 | \$1,358,365 | \$2,210,738 | 3.52 |

ATTACHMENT E
DERA Option (5.2.12)

2021 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative Template

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

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

SUMMARY PAGE

Project Title: 2021 North Carolina Diesel Emissions Reduction Grant

Project Manager and Contact Information

Organization Name: NC Department of Environmental Quality – Division of Air Quality

Project Manager: Jill B. Vitas

Mailing Address: 1641 Mail Service Center, Raleigh, NC 27699-1641

Phone: (919) 707-8424

Fax: (919) 707-8424

Email: jill.vitas@ncdenr.gov

Project Budget Overview:

| | 2021 |
|---|------------------|
| EPA Base Allocation | \$357,163 |
| EPA Match Bonus (if applicable) | \$178,582 |
| Voluntary Matching Funds (if applicable) | \$357,163 |
| Mandatory Cost-Share | TBD* |
| TOTAL Project Cost | \$892,908 |

*TBD – to be determined.

Project Period

October 1, 2021 – September 30, 2023

Summary Statement

Funds granted through the 2021 DERA State Grant Program will be used for diesel emissions reduction projects throughout the state through our State Diesel Emissions Reduction Grant Program. Projects will be selected based on cost effectiveness, project type and location. A portion of the 2021 DERA State Grant allocation will be used to fund 0.25 FTE (personnel, fringe benefits and indirect costs) to manage the State Diesel Emissions Reduction Grant Program. Past State Diesel Emissions Reduction Grant Program recipients may be found at: <http://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/mobile-source-emissions-reduction-grants>.

SCOPE OF WORK

The North Carolina Division of Air Quality (DAQ) intends to use the 2021 DERA State Grant Program money to supplement the existing State Diesel Emissions Reduction Grant Program.

The North Carolina Division of Air Quality plans to use the money to fund projects that will include diesel emission reduction solutions for locomotives, marine engines and non-road engines, equipment or vehicles used in construction, cargo handling, agriculture, mining or energy production (including stationary generators and pumps) and idle reduction technologies.

STATE/TERRITORY GOALS AND PRIORITIES:

North Carolina is a very diverse State with varied sources contributing to the air pollution. Specifically, for mobile source diesel emissions, the main sources are locomotives, commercial marine vessels, diesel non-road equipment and on-road diesel heavy-duty vehicles. Below is a table summarizing the statewide nitrogen oxides (NO_x) and fine particulate matter (PM_{2.5}) for these categories. The emissions were obtained from the latest emissions data available, the 2017 National Emissions Inventory (NEI) January 2021 version.

| | NO_x (tons/year) | PM_{2.5} (tons/year) |
|------------------------------------|---|---|
| Locomotives | 6,790 | 192 |
| Commercial Marine Vessels | 4,395 | 108 |
| Diesel Non-road Equipment | 17,476 | 1,318 |
| On-Road Diesel Heavy Duty Vehicles | 29,755 | 1,268 |

For the purposes of this Program, DAQ is focusing on reducing NO_x and PM_{2.5} because the State is currently in maintenance for ozone and particulate matter. Focusing on further reducing NO_x and PM_{2.5} will help DAQ achieve their goals of continuously improving air quality, specifically in the areas that are in maintenance for ozone (NO_x is a precursor for ozone) and particulate matter.

VEHICLES AND TECHNOLOGIES:

The NC Diesel Emissions Reduction Grant (DERG) Program will fund emissions reduction projects for marine engines and non-road engines, equipment and vehicles, and locomotives. Based on the types of eligible projects for funding under the 2021 Diesel Emissions Reduction Grant Program, the following technologies will be considered:

Marine Engines

- Marine shore power connection systems
- Certified diesel engine replacement
- Engine upgrades and remanufacture systems
- Verified exhaust controls
- Cleaner fuels

On-road Engines

- Engine upgrades and remanufacture systems
- Verified exhaust controls
- Certified diesel engine replacement
- Vehicle and equipment replacement
- Cleaner fuels

Nonroad Engines

- Engine upgrades and remanufacture systems
- Verified exhaust controls
- Certified diesel engine replacement
- Vehicle and equipment replacement
- Cleaner fuels

Idle Reduction Technologies

- Auxiliary power units (APUs)
- Battery air conditioning systems
- Thermal storage systems
- Electrified parking spaces (truck stop electrification)
- Fuel operated heaters

Locomotives:

- Verified idle reduction technologies
- Certified diesel engine replacement
- Newer/cleaner equipment replacement
- Engine upgrades and remanufacture systems
- Verified exhaust controls

ROLES AND RESPONSIBILITIES:

There are several personnel throughout the Department of Environmental Quality (DEQ) and the Division of Air Quality responsible for overseeing various aspects of the grant process. They are briefly outlined below.

Grant Administrator (Environmental Engineer):

- Responds to inquiries regarding grant process and procedures
- Calculates the emissions reductions
- Generates the grant award letters
- Coordinates with the chosen grant awardees the required documentation for the grant contractual agreement as well as uploading the documentation into the State Contracts and Processing System
- Submits quarterly reports to EPA Region 4

- Oversees the subgrantee expenditures
- Reviews, for accuracy, and submits subgrantee invoices to the Budget Office for payment
- Maintains the DAQ DERG website, including subgrantee updates and news releases
- Coordinates with the subgrantees throughout the grant process to receive quarterly updates

Environmental Specialist:

- Participates in the grant selection oversight committee meetings

Environmental Program Consultant (Contract Temporary Employee):

- Quality assures the Grant Administrator reports, emissions reductions calculations and invoice submittals
- Coordinates subgrantee site visits

Mobile Sources Compliance Branch Supervisor (Environmental Program Supervisor):

- Reviews selected grant applications
- Quality assures contract paperwork, quarterly reports and subgrantee invoices for Grant Administrator
- Provides guidance and feedback, as needed

DAQ Budget Officer:

- Reviews and approves for payment all subgrantee invoices
- Prepares all required financial forms and assists with the State procurement process
- Provides monthly financial reports to Grant Administrator for the quarterly reports

NC DEQ Contracts and Purchasing:

- Generates all of the grant contracts for the subgrantees and all contract amendments
- Provides payments to the subgrantees, once payment is approved by the DAQ Budget Officer

NC DEQ Secretary:

- Reviews and approves all grant awards for the State, all grant award letters are signed by the DEQ Secretary.

TIMELINE AND MILESTONES:

| Task | Date Completed |
|--|--|
| Call for Request for Proposals | July-September 2021 |
| State Clean Diesel Award received | October 1, 2021 |
| Request for Proposals closed | October 2021 |
| Application review and selection | October 2021 – November 2021 |
| Formal contract agreement preparation and processing | December 2021 – February 2022 |
| Subgrantees begin project work | March 2022 |
| DAQ submits 1 st quarterly report to EPA | January 2022 |
| DAQ submits 2 nd quarterly report to EPA | April 2022 |
| Subgrantee submits final reports to DAQ | September 30, 2022 |
| DAQ submits 3 rd quarterly report to EPA | July 2022 |
| DAQ submits 4 th quarterly report to EPA | October 2022 |
| DAQ submits 5 th quarterly report to EPA | January 2023 |
| DAQ submits 6 th quarterly report to EPA | April 2023 |
| DAQ submits 7 th quarterly report to EPA | July 2023 |
| DAQ submits final report to EPA | No later than 90 days after September 30, 2023 |

DERA PROGRAMMATIC PRIORITIES:

According to 2021 EPA guidance the following counties have be designated as priority counties in North Carolina:

| | | | |
|-------------|--------|---------|---------|
| Cabarrus | Gaston | Iredell | Lincoln |
| Mecklenburg | Rowan | Union | |

During evaluation of applications that are received through the RFP process, projects in these counties will be given priority as appropriate. Emission reductions from diesel engines in these counties will help to ensure continued maintenance of the both the ozone and particulate matter standards in North Carolina.

In addition, priority will be given to projects that are located at, or service goods movement facilities such as ports, airports, rail yards, terminals, and distribution centers within North Carolina.

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

Short-term Outcomes

| Outcome | Tracking Mechanism |
|--|--|
| Enhance grant contact network and knowledge of sector workings. | Increase the number of contacts to the grant notification database. |
| Increase knowledge of diesel emission reduction strategies by subgrant applicants. | Keep interested parties abreast of new diesel emissions technologies through communication via the grant notification network. |
| Increase knowledge of diesel emission reduction strategies by the DAQ grant staff. | DAQ staff’s participation in workshops, conferences, site visits, and other interactions. |

Medium-term Outcomes

As a result of implementation of the projects, DAQ expects increased/widespread adoption of the implemented technology. The projects funded by DERG will assist subgrantees by providing equipment, vehicles or technology that will be more competitive in the future and by saving diesel fuel and reducing maintenance costs. These metrics will be tracked through subgrantee’s quarterly and final reports.

Long-term Outcomes

Reducing diesel emissions from the legacy fleets will aid North Carolina in its goal of improving the ambient air quality across the State. The cleaner diesel vehicles and equipment results in workers operating in a healthier environment. While this is not easy to track, studies have repeatedly shown the increased health risks for operators from working near diesel engines. Prior results from subgrantees’ final reports show improved health of those working with the cleaner diesel vehicles and equipment. With the current ozone standard, the state will need to look at all avenues to maintain reductions in NOx emissions. The State Diesel Emissions Reduction Grant Program is advancing DAQ’s effort to maintain and improve upon the air quality across the State.

Based on the potential types of projects that we may receive through the request for proposal process, DAQ has developed an example fleet description for the FY2021 DERA cycle. Using this example fleet, DAQ used the EPA’s Diesel Emissions Quantifier to estimate the emissions benefits for the FY2021 cycle. The example fleet assumes that we will fund the purchase of five compressed natural gas refuse haulers, one all-electric refuse hauler, and sixteen forklifts under the funds available in FY2021. The table below shows the emissions reductions associated with the purchase of the new vehicles.

2021 Projected Annual Emissions from Diesel Reductions

| Project Description | NOx (tons/year) | PM _{2.5} (tons/year) | CO (tons/year) | CO ₂ (tons/year) | HC (tons/year) | Dollar per ton of NOx Emissions Reduced (\$/ton)/year |
|--|--------------------|----------------------------------|-------------------|--------------------------------|-------------------|---|
| Refuse hauler replacement- CNG | 1.27 | 0.094 | 0.00 | 0.00 | 0.08 | \$263,750 |
| Refuse hauler replacement- All-electric | 0.075 | 0.0004 | 0.006 | 22.5 | 0.001 | \$1,460,860 |
| Forklift equipment replacement | 18.9 | 2.98 | 5.38 | 0.00 | 0.827 | \$8,000 |

SUSTAINABILITY OF THE PROGRAM:

The DAQ routinely publicizes the availability of grants through the DAQ grant website, email distribution lists and presentations during meetings and conferences. Additionally, previous years' grants success stories are available on the DAQ website at <http://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/mobile-source-emissions-reduction-grants>. The DAQ readily complies with publicizing the grant awardees within 60 days of being awarded. By using these various conduits, DAQ's goal is to incentivize other interested parties on the advantages and benefits of embarking upon a diesel emissions reduction project. Additionally, DAQ's management is very supportive of the long term benefits of the DERG Program to the State of North Carolina.

The projects in this work plan address the following DERA programmatic priorities.

Maximizes public health - Diesel emissions are most harmful to people who operate diesel equipment and vehicles and sensitive population groups such as asthmatics, children and the elderly. Past subgrantees have reported a dramatic reduction in adverse health symptoms such as headaches, stinging eyes and asthma attacks.

Are Most Cost-effective - All DERG emissions reductions estimates are calculated using EPA's diesel emissions quantifier. The emissions reductions are then used to calculate a cost effectiveness per pollutant, which is the dollar per ton of emissions reduced. The projects are prioritized based on their cost effectiveness. In addition to cost effectiveness, other factors that influence selection are permanence of benefit, sector type, geographical distribution and location in a nonattainment/maintenance area.

Are in areas with high population density, nonattainment/maintenance or poor air quality areas - According to the 2010 US Census, North Carolina is the 10th most populous state in the union. Compared to the other EPA Region 4 states, North Carolina is the 3rd most populous state. North Carolina includes both ozone and fine particulate maintenance areas.

Are in areas that receive disproportionate quantity of diesel emissions - Construction and

agricultural equipment emissions are typically concentrated within a small area, thereby generating a disproportionate quantity of diesel emissions. Additionally, these areas can have multiple equipment operating simultaneously which further exacerbates the amount of diesel emissions being emitted.

Includes a certified engine configuration or verified technology - The equipment funded through DERG will be certified engine configurations and EPA verified or CARB certified emission reduction devices. The DAQ will work with the subgrantees to ensure only utilize verified/certified equipment and engine configurations. This will include working with the subgrantee vendors, if necessary.

Maximizes useful life - Projects in the past have maximized useful life by the selection of both vehicle and equipment with long useful lifetimes remaining. This is done by ensuring the subgrantees are adhering to the guidelines established by the EPA State Diesel Grant Program applicable technologies guidelines as well as reviewing each applicant's proposal regarding such factors as vehicle model year replacement, type of equipment replacement, etc.

Conserves Diesel Fuel - Some of the DERG projects are expected to include idle reduction. As part of the final report submitted to DAQ, subgrantees are required to report diesel fuel saved which allows DAQ to make projections for similar projects in the future.

BUDGET NARRATIVE

2021 Itemized Project Budget

| Budget Category | EPA Allocation | Mandatory Cost-Share | Voluntary Match (if applicable) | | Line Total |
|--|------------------|----------------------|---------------------------------|-------------|------------------|
| | | | VW Mitigation Trust Funds | Other Funds | |
| 1. Personnel | \$16,694 | | | | \$16,694 |
| 2. Fringe Benefits | \$6,508 | | | | \$6,508 |
| 3. Travel | \$2,000 | | | | \$2,000 |
| 4. Equipment | \$- | | | | \$- |
| 5. Supplies | \$250 | | | | \$250 |
| 6. Contractual | \$4,060 | | | | \$4,060 |
| 7. Other | \$504,280 | TBD | \$357,163 | | \$861,443 |
| 8. Total Direct Charges (sum 1-7) | \$533,792 | | \$357,163 | | \$890,955 |
| 9. Indirect Charges | \$1,953 | | | | \$1,953 |
| 10. Total (Indirect + Direct) | \$535,745 | | \$357,163 | | \$892,908 |
| 11. Program Income | \$- | | | | \$- |

Explanation of Budget Framework

- **Personnel - List all staff positions by title. Give annual salary, percentage of time assigned to the project, and total cost for the budget period.**

Scott Albright, Environmental Specialist (annual salary \$45,844) spends about 5% of his time on this grant. Jill Vitas, Environmental Engineer (annual salary \$70,945) will spend 20% of her time on this grant. The combined total will be \$16,694. Please see the SF 424A form and Budget Justification Worksheet for additional details.

- **Fringe Benefits - Identify the percentage used, the basis for its computation, and the types of benefits included.**

For fringe benefits, medical reflects 25% of the annual cost of medical benefits which is \$1,582. Retirement is 21.86% of each staff member's salary added together, and Social Security is 7.65% of each salary added together. The total for all fringe benefits is \$6,508.

- **Travel - Specify the mileage, per diem, estimated number of trips in-State and out-of-State, number of travelers, and other costs for each type of travel.**

Travel is estimated at the cost of the Environmental Engineer, Program Consultant and Environmental Engineering Supervisor to attend the annual SEDC conference. The location and length of the conference is still undetermined and will impact the cost. Based on previous years, an estimate of total travel costs of \$2,000 is reasonable.

- **Supplies - “Supplies” means all tangible personal property other than “equipment”.**
Supplies are used for color printer cartridges for printing promotional photos and posters, art paper and general office supplies, \$250.
- **Equipment - Identify each item to be purchased which has an estimated acquisition cost of \$5,000 or more per unit and a useful life of more than one year.**
No equipment purchases are anticipated for this grant.
- **Contractual - Identify each proposed contract and specify its purpose and estimated cost.**
An environmental program consultant will spend 5% of her time assisting with the grant as outlined in the work plan. Temporary Solutions provides the personnel to fill this position at a current rate of \$39.04/hr. for a total of \$4,060.
- **Other - List each item in sufficient detail for EPA to determine the reasonableness and allowability of its cost.**

All subgrants and rebates in this work plan will be under the “Other” category. Funding for NC Diesel Emissions Reductions Grant – used to fund subgrantees’ projects, \$861,443 (including the state match from VW Mitigation funds).

- **Indirect Charges - If indirect charges are budgeted, indicate the approved rate and base.**
Indirect charges: Personnel (Indirect Rate x Personnel = Indirect Costs)
(Indirect Rate: 11.7%)

Indirect Charges: \$16,694 x 0.117 = \$1,953

Administrative Costs Expense Cap

Administrative costs for North Carolina are less than 6% of the total program costs (total administrative costs \$31,465).


Matching Funds and Cost-Share Funds

DAQ will be matching EPA funding with VW Mitigation funds under the DERA Option and therefore will be receiving the bonus funding from EPA. A D-4 will be submitted to the Trustee once the subgrantees have been identified through the RFP process. The Trustee is allowed up to 60 days to review and approve the D-4 request. Once the request has been approved the contracting process through the DAQ Grant Management System will take place.

Subgrantees will be required to provide a mandatory cost share based on the type of project that is awarded and the DERA funding limits outlined in the 2021 DERA State Grants Program Guide.

Funding Partnerships

No funding partnerships are anticipated at this time.

| | | | | |
|---|---|--|---|---|
|  | U.S. ENVIRONMENTAL PROTECTION AGENCY Cooperative Agreement | | GRANT NUMBER (FAIN): 02D10221 MODIFICATION NUMBER: 0 PROGRAM CODE: DS | DATE OF AWARD 08/19/2021 |
| | | | TYPE OF ACTION New | MAILING DATE 08/26/2021 |
| | | | PAYMENT METHOD: ASAP | ACH# 40192 |
| | | | RECIPIENT TYPE: State | |
| RECIPIENT: North Carolina DEQ 217 W. Jones Street Raleigh, NC 27603 EIN: 56-6000372 | | PAYEE: North Carolina Department of Environmental Quality 217 W. Jones Street Raleigh, NC 27603 | | |
| PROJECT MANAGER Jill Vitas 1641 Mail Service Center Raleigh, NC 27699-1641 E-Mail: jill.vitas@ncdenr.gov Phone: 919-707-8424 | | EPA PROJECT OFFICER Katherine Evans 61 Forsyth St., S.W. Atlanta, GA 30303 E-Mail: evans.katherine@epa.gov Phone: 404-562-8965 | | EPA GRANT SPECIALIST Christopher Walston Grants and Audit Management Section 61 Forsyth St., S.W. Atlanta, GA 30303-8960 E-Mail: Walston.Christopher@epa.gov Phone: 404-562-8201 |
| PROJECT TITLE AND DESCRIPTION State Clean Diesel Grant Program This action approves an award in the amount of \$535,745 to the State of North Carolina. The purpose of this diesel emissions reduction act funded cooperative agreement is to support projects within the state that will include diesel emission reduction technologies for locomotives, marine engines and non-road engines, equipment or vehicles used in construction, cargo handling, agriculture, mining or energy production (including stationary generators and pumps) and idle reduction technologies. The State will seek requests for proposals from designated priority counties including Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan and Union and select projects that reduce diesel emissions in these counties and help to ensure continued maintenance of both the ozone and particulate matter standards in the State. Anticipated deliverables, expected outcomes and beneficiaries of this project include the following: increasing the usage of the diesel emission reduction technologies; reducing diesel emissions from legacy fleets which will aid in improving the ambient air quality across the state; and maximizing public health by reducing diesel emissions for people who operate diesel equipment and vehicles and sensitive population groups such as asthmatics, children and the elderly. | | | | |
| BUDGET PERIOD 10/01/2021 - 09/30/2022 | PROJECT PERIOD 10/01/2021 - 09/30/2022 | TOTAL BUDGET PERIOD COST \$892,908.00 | TOTAL PROJECT PERIOD COST \$892,908.00 | |
| NOTICE OF AWARD | | | | |
| Based on your Application dated 05/24/2021 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$535,745.00. EPA agrees to cost-share 60.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of \$535,745.00. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments. | | | | |
| ISSUING OFFICE (GRANTS MANAGEMENT OFFICE) | | | AWARD APPROVAL OFFICE | |
| ORGANIZATION / ADDRESS 61 Forsyth Street Atlanta, GA 30303-8960 | | | ORGANIZATION / ADDRESS U.S. EPA, Region 4 OAR - Office of Air and Radiation 61 Forsyth Street Atlanta, GA 30303-8960 | |
| THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY | | | | |
| Digital signature applied by EPA Award Official Keva R. Lloyd - Grants Management Officer | | | | DATE 08/19/2021 |

EPA Funding Information

| FUNDS | FORMER AWARD | THIS ACTION | AMENDED TOTAL |
|-------------------------------|--------------|-------------|---------------|
| EPA Amount This Action | \$0 | \$535,745 | \$535,745 |
| EPA In-Kind Amount | \$0 | \$0 | \$0 |
| Unexpended Prior Year Balance | \$0 | \$0 | \$0 |
| Other Federal Funds | \$0 | \$0 | \$0 |
| Recipient Contribution | \$0 | \$0 | \$0 |
| State Contribution | \$0 | \$357,163 | \$357,163 |
| Local Contribution | \$0 | \$0 | \$0 |
| Other Contribution | \$0 | \$0 | \$0 |
| Allowable Project Cost | \$0 | \$892,908 | \$892,908 |

| Assistance Program (CFDA) | Statutory Authority | Regulatory Authority |
|---|--|-------------------------------------|
| 66.040 - Diesel Emissions Reduction Act (DERA) State Grants | Diesel Emission Reduction Act of 2010, codified at 42 U.S.C. 16133 | 2 CFR 200, 2 CFR 1500 and 40 CFR 33 |

| Fiscal | | | | | | | | | |
|-----------|------------|----|--------------|---------------------|--------|--------------|--------------|-------------------|---------------------------|
| Site Name | Req No | FY | Approp. Code | Budget Organization | PRC | Object Class | Site/Project | Cost Organization | Obligation / Deobligation |
| - | 2104VW1133 | 21 | E4 | 04V6 | 000AH4 | 4123 | - | - | \$535,745 |
| | | | | | | | | | \$535,745 |

Budget Summary Page

| Table A - Object Class Category (Non-Construction) | Total Approved Allowable Budget Period Cost |
|--|--|
| 1. Personnel | \$16,694 |
| 2. Fringe Benefits | \$6,508 |
| 3. Travel | \$2,000 |
| 4. Equipment | \$0 |
| 5. Supplies | \$250 |
| 6. Contractual | \$4,060 |
| 7. Construction | \$0 |
| 8. Other | \$861,443 |
| 9. Total Direct Charges | \$890,955 |
| 10. Indirect Costs: 11.70 % Base Total Direct Salaries & Wages | \$1,953 |
| 11. Total (Share: Recipient 40.00 % Federal 60.00 %) | \$892,908 |
| 12. Total Approved Assistance Amount | \$535,745 |
| 13. Program Income | \$0 |
| 14. Total EPA Amount Awarded This Action | \$535,745 |
| 15. Total EPA Amount Awarded To Date | \$535,745 |

Administrative Conditions

General Terms and Conditions

The recipient agrees to comply with the current EPA general terms and conditions available at: <https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-november-12-2020-or-later>. These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at: <https://www.epa.gov/grants/grant-terms-and-conditions>.

A. Correspondence Condition

The terms and conditions of this agreement require the submittal of reports, specific requests for approval, or notifications to EPA. Unless otherwise noted, all such correspondence should be sent to the following email addresses:

- Federal Financial Reports (SF-425): rtpfc-grants@epa.gov

- MBE/WBE reports (EPA Form 5700-52A): R4epagrantsmbewbereporting@epa.gov

cc: Walston.Christopher@epa.gov

- All other forms/certifications/assurances, Indirect Cost Rate Agreements, Requests for Extensions of the Budget and Project Period, Amendment Requests, Requests for other Prior Approvals, updates to recipient information (including email addresses, changes in contact information or changes in authorized representatives) and other notifications:

Christopher Walston / Grants Management Specialist

Walston.Christopher@epa.gov

404-562-8201

Katherine Evans/ Project Officer

Evans.Katherine@epa.gov

404-562-8965

- Payment requests (if applicable):

Katherine Evans/ Project Officer

Evans.Katherine@epa.gov

404-562-8965

Quality Assurance documents, workplan revisions, equipment lists, programmatic reports and deliverables:

Katherine Evans/ Project Officer

Evans.Katherine@epa.gov

404-562-8965