

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary _____

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

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

SUMMARY

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

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

ATTACHMENTS
(CHECK BOX IF ATTACHED)

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

CERTIFICATIONS

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

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

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

DATED: _____

Michael A. Abraczinskas

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

[LEAD AGENCY]

for

[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 \$491,487.11 in funds to implement the DERA Option for the replacement of 7 diesel vehicles under the EPA Diesel Emission Reduction Act program. 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):

Projects are selected through the State's DERA program are based on the calculated potential air quality benefits. The projects chosen for the 2020 DERA Option are early replacements of commercial short haul trucks, forklifts, and an excavator which yield emission reductions from the improved engine technology.

North Carolina's work plan and budget for the FY2020 State DERA grant is attached. Under the FY2020 State DERA program, North Carolina expects to replace 7 heavy-duty diesel vehicles with the DERA Option.

NC DEQ estimates the following emissions reductions because of this DERA vehicle replacement project:

Awardee	Vehicle Type	Number of Vehicles	Pollutant (annual tons reduced)		
			NOx	PM2.5	GHG
Sundown Seafood	Commercial Marine Vessel	1	2.47	0.0291	3.60
City of Wilmington	Refuse Hauler	1	0.09	0.0005	35.6
City of Charlotte	Transit Bus	1	0.27	0.0018	141.2
Waste Management	Refuse Hauler	1	0.19	0.0004	9.9
Waste Management	Refuse Hauler	1	0.21	0.016	7.7
Waste Management	Refuse Hauler	1	0.23	0.001	12.8
Waste Management	Refuse Hauler	1	0.16	0.0004	9.1
	Total	7	3.6	0.0492	219.9

The Sundown Seafood project will replace a 2000 diesel engine with new 2021 engine.

The City of Wilmington project will replace a 2008 diesel refuse hauler with an all-electric 2021 refuse hauler and install charging infrastructure.

The City of Charlotte project will replace a 2007 diesel transit bus with an all-electric 2021 transit bus.

The Waste Management project will replace a 2006, two 2007, and a 2009 model year diesel refuse hauler with four 2021 model year compressed natural gas refuse haulers.

Estimate of Anticipated NOx Reductions (5.2.3):

The estimated emissions were calculated using the EPA's Diesel Emission Quantifier (DEQ). The anticipated annual NOx emissions reduction from the DERA Option projects is 3.6 annual tons of NOx.

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

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 2014 National Emissions Inventory (Version 2) 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 2020 Priority County List for North Carolina

Brunswick	Cabarrus	Carteret	Currituck
Dare	Gaston	Iredell	Lincoln
Mecklenburg	New Hanover	Pamlico	Pender
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	\$2,847,700.01	\$491,487.11	\$339,805.81	\$2,016,407.09
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	\$2,847,700.01	\$491,487.11	\$339,805.81	\$2,016,407.09
Percentage	100%	17.3%	11.9%	70.8%

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

TIMELINE AND MILESTONES:

Task	Date Completed
DERA application submittal due on www.Grants.gov	May 8, 2020
State Clean Diesel Award received from EPA	August 5, 2020
NCDEQ selects grant recipients	December 2, 2020
NCDEQ notification of awarded projects to awardees	January 2021
NCDEQ submits D-4 and other required forms to Trustee	February 19, 2021
NCDEQ submits Attachment A to Trustee	February 19, 2021
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	May 1, 2021
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	May 2021 to October 2022
Subgrantee submits final reports to with proof of destruction to NCDEQ	September 30, 2022
NCDEQ submits final report to EPA	No later than 90 days after September 30, 2022

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 website,
2. Quarterly Reports submitted to the Environmental Protection Agency on the FY 2020 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 2020 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 D

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

Attachment D
State of North Carolina VW Settlement Phase 1 Awards
DERA Option - Vehicle List

Awardee	Vehicle Replacement Type	Number of Vehicles Awarded	Fuel Type	NOx Emission Reductions (annual tons)	Replacement Cost per Vehicle	NCDEQ Awarded Amount	Share Total Budget Funded by the DERA	Share Total Budget Funded by the Trust	Cost-Share Amount
Sundown Seafood	Commercial Marine Vessel	1	Diesel	2.47	\$43,000.00	\$10,500.00	\$0.00	\$10,500.00	\$32,500.00
City of Wilmington	Refuse Hauler	1	All-Electric	0.09	\$601,302.05	\$270,585.92	\$0.00	\$270,585.92	\$330,716.13
City of Charlotte	Transit Bus	1	All-Electric	0.27	\$867,127.00	\$390,207.00	\$339,805.81	\$50,401.19	\$476,920.00
Waste Management	Refuse Hauler	1	CNG	0.19	\$328,265.02	\$40,000.00	\$0.00	\$40,000.00	\$288,265.02
Waste Management	Refuse Hauler	1	CNG	0.21	\$339,870.46	\$40,000.00	\$0.00	\$40,000.00	\$299,870.46
Waste Management	Refuse Hauler	1	CNG	0.23	\$328,265.02	\$40,000.00	\$0.00	\$40,000.00	\$288,265.02
Waste Management	Refuse Hauler	1	CNG	0.16	\$339,870.46	\$40,000.00	\$0.00	\$40,000.00	\$299,870.46
		7		3.6	\$2,847,700.01	\$831,292.92	\$339,805.81	\$491,487.11	\$2,016,407.09

**Project Budget - DERA Option
Project Summary**

Awardee	Total Approved Budget	Share of Total Budget paid by Federal DERA program	Share Total Budget Funded by the Trust	Cost-Share Amount Paid by Recipient
Sundown Seafood	\$43,000.00	\$0.00	\$10,500.00	\$32,500.00
City of Wilmington	\$601,302.05	\$0.00	\$270,585.92	\$330,716.13
City of Charlotte	\$867,127.00	\$339,805.81	\$50,401.19	\$476,920.00
Waste Management Carolinas	\$1,336,270.96	\$0.00	\$160,000.00	\$1,176,270.96
Project Totals	\$2,847,700.01	\$339,805.81	\$491,487.11	\$2,016,407.09

ATTACHMENT E
DERA Option (5.2.12)

Phillips, Brian

From: Carnright, William <carnright.william@epa.gov>
Sent: Tuesday, February 9, 2021 3:02 PM
To: Vitas, Jill B
Cc: Evans, Katherine; Phillips, Brian
Subject: [External] RE: Extension Request and Budget Changes for DERA Grant DS-00D95219-2

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Thanks Jill!

I have reviewed and approve this extension request. I spoke to Katherine today in regards to your question on whether this would be one or two actions (to account for both the time extension and the additional funds) and she confirmed that this can be done in one action.

Will

William Carnright, Environmental Engineer
U.S. Environmental Protection Agency | Region 4
61 Forsyth St. SW, Atlanta, GA 30303
carnright.william@epa.gov | (404)-562-9202

From: Vitas, Jill B <Jill.Vitas@ncdenr.gov>
Sent: Monday, February 8, 2021 1:00 PM
To: Carnright, William <carnright.william@epa.gov>; Evans, Katherine <Evans.Katherine@epa.gov>
Cc: Phillips, Brian <brian.phillips@ncdenr.gov>; Hall, Steve <steve.hall@ncdenr.gov>; Kelly, Karen <Karen.Kelly@ncdenr.gov>; Trombley, Wanda C <Wanda.Trombley@ncdenr.gov>; Godwin, Michele D <michele.godwin@ncdenr.gov>
Subject: Extension Request and Budget Changes for DERA Grant DS-00D95219-2

Will and Katherine,

Attached please find the letter of submittal and revised work plan and budget narrative for North Carolina's extension request to September 30, 2022 and budget changes to reflect the addition of \$ 491,487.11 in VW Mitigation funds to our 2020 DERA Grant. Please let me know if there is additional documentation necessary to complete these changes. If you have any questions or concerns please feel free to call me at 919-707-8424 or e-mail me at jill.vitas@ncdenr.gov.

Kind regards,

Jill



Jill Vitas
Environmental Engineer II Mobile Sources Compliance Branch
North Carolina Department of Environmental Quality
919.707.8424 (Office)
Jill.Vitas@ncdenr.gov

Environmental records released from this website in August 2011 by North Carolina Public Records Law and the Environmental Policy Act.

(Physical address) 217 West Jones Street
Raleigh, NC 27603
(Mailing Address) 1641 Mail Service Center
Raleigh, NC 27699-1641

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL ABRACZINSKAS
Director



NORTH CAROLINA
Environmental Quality

February 8, 2021

William Carnright & Katherine Evans
U.S. Environmental Protection Agency Region 4
61 Forsyth St. SW
Atlanta, GA 30303

Dear Mr. Carnright and Ms. Evans:

The North Carolina Department of Environmental Quality (NC DEQ) requests the Environmental Protection Agency (EPA) to provide an extension to the 2019/2020 State Clean Diesel Grant Program from the current end date of September 30, 2021 to September 30, 2022. In an email from Jason Wilcox, it was indicated that a year extension to September 30, 2022, would be available due to issues associated with the COVID-19 pandemic. Therefore, NC DEQ is requesting this extension to allow all funded projects to reach completion in a timely manner.

In addition to the extension, NC DEQ made the decision to fully fund five eligible applications that were received. In order to fully fund the applications, additional funding will be sought through North Carolina's Volkswagen Mitigation Plan in the amount of \$491,487.11.

The work plan and budget narrative included in Attachment 1 outline both the time extension and the addition of the Volkswagen funds.

Please contact me at (919) 707-8424 if you have any questions or concerns with this request.

Sincerely,

A handwritten signature in cursive script that reads "Jill B. Vitas".

Jill B. Vitas
DERA Grant Coordinator

cc: Michele Godwin
Karen Kelly
Wanda Trombley



North Carolina Department of Environmental Quality | Division of Air Quality
217 West Jones Street | 1641 Mail Service Center | Raleigh, North Carolina 27699-1641
919.707.8400

2020 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative Template

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

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

SUMMARY PAGE

Project Title:

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:

	2019	2020
EPA Base Allocation	\$328,887	\$358,032
EPA Match Bonus (if applicable)	\$0	\$0
State or Territory Voluntary Matching Funds (if applicable)*	\$0	\$491,487.11*
Mandatory Cost-Share	\$2,828,937.84**	
TOTAL Project Cost	\$4,007,343.95**	
Other Leveraged Funds	\$0	\$0

* State matching funds will be from the North Carolina VW Settlement allocation using the DERA Option

**Based on actual applications received through the RFP process

Project Period

October 1, 2019 – September 30, 2022

Summary Statement

Funds granted through the 2020 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 2020 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 2020 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 nonroad 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 nonroad 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 2014 National Emissions Inventory (NEI) version 2.

	NO_x (tons/year)	PM_{2.5} (tons/year)
Locomotives	7,304	213
Commercial Marine Vessels	10,953	303
Diesel Nonroad Equipment	23,439	1,887
On-Road Diesel Heavy Duty Vehicles	49,716	2,314

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 nonroad engines, equipment and vehicles, and locomotives. Based on the types of eligible projects for funding under the 2020 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

Onroad 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 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

NC 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 NC 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	August – October 2020
State Clean Diesel Award received	October 1, 2020
Request for Proposals closed	October 2020
Application review and selection	October 2020 – December 2020
Formal contract agreement preparation and processing	January – March 2021
Subgrantees begin project work	April 2021
DAQ submits 1 st quarterly report to EPA	January 2021
DAQ submits 2 nd quarterly report to EPA	April 2021
DAQ submits 3 rd quarterly report to EPA	July 2021
DAQ submits 4 th quarterly report to EPA	October 2021
DAQ submits 5 th quarterly report to EPA	January 2022
DAQ submits 6 th quarterly report to EPA	April 2022
Subgrantee submits final reports to DAQ	September 30, 2022
DAQ submits 7 th quarterly report to EPA	July 2022
DAQ submits 8 th quarterly report to EPA	October 2022
DAQ submits final report to EPA	No later than 90 days after September 30, 2022

DERA PROGRAMMATIC PRIORITIES:

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

Brunswick	Cabarrus	Carteret	Currituck
Dare	Gaston	Iredell	Lincoln
Mecklenburg	New Hanover	Pamlico	Pender
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:

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 populace 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.

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.

In October/November 2020, DAQ received ten applications for DERA funding. Of these applications, seven were eligible for funding per the EPA program requirements. DAQ has committed to fund five of the seven eligible projects under this grant. Using the EPA's Diesel Emissions Quantifier, estimates of the annual emissions benefits for these projects are found in the table below.

Project Description	NOx (tons/year)	PM_{2.5} (tons/year)	Green House Gas (tons/year) measured as CO₂
Commercial marine fishing vessel repower	2.5	0.0291	3.6
Refuse hauler all-electric replacement	0.1	0.0005	35.6
Transit bus all-electric replacement	0.3	0.0018	141.2
Refuse hauler CNG replacement	0.8	0.0171	39.6
Short haul vehicle replacement	1.3	0.0784	19.3
Forklift replacement	3.2	0.5275	24.3
TOTAL	8.1	0.6527	263.6

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.

BUDGET NARRATIVE

This section of the work plan should include a detailed itemized budget proposal (in addition to the Standard Form 424A), using the table below. Justify the expenses for each of the categories being performed within the grant/project period. Indicate which costs will be paid by the state's or territory's allocation from EPA (which would include the bonus match, if applicable) and which costs will be paid by the state's or territory's voluntary matching funds, if applicable.

Applicants must **itemize** costs related to personnel, fringe benefits, travel, equipment, supplies, contractual costs, other direct costs, indirect costs, and total costs. If the project budget includes any cost-share, mandatory or voluntary, the budget detail portion of the work plan must include a detailed description of how the applicant will obtain the cost-share and how the cost-share funding will be used. Applicants may not know the final projects at the time of submitting the application, but are encouraged to include a best estimate of the type and quantity of equipment impacted by the grant and the corresponding cost-shares.

If EPA accepts an offer for a voluntary cost-share, applicants must meet their sharing commitment in order to receive EPA funding. If the proposed cost-share is to be provided by a third-party, a letter of commitment is encouraged. Any form of cost-share included in the budget detail must also be included on the SF-424 and SF-424A.

Applicants should use the following instructions, budget category descriptions and example table to complete the budget detail section of the work plan. Detailed sample budgets representing various mandatory cost-share versus state voluntary match scenarios are available at: www.epa.gov/cleandiesel/clean-diesel-state-allocations.

2019/2020 Itemized Project Budget

Budget Category	2019 EPA Allocation	2020 EPA Allocation	Mandatory Cost-Share	Voluntary Match (if applicable)		Line Total
				VW Mitigation Trust Funds	Other Funds	
1. Personnel	\$19,237.24	\$33,639.15	\$ -	\$ -		\$52,876.38
2. Fringe Benefits	\$6,837.88	\$12,038.01	\$ -	\$ -		\$18,875.89
3. Travel	\$2,000.00	\$2,130.00	\$ -	\$ -		\$4,130.00
4. Equipment	\$ -	\$ -	\$ -	\$ -		\$ -
5. Supplies	\$250.00	\$250.00	\$ -	\$ -		\$500.00
6. Contractual	\$3,958.24	\$8,018.40	\$ -	\$ -		\$11,976.64
7. Other	\$293,910.43	\$297,246.96	\$2,828,937.84	\$491,487.11		\$3,911,582.34
8. Total Direct Charges (sum 1-7)	\$326,193.79	\$353,322.52	\$2,828,937.84	\$491,487.11		\$3,999,941.25
9. Indirect Charges	\$2,693.21	\$4,709.48	\$ -	\$ -		\$7,402.69
10. Total (Indirect + Direct)	\$328,887.00	\$358,032.00	\$2,828,937.84	\$491,487.11		\$4,007,343.95
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.** This category includes only direct costs for the salaries of those individuals who will perform work directly for the project (generally, paid employees of the applicant organization). If the applicant organization is including staff time (in-kind services) as a cost share, this should be included as Personnel costs. Personnel costs do not include: (1) costs for services of consultants, contractors, consortia members, or other partner organizations, which are included in the “Contractual” category; (2) costs for employees of subrecipients under subawards, which are included in the “Other” category; or (3) effort that is not directly in support of the proposed project, which may be covered by the organization’s negotiated indirect cost rate. The budget detail must identify the personnel category type by Full Time Equivalent (FTE), including percentage of FTE for part-time employees, number of personnel proposed for each category, and the estimated funding amounts.

Employee	2019	2020	2021*	Total
Environmental Engineer (20% of time)	\$14,401.92	\$14,401.91	\$14,401.91	\$43,205.74
Environmental Program Supervisor (5% of time)	\$4,835.32	\$4,835.32	\$ -	\$9,670.64
Total	\$19,237.24	\$19,237.23	\$14,401.91	\$52,876.38

* With the extension of the grant period from September 30, 2021 to September 30, 2022 the Environmental Engineer will require another year of salary to oversee the program.

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.** Fringe benefits are allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to the cost of leave, employee insurance, pensions and unemployment benefit plans.

Fringe Benefit Category	2019	2020	2021*	Total
Medical (25% of medical benefits)	\$1,576.50	\$1,576.50	\$1,261.21	\$4,414.21
Retirement (19.7% of salaries)	\$3,789.74	\$3,789.74	\$2,837.17	\$10,416.65
Social Security (7.65% of salaries)	\$1,471.64	\$1,471.64	\$1,101.75	\$4,045.03
Total	\$6,837.88	\$6,837.88	\$5,200.13	\$18,875.89

* With the extension of the grant period from September 30, 2021 to September 30, 2022 additional fringe benefits will be required to oversee the program.

- **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 may be integral to the purpose of the proposed project (e.g. inspections) or related to proposed project activities (e.g. attendance at meetings). Travel costs do not include: (1) costs for travel of consultants, contractors, consortia members, or other partner organizations, which are included in the “Contractual” category; (2) travel costs for employees of subrecipients under subawards, which are included in the “Other” category.

Travel is estimated at the cost of the Environmental Engineer, Program Consultant and Environmental Engineering Supervisor to attend the annual STRIDE/SEDC conference. It will also cover a mileage allowance for two of the grant selection committee members. Annual STRIDE/SEDC Conference – airfare for three personnel (\$750), hotel expenses for three personnel (\$800), cost per diem at three days @ \$42.10/day for three personnel (\$379), and ground transportation and parking costs (\$200). Total travel cost of \$2,130.

- **Supplies - “Supplies” means all tangible personal property other than “equipment”.** The budget detail should identify categories of supplies to be procured (e.g., laboratory supplies or office supplies). Non-tangible goods and services associated with supplies, such as printing service, photocopy services, and rental costs should be included in the “Other” category.

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.** Equipment also includes accessories necessary to make the equipment operational. Equipment does not include: (1) equipment planned to be leased/rented, including lease/purchase agreement; or (2) equipment service or maintenance contracts. These types of proposed costs should be included in the “Other” category. Items with a unit cost of less than \$5,000 should be categorized as supplies, pursuant to 2 CFR Part 200. The budget detail must include an itemized listing of all equipment proposed under the project.

No equipment will be purchased.

- **Contractual - Identify each proposed contract and specify its purpose and estimated cost.** Contractual/consultant services are those services to be carried out by an individual or organization, other than the applicant, in the form of a procurement relationship. Leased or rented goods (equipment or supplies) should be included in the “Other” category. The applicant should list the proposed contract activities along with a brief description of the scope of work or services to be provided, proposed duration, and proposed procurement method (competitive or non-competitive), if known.

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 for a total of \$11,976.64 (including the additional oversight assistance for the extension from 2021 to 2022).

- **Other - List each item in sufficient detail for EPA to determine the reasonableness and allowability of its cost.** This category should include only those types of direct costs that do not fit in any of the other budget categories. Examples of costs that may be in this category are: insurance, rental/lease of equipment or supplies, equipment service or maintenance contracts, printing or photocopying, participant support costs (i.e., rebates) and subaward costs.

Subawards (e.g., subgrants) and participant support costs are each a distinct type of cost under this category. The term “subaward” means an award of financial assistance (money or property) by any legal agreement made by the recipient to an eligible subrecipient even if the agreement is referred to as a contract. Rebates, subsidies, and similar one-time, lump-sum payments to program beneficiaries for the purchase of eligible emission control technologies and vehicle replacements are considered to be “participant support costs.” Please refer to Appendix A of the DERA State Program Guide for detailed guidance on funding projects and partnerships and how to correctly categorize these costs in the workplan budget, as well as [RAIN-2018-G05, “Interim EPA Guidance on Participant Support Costs.”](#)

“Other” does not include procurement purchases, technical assistance in the form of services instead of money, or other assistance in the form of revenue sharing, loans, loan guarantees, interest subsidies, insurance, or direct appropriations. Subcontracts are not subawards and belong in the contractual category. Applicants must provide the aggregate amount they propose to issue as subaward work or participant support costs as a separate line item in the “Other” category, and a description of the types of activities to be supported. Refer to [EPA’s Subaward Policy and supplemental Frequent Questions](#) for additional guidance.

Project Description	Total Request Funds	EPA Allocation	Voluntary Cost Share (VW)	Total Matching Funds from Subawardee
Commercial marine fishing vessel repower	\$10,500.00	\$0	\$10,500	\$32,500.00
Refuse hauler all-electric replacement	\$270,585.92	\$0	\$270,585.92	\$330,716.13
Transit bus all-electric replacement	\$390,207.00	\$339,805.81	\$50,401.19	\$476,920.00
Refuse hauler CNG replacement	\$160,000.00	\$0	\$160,000.00	\$1,176,270.00
Short haul vehicle and forklift replacement	\$251,351.58	\$251,351.58	\$0	\$812,530.75
Total	\$1,082,644.50	\$591,157.39	\$491,487.11	\$2,828,937.84

- **Indirect Charges - If indirect charges are budgeted, indicate the approved rate and base.** Indirect costs are those incurred by the grantee for a common or joint purpose that benefit more than one cost objective or project, and are not readily assignable to specific cost objectives or projects as a direct cost. In order for indirect costs to be allowable, the applicant must have a federal or state negotiated indirect cost rate (e.g., fixed, predetermined, final or provisional), or must have submitted a proposal to the cognizant Federal or State agency. Examples of Indirect Cost Rate calculations are shown below:
 - Personnel (Indirect Rate x Personnel = Indirect Costs)
 - Personnel and Fringe (Indirect Rate x Personnel & Fringe = Indirect Costs)
 - Total Direct Costs (Indirect Rate x Total direct costs = Indirect Costs)
 - Direct Costs minus distorting or other factors such as contracts and equipment
(Indirect Rate x (total direct cost – distorting factors) = Indirect Costs)

Indirect charges: Personnel (Indirect Rate x Personnel = Indirect Costs)

(Indirect Rate: 14%)

Indirect Charges: $\$52,876.38 \times 0.14 = \$7,402.69$ (based on the additional oversight with the extension from September 30, 2021 to September 30, 2022)

Administrative Costs Expense Cap

States and territories must demonstrate that no more than 15% of a state's or territory's total project costs are being used to cover administrative costs as identified in OMB Circular A-87 Appendix B (e.g. personnel, benefits, travel, supplies). Total project costs include the federal share as well as any cost-share provided by the state. However, Regions have the discretion to allow state matching funds to exceed the 15% cap if the state provides justification for unique circumstances. The 15% maximum does not include indirect cost rates or funds assigned to projects, and total cost for the budget period.

Based on the budget as outlined above, NC DAQ's administrative expenses for this grant are 13.9% (representing the EPA allocation) which is under the 15% maximum. The additional administrative costs are being met with VW Trust Funds as outlined above.

Matching Funds and Cost-Share Funds

States and territories must provide a detailed description of the source of funding for any voluntary match or mandatory cost-share funds included in the project budget, if applicable. Include details on when the match will be available for use. If applicable, include letters of financial support, which specifically indicate how supporting organizations will assist in the project.

See Sections V.D and X of the Program Guide for more information on the voluntary matching incentive and mandatory cost-share funds.

NC DAQ will not be matching EPA funding and therefore will not be receiving the bonus funding from EPA. Subgrantees will be required to provide mandatory cost share and based on the 2019 and 2020 base allocation of \$686,919 and as shown in the table on page 14 the total mandatory cost match will be \$2,828,937.84.

Funding Partnerships

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

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