Environmental Advisory Commission

April 5, 2018

5:30pm City Council Chambers

Agenda

Greenville NORTH CAROLINA

Find yourself in good company

Basic Motions

Motion
Calls for Action
Debatable
Simple Majority

Motion to Amend
Changes Original
Debatable
Simple Majority

Other Motions

Table
Postpone Vote
No Discussion
Simple Majority

Close Debate
End Debate & Vote
No Discussion
2/3 Majority

Reconsider
Change Prior Decision
Voted in Majority
Within One Meeting
Debatable
2/3 Majority

Recess
Take a Short Break
No Discussion
Simple Majority

Consensus Process
If 1-Vote Majority
Debatable
3 Votes to Pass

Adjourn
End the Meeting
No Discussion
Simple Majority

Actions and discussion are governed by motions. Only 3 motions on the table at once (a 4th would be out of order). Most recent motion is considered first.

❑ **Convene meeting + Reminder: Turn off Cell Phone**

I. Roll Call/Quorum _____ Board Members (quorum = 4)

II. Pledge of Allegiance

III. Additions/Deletions/Approval of Agenda

IV. Approval of March 1, 2018 Minutes (Attachment A)

V. Announcements

VI. Public Comment Period

Public Comment Period is a period reserved for comments by the public. A total of 30 minutes is allocated with each individual being allowed no more than 3 minutes each. The Public Comment Period will be closed once the allocated time has been reached.

VII. New Business

a. 2018-2019 EAC Grant – No applications received (5 mins) E. Kane

VIII. Old Business

a. Sustainability Reports Discussion (15 mins) – C. Becker

IX. Commission Reports

a. ECU Sustainability Report (10 mins) – C. Carwein
b. Community Appearance Commission Update (10 mins) D. Ames
c. SWAC Update (10 mins) D. Brinkley

X. Other – FYI

a. Volkswagen Draft Mitigation Plan (Attachment B)

XI. Proposed Agenda Items – May 3, 2018

a. Bike & Pedestrian Commission Update (E. Kane)
b. Volkswagen Settlement Mitigation Plan Update (D. Tyson)
c. SWAC Update (D. Brinkley)
d. Cool Cities Initiative Update
e. Plastic Bag Resolution Update
f. Volkswagen Settlement Update

XII. Adjourn

Items for Future Consideration

_____	_____
_____	_____
_____	_____

2018

Board Members

Chair

1. Durk Tyson

Commission Members

2. David Ames
3. Drake Brinkley
4. Nathaniel Hamilton
5. Emilie Kane (Vice-Chair)
6. Ann Maxwell
7. Diego LLerena

Ex-officio

Kevin Mulligan
(Public Works)

Staff Liaison

Daryl Norris
(Public Works)

City Council Liaison

Brian Meyerhoeffer

Environmental Advisory Commission Mission:

The Environmental Advisory Commission is hereby created for the primary purpose of recommending matters of environmental concern and serve as technical advisory to the City Council.

Environmental Advisory Commission Purpose:

- Inventory and review, on a continuing basis, the condition of and threats to the environmental resources of the City; and as technical advisors, to report all needs for improvement and corrective actions to the City Council.
- To be advisory to the City Council. The commission will recommend to the City Council matters of city-wide environmental concern and shall serve as technical advisors to the City Council on environmental matters. In addition, it will review Environmental Impact Statements required by the City on major development projects.

ATTACHMENT A

(March 1, 2018 Minutes)

Action: For your review and approval.

DRAFT OF MINUTES PROPOSED FOR ADOPTION BY THE ENVIRONMENTAL ADVISORY COMMISSION MARCH 1, 2018

CALL TO ORDER

Members of the Environmental Advisory Commission met on the above date at 5:30 p.m. in the City Council Chambers. Durk Tyson, Chairperson, called the meeting to order and welcomed all those present. The following attended the meeting:

1. ROLL CALL

MEMBERS:

David Ames
Nathaniel Hamilton
Diego LLerena
Durk Tyson
Drake Brinkley
Emilie Kane
Ann Maxwell

OTHERS PRESENT:

Brian Meyerhoeffer, Council Member
Daryl Norris, City of Greenville
Amanda Braddy, City of Greenville
Craig Becker, ECU

2. PLEDGE OF ALLEGIANCE

3. ADDITIONS/DELETIONS TO THE AGENDA

With the absence of Mr. Carwein, Item IX A. ECU Sustainability Report, this item was tabled. Dr. Kane made a motion to approve the agenda as amended. The motion was seconded by Dr. Ames and passed unanimously.

4. APPROVAL OF FEBRUARY 1, 2018 MINUTES

A motion was made by Dr. Hamilton to approve the minutes of February 1, 2018 as presented. The motion was seconded by Ms. Maxwell and passed unanimously.

5. ANNOUCEMENTS

Ms. Maxwell announced that the Town Creek Culvert Public Information meeting will be held on March 5, 2018 at 6pm in City Council Chambers.

6. PUBLIC COMMENT PERIOD

There were no public comments

7. NEW BUSINESS

NONE

8. OLD BUSINESS

A. Volkswagen Settlement Update

Mr. Tyson forwarded an email to members regarding the Volkswagen Settlement. The NC Division of Air Quality (NCDAQ) has posted all Requests for Information responses to their web page.

NCDAQ staff is currently working on a draft of the State Mitigation Plan, which they anticipate posting online in mid-March. NCDAQ is also working to schedule a series of stakeholder meetings across the state. Dates and times will be included along with the draft mitigation plan.

For additional information, visit https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-and-air-quality/volkswagen-settlement/volkswagen.

B. Sustainability Report Discussion

Dr. Becker requested staff to provide a timeline of the Greenville Climate Protection Partnership (GCPP) completed efforts. Ms. Braddy will provide the minutes of GCPP to Dr. Becker. Council Member Meyerhoeffer also added that he had sent emails to the City Manager's office and the Public Works Director regarding sustainability efforts and Cool Cities initiatives. Council Member Meyerhoeffer will report back to the Commission with the follow up information. Mr. Tyson also contacted the City Manager's office to discuss the EAC's inquiry regarding a Sustainability Officer position.

9. Commission Reports

A. ECU Sustainability Report

This item was tabled.

B. Public Transportation & Parking Commission Update

Dr. Kane reported that she contacted the secretary for the Commission and received the most current minutes from the last meeting available. Dr. Kane also reported a parking study was being conducted and will be presented to City Council for approval.

C. Recreation & Parks Commission Update

Dr. Hamilton reported the Commission's last minutes available were November 2017. The minutes focused on the success of the Greenville Little League Baseball team. Plans for parks were also detailed as well as the possibility of a BMX park honoring Dave Mirra.

D. SWAC Update

Mr. Brinkley reported the focus of the last SWAC meeting was to access the level of service being provided by the Stormwater Management Utility Plan. The level of services currently being provided as compared to level or service desired were compared and discussion ensued regarding the fees that would be required to reach the desired level of service. The next SWAC meeting will be held on April 3, 2018 and will further discussion on funding sources. The consultant will be available for two more meetings. Dr. Kane asked if there were outside funding sources available for Stormwater Utility. Mr. Norris stated the Stormwater Utility fee could not be charged to citizens outside of the City limits. Mr. Norris further stated there were opportunities that could provide loans and grants to the City. However, the process was competitive for small amounts of funds and was more specific to particular issues.

10. OTHER– FYI

A. 2018-2019 EAC Grant – Reminder to promote
B. Keep Greenville Beautiful Update (See attachment)
C. UST Report (See attachment)
D. Sound Rivers Announcement (See attachment)

11. PROPOSED AGENDA ITEMS

The following items are proposed for the April 4, 2018 meeting:

A. 2018-2019 EAC Grant – Review & Discuss
B. Community Appearance Commission Update (D. Ames)
C. Redevelopment Commission Update (D. Brinkley)
D. Sustainability Report Discussion
E. SWAC Update

11. ADJOURNMENT

There being no further business to discuss, Mr. Tyson concluded the meeting by unanimous confirmation.

ATTACHMENT B

(Volkswagen Draft Mitigation Plan)

Action: For your information.

State of North Carolina

Draft

Volkswagen Mitigation Plan

Department of Environmental Quality

Division of Air Quality

March 2018

The following represents North Carolina's draft mitigation plan for the first phase of funding under the Volkswagen Environmental Mitigation Trust. The Department of Environmental Quality is taking comment on this draft plan through May 3, 2018. Several stakeholder meetings have been scheduled to take additional input from the public. The dates, times and locations of those meetings can be found on pages 14-15 of this document. Comments on this draft plan may be emailed to: daq.NC_VWGrants@ncdenr.gov.

Contents

I) Background and Summary of Volkswagen Settlement

On September 18, 2015, the U.S. Environmental Protection Agency (EPA) cited the Volkswagen Group of America, Inc. (VW) with a Notice of Violation (NOV) for noncompliance of Section 203(a)(3)(B) of the Clean Air Act (CAA), 42 U.S.C. §75229(a)(3)(B). This NOV was issued because VW manufactured and installed emissions defeat devices in certain model year 2009 – 2015 2.0-liter diesel engine light-duty vehicles that circumvented EPA's nitrogen oxide (NOx) emissions standard. The complaint filed by EPA alleges the defeat devices cause the vehicle's NOx emissions to exceed EPA's standards during normal driving conditions. During normal driving conditions, the software renders certain emission control systems inoperative resulting in NOx increased emissions.

On November 2, 2015, an additional NOV, citing the same Clean Air Act noncompliance, was issued to VW from EPA because the 3.0-liter diesel engine vehicles from model years 2009-2016 were found to have emissions defeat devices installed as well.

In November 2015, EPA referred this matter to the U.S. Department of Justice (DOJ) for initiation of appropriate enforcement action. The DOJ filed a complaint on behalf of EPA against VW as a result, on June 28, 2016, the U.S. lodged with the court a settlement with Volkswagen. This settlement only partially resolves the allegations against VW noncompliance of the Clean Air Act. This agreement is partial because it only addresses what VW must do to address the violation of the 2.0-liter diesel engine light-duty vehicles.

On December 20, 2016, the U.S lodged with the court a second settlement with VW. This settlement stipulates what VW must do to address the violation of the 3.0-liter diesel engine light-duty vehicles.

On February 24, 2017, in the U.S. District Court for the Northern District of California, the United States, through the DOJ's Environment and Natural Resources Division, filed an unopposed motion to select and appoint Wilmington Trust, N.A. as the trustee of the Environmental Mitigation Trust pursuant to the partial VW consent decree in United States v. Volkswagen AG et al. (Case No. 16-cv-295). Wilmington Trust was officially appointed by the court as the Trustee of the Environmental Mitigation Trust on March 15, 2017.

On September 12, 2017, in the DOJ submitted a proposed VW Settlement Environmental Mitigation Trust Agreement to the U.S. District Court in Northern California. The proposed agreement included revisions to the Environmental Mitigation Trust portion of the First and Second Partial Consent Decrees of the VW Settlement made by the selected trustee, Wilmington Trust, NA.

On October 2, 2017, the U.S. District Court for the Northern District of California, the United States, through the DOJ's Environment and Natural Resources Division, filed the final paperwork for the VW Settlement's Environmental Mitigation Trust and the Trust Effective Date was set as October 2, 2017. North Carolina submitted the Certification for Beneficiary Status paperwork to the trustee on December 1, 2017 and was officially named a state beneficiary on January 31, 2018.

Partial Settlement

In the partial settlement, VW and related entities have agreed to spend up to $14.7 billion to settle the allegations. VW is required to spend up to $10 billion to offer owners of the affected vehicles the option of having VW buy back the vehicle and offer lessees the option to cancel their lease at no cost. VW is also required to spend $4.7 billion to mitigate pollution and make investments that support zero emission vehicle (ZEV) technology.

In the second partial settlement, VW must offer buy back or lease terminations for 100% of the Generation 1.x vehicles and must offer an Emissions Compliant Recall for Generation 2.x and 3.0 liter subject vehicles. VW must achieve an overall recall rate of at least 85% of the affected vehicles or pay additional funds. VW is also required to spend $225 million to mitigate NOx pollution where the vehicles are or will be operated.

Mitigation Trust

$2.9 billion will be used to fund projects across the U.S. that will reduce NOx emissions where the 2.0-liter diesel engines were, are or will operate. These funds will be placed in a mitigation trust over three (3) years and will be administered by an independent trustee. All 50 states, Puerto Rico, the District of Columbia and Indian tribes may elect to become beneficiaries of the mitigation trust. Each participating beneficiary will be allocated funds from the $2.9 billion that can be used for eligible mitigation projects. The purpose of the mitigation projects is to reduce NOx emissions from heavy-duty diesel vehicles. The beneficiaries will have the option to choose which projects best suits their needs in the affected areas.

Zero Emission Vehicle Investment

Another $2 billion will be invested toward improving infrastructure, access and education to support and advance zero emission vehicles. The investments will be made over 10 years, with $1.2 billion directed toward a national EPA-approved investment plan and $800 million directed toward a California-specific investment plan. VW will solicit and consider input from states, cities, Indian tribes and federal agencies as part of developing the national plan.

The provisions of the U.S.-California settlement are contained in a proposed consent decree that was filed in the U.S. District Court for the Northern District of California on June 8, 2016.

II) NOx Emissions in North Carolina

The state will ensure that funded projects will support the mitigation plan goal. This goal will be achieved by establishing project selection priorities and criteria to be used to guide the solicitation of projects, project planning and the overall selection process. The categories of eligible mitigation projects deemed appropriate to achieve the plan's goal are based on mobile NOx emissions sources shown in Figure 1 and Table 1.

Figure 1: Breakdown of Mobile NOx Emissions in North Carolina (2014 NEIv2)

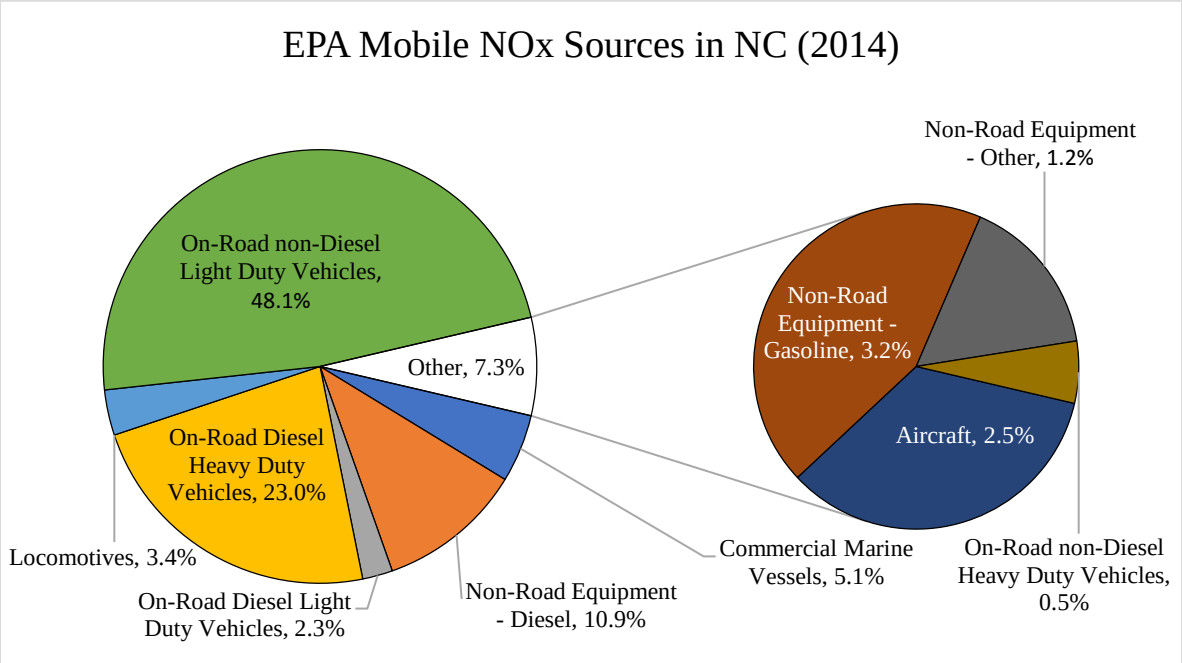


Table 1: Mobile Sector NOx Emissions by Source (Data from 2014 NEIv2)

Mobile NOx Emissions Source	Eligible	Emissions (tons/year)	Percentage
Commercial Marine Vessels	Y	10,953	5.08%
Non-Road Equipment – Diesel	Y	23,439	10.86%
On-Road Diesel Light Duty Vehicles	Y	4,850	2.25%
On-Road Diesel Heavy Duty Vehicles	Y	49,716	23.04%
Locomotives	Y	7,304	3.39%
On-Road Non-Diesel Heavy Duty Vehicles	N	981	0.45%
Aircraft	N	5,417	2.51%
Non-Road Equipment – Gasoline	N	6,846	3.17%
Non-Road Equipment – Other	N	2,514	1.17%
On-Road Non-Diesel Light Duty Vehicles	N	103,753	48.08%

To better understand the impact of the excess emissions from the VW vehicles in North Carolina, it is important to understand the current emissions inventory in North Carolina. According to the EPA's 2014v2 National Emission Inventory, emissions from eligible highway and non-road diesel-powered mobile sources account for approximately 96,263 tons per year of NOx in North Carolina in 2014. New EPA standards for diesel-powered vehicles and equipment with model year 2007 and newer engines, will ensure that newer medium and heavy-duty engines are less polluting. Many older diesel engines, however, can operate for 25 to 30 years before replacement is necessary. It may be many years before existing equipment is replaced with newer, cleaner equipment based on typical fleet turnover. It is likely that many older diesel engines not subject to the new federal emissions standards will continue to operate in the state for the near future. The EPA Diesel Emission Reduction Act (DERA) projects are one of the

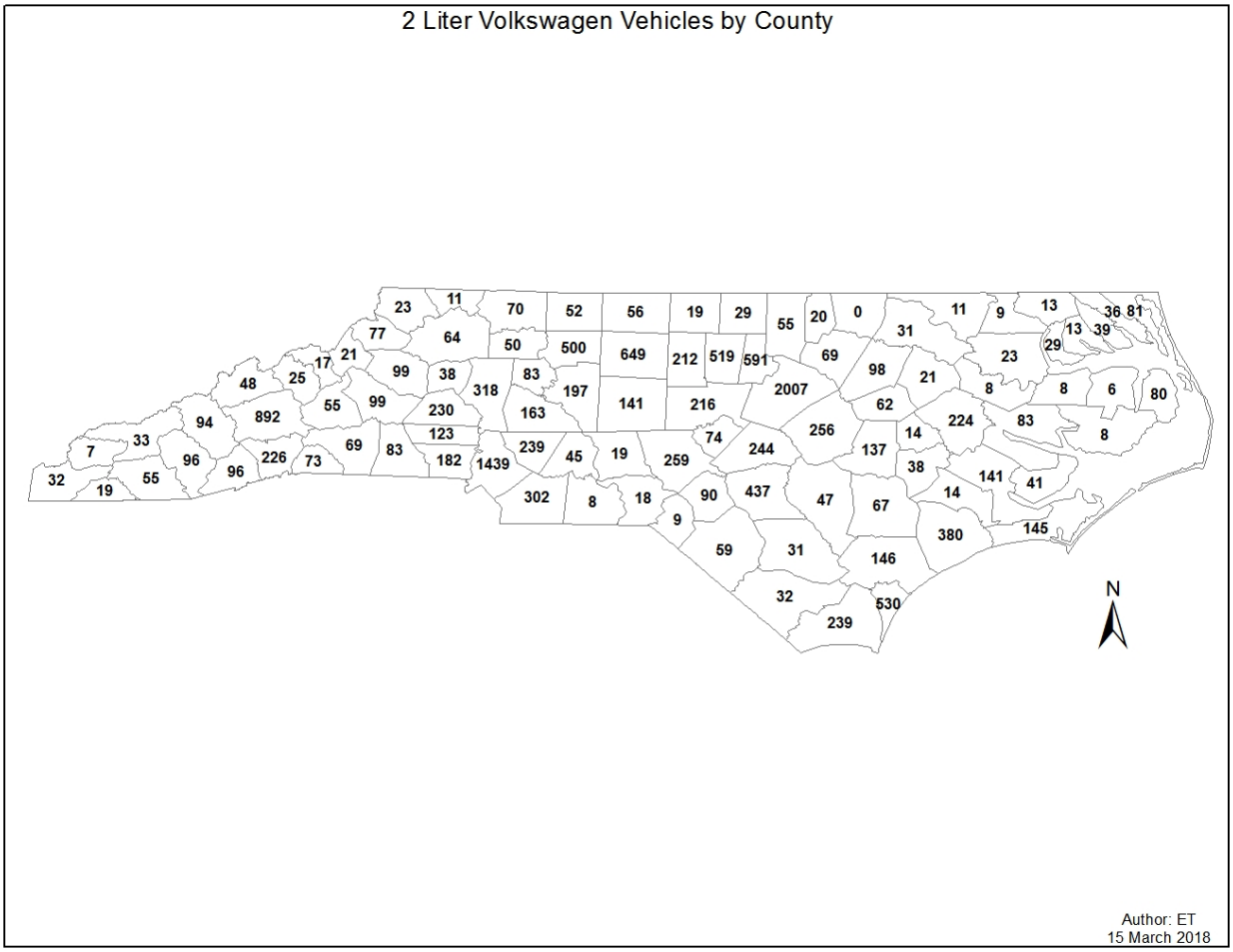
eligible categories deemed appropriate under the VW Mitigation Trust. The state currently uses funds awarded from DERA as a cost-effective strategy to reduce diesel emissions of NOx from diesel mobile source vehicles[1].

III) Location of VW Diesel Vehicles in North Carolina

The DEQ identified the number of vehicles per county that are subject to the VW settlement. Then a breakdown of county type (urban vs. rural) was determined using NC Rural Center county classifications. Combining these data, DEQ allocated subject vehicle by county type. These methods are shown graphically in the next few figures.

The following figures show where the subject VW diesel vehicles were registered in North Carolina for both the model year 2009 – 2015 2.0 Liter and model year 2009 – 2016 3.0 Liter vehicles based on 2016 NC Division of Motor Vehicles registration data.

Figure 2: 2009 – 2015 2.0 Liter VW Diesel Vehicles



[1] https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/mobile-source-emissions-reduction-grants

Figure 3: 2009 – 2016 3.0 Liter VW Diesel Vehicles

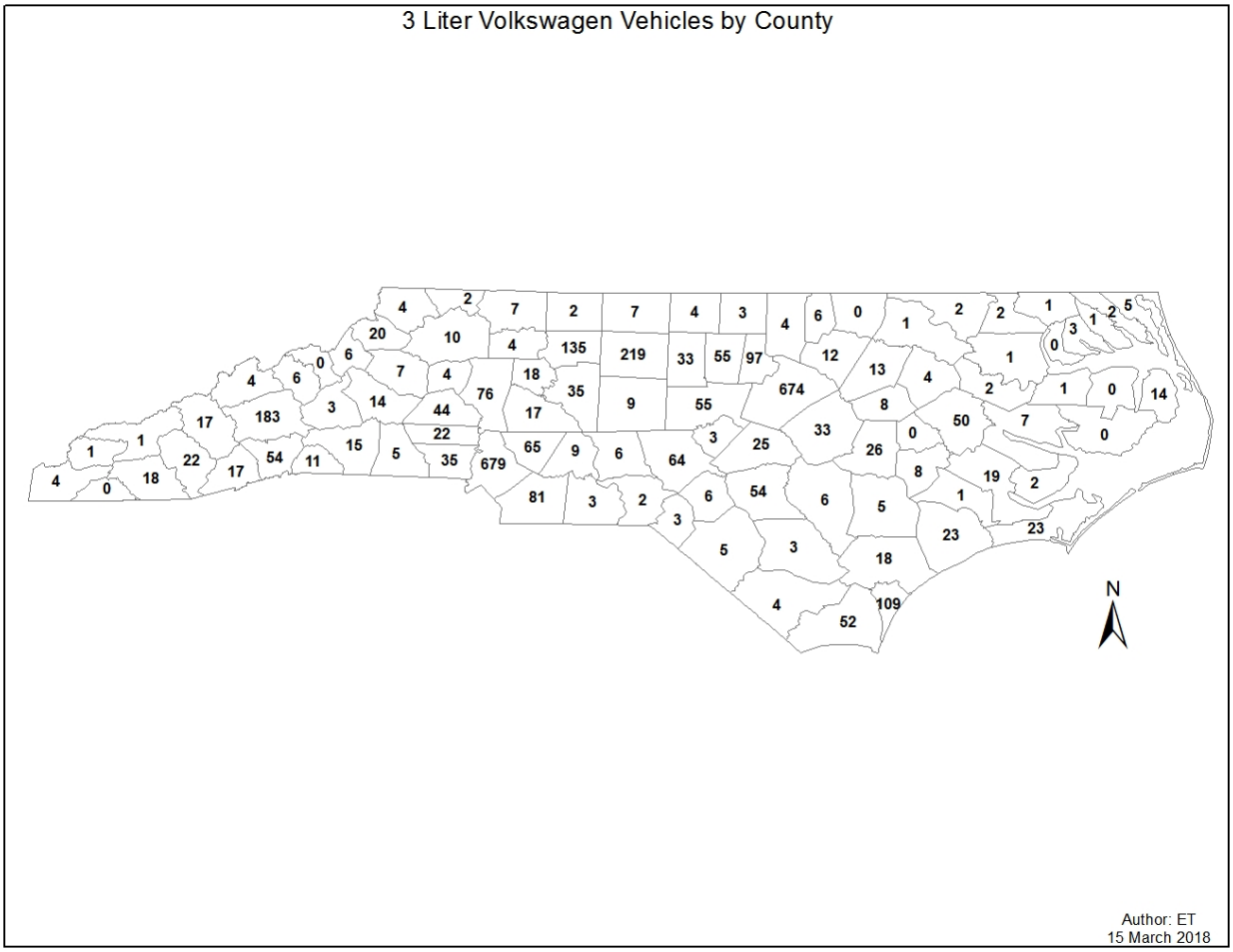
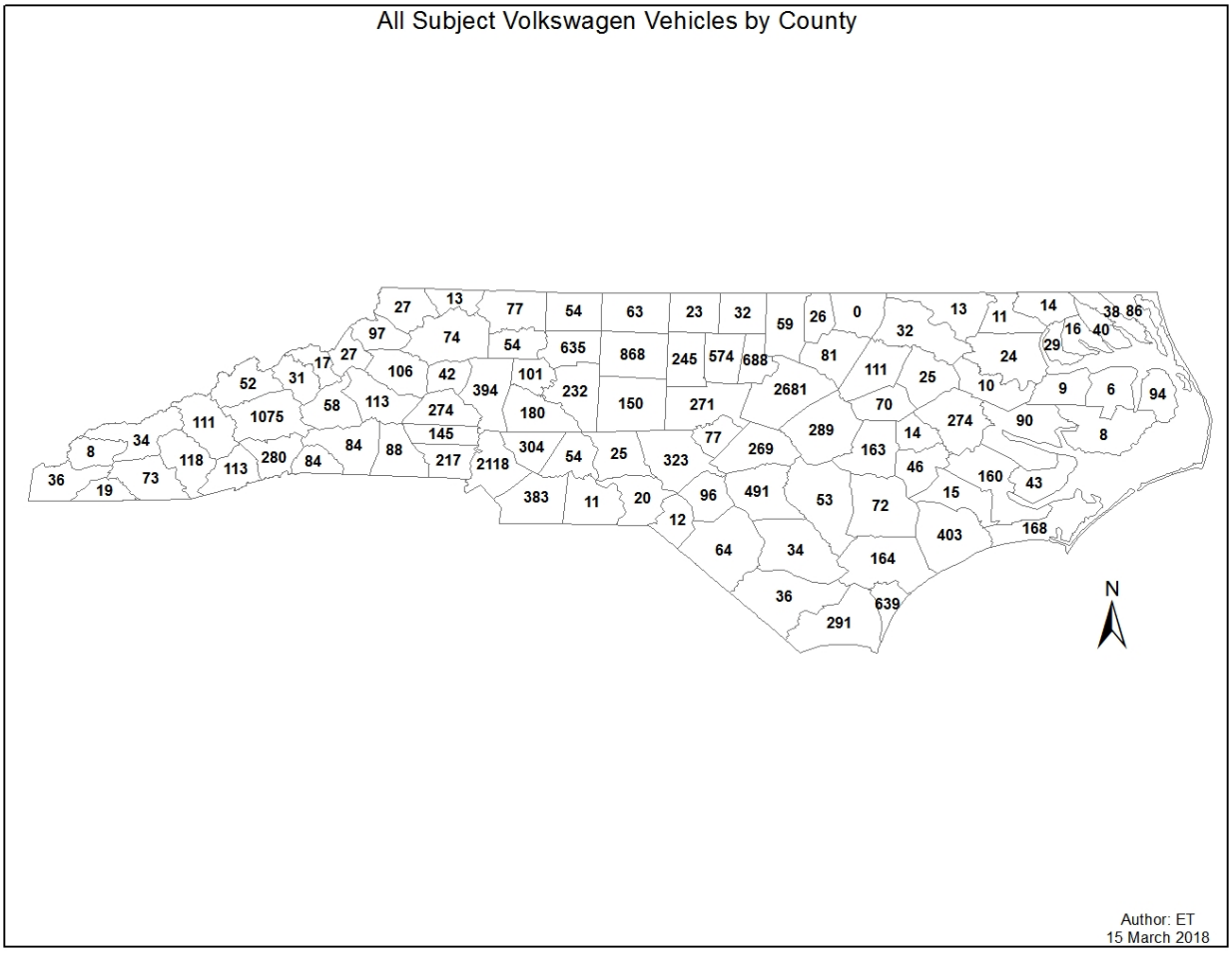
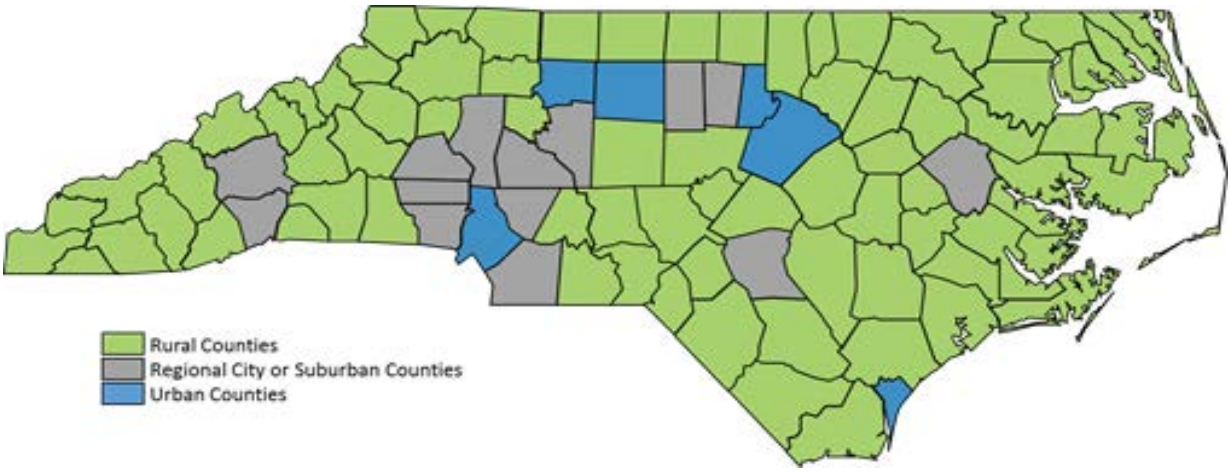


Figure 4: All VW Subject Diesel Vehicles



The North Carolina Rural Center has expanded its system for classifying counties to include a distinction for suburban counties. The Rural Center has grouped counties into three categories: rural, urban and regional city or suburban as shown in Figure 5 below.

Figure 5: N.C. County Classifications



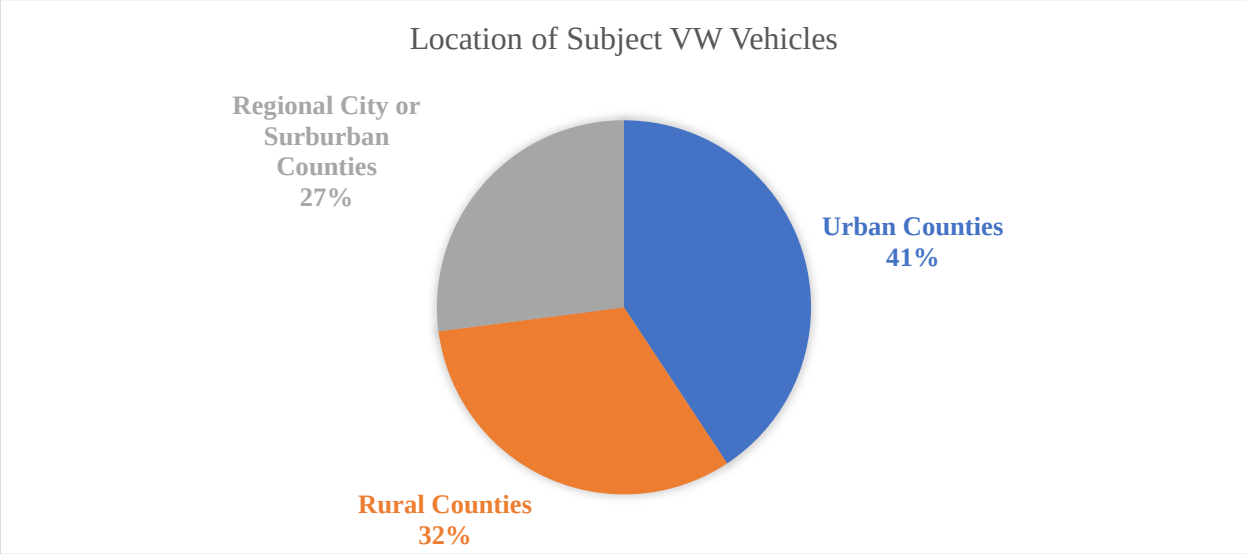
The Rural Center uses the following definitions in classifying counties:

Rural: There are 80 counties with population densities of 250 people per square mile or less, according to 2014 U.S. Census population estimates. These counties are home to a little more than 4 million people (41% of the state population).

Regional city or suburban counties: There are 14 counties with population densities between 250 and 750 people per square mile. These counties account for 2.4 million people (25% of the state population).

Urban: There are six counties with population densities between 750 and 1,933 people per square mile. These counties account for 3.3 million people (34% of the state population)[2].

Figure 6: Subject VW Vehicles by County Classification



Using the Rural Center classification for counties, urban counties account for the largest population of subject VW vehicles with 41% of the total. Rural counties account for 32% of the vehicles and regional city or suburban counties account for 27% of the VW vehicle population.

IV) Overall Goals for the Use of the Funds

The DEQ solicited input from North Carolinians across the state on how the VW settlement funds should be spent, and used the feedback to set goals for the funds to guide the DEQ on how to allocate the funds over the duration of the program. The DEQ will use the funds to achieve significant emissions reductions across the state. Based on the distribution of violating vehicles registered across the state (see Figure 6 above), the DEQ proposes investing 68% in urban and suburban counties and 32% in rural counties. The DEQ will submit requests to the trustee to use funds for projects throughout the state that will reduce or eliminate emissions of NOx focusing on the most cost-effective projects and other factors.

The following list indicates the DEQ's overall goals and is not meant to be exclusive. The DEQ may consider other qualifications and factors when determining whether to submit projects to the trustee for funding.

[2] https://www.nccommerce.com/lead/research-publications/the-lead-feed/artmid/11056/articleid/123/rural-center-expands-its-classification-of-north-carolina-counties

Elements Required in Beneficiary Mitigation Plan

Section 4.1 of the Trust Agreement (Appendix A of the Final Trust Agreement) specifies several elements that a Beneficiary Mitigation Plan (the Plan) must address:

1. The beneficiary's overall goal for the use of the funds;
2. The categories of Eligible Mitigation Actions the beneficiary anticipate will be appropriate to achieve the stated goals and the preliminary assessment of the percentages of funds anticipated to be used for each type of Eligible Mitigation Action;
3. A description of how the beneficiary will consider the potential beneficial impact of the selected Eligible Mitigation Actions on air quality in areas that bear a disproportionate share of the air pollution burden within its jurisdiction; and
4. A general description of the expected ranges of emission benefits the beneficiary estimates would be realized by implementation of the Eligible Mitigation Actions identified in the Beneficiary Mitigation Plan.

Additionally, the Plan shall explain the process by which the beneficiary shall seek and consider public input on the Plan. Information about public input is described separately, in Section X of this document.

Consideration will be given to distributing project funds statewide, as appropriate, primarily based on the cost-effectiveness and the quantity of NOx emission reductions. The DEQ anticipates the following:

1. Maximize the air quality benefits in North Carolina on a dollar per ton basis (i.e., capital cost effectiveness in dollar/ton);
2. Distribute settlement funds within the time allotted;
3. Award funds through a transparent public process;
4. Fully account for all funds and comply with legal requirements;
5. Focus on vehicles, engines and equipment operating in or near areas that bear a disproportionate share of the air pollution burden;
6. Devote 15% of trust funds to light duty zero emission vehicle (ZEV) supply equipment;
7. Enhance efficiency by utilizing or building on existing processes and programs to select projects;
8. Minimize administrative costs associated with overseeing the mitigation trust; and
9. Complement any investments in light duty ZEV supply equipment, access or education that Electrify America makes in North Carolina through the nationwide $2 billion Zero Emissions Vehicle Investment Commitment.

V) Funding Breakdown

North Carolina's allocation is set at $87,177,373.87 or 3.23% of the $2.9 billion settlement based on the number of registered subject vehicles in the state for the 2.0-Liter subject vehicles and $4,868,284.13 or 2.16% of the $225 million settlement for the 3.0-Liter subject vehicles for a total of $92,045,658.00. This value could increase if other states do not spend 80% of their allotted money on the 10-year anniversary of the Trust Effective Date (October 2, 2027). This value could also decrease if North Carolina does not spend at least 80% of the allotted funds on the 10-year anniversary of the Trust Effective Date. Per the consent decree, the DEQ may to apply up to 15% of its allocation from the mitigation trust funds for actual administrative expenditures associated with implementing Eligible Mitigation Actions. Administrative costs may include personnel costs, fringe benefit costs, supply costs, contractual costs and other eligible costs allowed in the consent decree.

The DEQ may request one-third of its total allocation during the first year or two- thirds of its allocation during the first two years after the trust is initially funded. Project funding will be awarded through a competitive process in accordance with North Carolina's procurement laws.

The DEQ will maintain and make publicly available via our web page all documentation submitted in the support of the funding request and all records supporting all expenditures of eligible mitigation project funds.

VI) Eligible Project Funding

Based on comments received during the DEQ's "Request for Information" in late 2017, there is interest in all eligible mitigation project categories. This feedback resulted in all categories being considered moving forward. The input also revealed a significant interest in devoting the maximum allowed (15% of the total allocation) to light duty zero emission vehicle supply equipment. Based on this feedback North Carolina is proposing to dedicate 15% of the total allocation to light duty zero emission vehicle supply equipment.

Under the settlement agreement, non-government and government entities are eligible to apply for funding to implement mitigation projects. However, based on the information received during the request for information in 2017, the public sector needs in the eligible mitigation categories far outweigh the available funding. Therefore, only public-sector projects are proposed in this first phase of the plan.

The DEQ is proposing a phased approach for North Carolina's $92 million allocation. A phased approach will allow the DEQ to:

- Build in transparency and involve the public in reviewing and revisiting the plan between phases;
- Learn which projects work best in North Carolina, and modify our requests for proposals in subsequent phases to emphasize the most effective projects;
- Identify areas in need of additional consideration as we request proposals; and
- Evolve with the constantly changing vehicle technology and invest in the most effective technology at the time.

The first phase of funding represents the beginning step in achieving our multi-year goals for the program. The proposed three phases of funding are:

- Phase 1: $30.68 million (33% of overall funds) – 2018 – 2020 – Phase 1 is the period addressed in this draft plan for government-sector projects only. We will solicit input and review and revise the plan for Phase 2 prior to the conclusion of Phase 1.
- Phase 2: $30.68 million (33% of overall funds) – 2020 – 2022 – We will develop the spending plan for Phase 2 after further public input. We will solicit input on spending priorities for Phase 3 and review and revise the plan prior to the conclusion of Phase 2.
- Phase 3: $30.68 million (33% of overall funds) – 2022 – 2024 – Remaining funds allocated.

Phase 1 of funding (2018 - 2020)

During the initial 2018 – 2020 period, the DEQ will allocate 30% ($30.68 million) of North Carolina's overall funding, or $30.68 million. The state's ability to fund projects in each category at the target levels will depend on the applications received and interest by vehicle and equipment owners. The exact percentages may shift with demand. Table 2 reflects a potential Phase 1 funding scenario based on feedback received in the Request for Information. It should be noted that nothing in this table is binding, and the information is intended to only provide a reasonable amount of detail such as to provide the public with a high-level vision for the use of the mitigation funds. If the DEQ does not receive sufficient

applications in a category, the DEQ would shift funds between categories in Phase 1 or move funds into the next funding phase. A complete list of eligible mitigation actions can be found in Appendix A.

Table 2: Summary of Phase 1 Funding Programs for 2018 – 2020

NC Grant Programs (2018-2020)	Eligible Action Category	Eligible Fuels	2018-2020 Funding (Phase 1)	
			Targeted Percent*	Targeted Funding Amount
School bus replacement program	School buses	All (diesel, propane, natural gas, electric)	35%	$10,738,660
Transit bus replacement program	Transit buses	All (diesel, propane, natural gas, electric)	20%	$6,136,377
Clean heavy-duty on-road equipment program	Class Local Freight 4-8 trucks	All (diesel, propane, natural gas, electric)	10%	$3,068,189
Clean heavy-duty off-road equipment program	Switcher locomotives, ferries, tugs, forklifts, port cargo handling equipment, ocean-going vessel shore power, Diesel Emission Reduction Act (DERA)	All (diesel, propane, natural gas, electric)	15%	$4,602,283
ZEV infrastructure		Not Applicable	15%	$4,602,283
Administrative Costs		Not Applicable	5%	$1,534,094
	Total:			$30,681,886

*Percentage of available settlement funds targeted in these eligible categories for 2018 – 2020.

Estimated Emission Reductions

To get a sense of the range of emission reductions that could be achieved by making investments as outlined in Table 2 above, several assumptions must be made. First the number of vehicles that could potentially be replaced, by fuel type, must be estimated. A range of fuel types and equipment types are used in these estimates, but are not binding in any way. The goal of the estimates is simply to provide a range of the potential range of emissions reductions. Parameters and equations used in the emissions calculators are in Appendix D.

The estimated emission reductions for the school bus replacement program were calculated by estimating the approximate number of school buses using the proposed funding amount allotted to the school bus replacement program. The DEQ assumed a mix of 77 diesel, 16 propane and 5 electric buses for the determination of potential emission reductions from school bus replacements for Phase 1. The estimated NOx emission reductions range from 1.8 to 6.6 tons per year. The estimated $PM_{2.5}$ emissions reductions range from 0.06 to 0.53 tons per year.

The estimated emission reductions for the transit bus replacement program were calculated by estimating the approximate number of transit buses using the proposed funding amount allotted to the transit bus replacement program. The DEQ used a mix of 4 diesel, 2 natural gas, 2 hybrid electric diesel and 2 electric buses for the determination of potential emission reductions from transit bus replacements for Phase 1. The estimated NOx emission reductions range from 1.6 to 2.5 tons per year. The estimated $PM_{2.5}$ emissions reductions range from 0.03 to 0.06 tons per year.

The estimated emission reductions for the clean heavy-duty on-road equipment replacement program were calculated by estimating the approximate number of on-road heavy-duty vehicles using the proposed funding amount allotted to the transit bus replacement program. The DEQ used a mix of 8 diesel and 7 natural gas refuse trucks for the determination of potential emission reductions from clean heavy-duty on-road equipment replacements for Phase 1. The estimated NOx emission reductions range from 5.3 to 6.1 tons per year. The estimated $PM_{2.5}$ emissions reductions range from 0.37 to 0.42 tons per year.

The estimated emission reductions for the clean heavy-duty off-road equipment replacement program were calculated by estimating the approximate number of off-road heavy-duty vehicles using the proposed funding amount allotted to the transit bus replacement program. The DEQ used a mix of 6 propane mowers, 9 diesel crawler tractors and 9 diesel ferry engine repowers for the determination of potential emission reductions from clean heavy-duty off-road equipment replacements for Phase 1. The estimated NOx emission reductions range from 0.07 to 37.7 tons per year. The estimated $PM_{2.5}$ emissions reductions range from 0.02 to 0.88 tons per year.

Funding Process

The DEQ may establish more than one process to fund projects. Projects may be funded by a competitive grant process or a voucher system. The DEQ will develop a set of criteria and process for scoring projects and selecting those that best align with the plan goals.

The settlement allows various cost sharing amounts based on project type and owner of the original equipment (see Appendix A for allowable matches). However, this proposal focuses on only public-sector projects for the first phase of funding.

VII) Environmental Justice Plan

Environmental Justice, Equity, and Inclusion definition:

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies.

North Carolina has this goal for all communities and persons across the state. It will be achieved when everyone enjoys:

- The same degree of protection from environmental and health hazards, and
- Equal access to the decision-making process to have a healthy environment in which to live, learn and work.

This mitigation plan will not discriminate against:

- Varying demographics, which may include but are not limited to race, ethnicity, color, national origin, income, age, sex, poverty level, limited English proficiency or disability,
- American Indian tribes which are made up of North Carolina tribes and organizations: Coharie Tribe, Eastern Band of Cherokee Nation, Haliwa-Saponi Tribe, Lumbee Tribe of North Carolina, Meherrin Indian Tribe, Occaneechi Band of Saponi Nation, Sappony, Waccamaw Siouan Tribe, and the Urban Indian Organizations that reside across North Carolina, as well as the North Carolina Commission of Indian Affairs, and

- Tier one counties that are categorized as less than 12,000 people or a population less than 50,000 people and a poverty rate of 19% or greater.

Assistance

The DEQ will consult with Environmental Justice stakeholders in the consideration of areas that bear a disproportionate share of air pollution.

VIII) Project Selection Process

A combination of evaluation factors will be considered for the selection process to ensure the success of North Carolina's mitigation plan. These factors will guide the DEQ in giving priority to projects that perform the highest overall. The DEQ will consider factors such as, but not limited to:

- **Cost Effectiveness** (VW$ funded per NOx tons reduced)**:** cost effectiveness is based on applicant provided information using an accepted calculation tool and if applicable, matching funds
- **NO_x Emissions Reductions:** NOx emission reduction calculation based on applicant provided information using an accepted calculation tool
- **Location of project:** how many subject vehicles were registered in project area
- **Co-Benefits:** e.g. other emission reductions (SOx, PM, VOC, GHG and CO)
- **Sustainability of the Project:** longevity of the funded equipment and additional long term benefits
- **Timeliness:** ability to complete project within two years of award, e.g., project complete and providing emission reductions
- **Useful life of vehicle replaced:** Vehicle should have at least 3-5 years of useful life remaining
- **Other Selection Criteria:** employed as necessary for the selection of proposals, e.g., located in an environmental justice area, innovative technology or approaches.

IX) Measuring Environmental Benefits

The expected emission benefits will mainly depend upon the nature, operation and age of the vehicle or equipment being replaced or repowered more so than on the vehicle or equipment that is purchased. The DEQ anticipates significant reductions in NOx, CO_2, particulate matter and air toxic emissions, which is dependent upon the engine size, category and age. The DEQ anticipates public health and environmental benefits over the wide range of impacts associated with exposure to exhaust from legacy diesel engines. The DEQ expects that most of the replacement vehicles and equipment will result in reduced fuel consumption because of advances in technology.

X) Public Involvement

In addition to the elements described in Section III of this Beneficiary Mitigation Plan, Section 4.1 of the trust agreement (Appendix D of the First Partial Consent Decree) also requires that the Plan explain the process by which public input is considered for the Beneficiary Mitigation Plan. This section describes the public input process the DEQ will implement to inform the development of the Plan, as well as the public input process to be employed when revising the Plan.

The DEQ is committed to using the VW settlement funds in ways that reflect the input and interests of North Carolinians. The DEQ will have an open and transparent process that includes the input of a wide range of citizens. The DEQ has been soliciting and listening to public and stakeholder input to help inform the development of the draft plan. The DEQ will also have opportunities to receive input

throughout the 10-year period of the settlement program. Information on how to provide input and summaries of responses the DEQ has received so far, is located on our VW settlement website: https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-and-air-quality/volkswagen-settlement/volkswagen.

The DEQ sought input from community members and stakeholders through the release of a Request for Information (RFI) on November 22, 2017. The RFI was announced through DEQ's VW email distribution list, the Division of Air Quality's rule-making and outside involvement email distribution lists, a press release, and social media (Facebook and Twitter). The RFI consisted of 14 questions on the design of the Plan and allowed for stakeholders to submit preliminary project proposals to allow the DEQ to better understand the types of projects to expect during the actual Request for Proposals. The comment period was open from November 22, 2017 to December 31, 2017. The DEQ received 872 total comments with preliminary project proposals totaling over $409 million. The DEQ received a wide variety of input emphasizing the importance of various issues and needs. Some project ideas received were not eligible under the provisions of the Volkswagen consent decree or DERA option. The DEQ posted a summary of comments and all comments received from the RFI on our webpage https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-and-air-quality/volkswagen-settlement/volkswagen.

The DEQ has met with stakeholders with expertise in heavy-duty vehicles, equipment, electric charging stations and health impacts of air pollution. The DEQ has also presented to the Joint Legislative Committee on Energy Policy, the State Energy Policy Council, the DAQ Outside Involvement Committee, Clean Cities Coalitions and several instate conferences with interest in the VW Settlement. The DEQ is also using the VW stakeholders as a conduit to promote the VW Settlement to ensure all interested parties across the state have an opportunity to provide input. The DEQ has several stakeholder's meetings scheduled across the state to seek input on the draft Plan. The schedule is:

March 26, 2018
7PM – 9PM
Land of Sky Regional Council,
339 New Leicester Hwy, Suite 140,
Asheville, NC 28806
Facilitator: Bill Eaker / 828-734-7434

March 27, 2018
3PM – 5PM
Kannapolis Train Station,
Train Station Multi-Purpose Room,
201 South Main Street,
Kannapolis, NC 28081
Facilitator: Jason Wager

April 16, 2018
5PM – 7PM
Lenoir Community College
Bullock Building Room 150
Kinston NC 28502
Chet Jarman administrative contact
252-527-6223 x 360
Facilitator: Andrea Eilers

April 17, 2018
1PM – 3PM
Triangle J Council of Governments
4307 Emperor Boulevard, Suite 110,
Durham, NC 27703
Facilitator: Andrea Eilers

April 20, 2018
9AM – 11AM
Cape Fear Community College
Union Station Bldg., Room 512
502 N. Front Street
Wilmington, NC 28401
Onsite contact: Debi Causey, 910-362-7488
Facilitator: TBD

VW Stakeholders also have the opportunity to join the DEQ VW email distribution list. In addition to the VW Stakeholder email distribution list, the DEQ has used social media to promote the DEQ's efforts to receive public input and other activities related to the VW Settlement.

To provide transparency and accountability, the DEQ will post information on its VW website, https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/Volkswagen _Settlement, which is further described in the section below.

1. Public Input – The DEQ will seek public input on the Plan through the following public participation process. The DEQ anticipates that it will follow a similar process for future major revisions to the Plan.

    a. Draft Beneficiary Mitigation Plan – Notice of the opportunity for public comment on the plan will be published in a press release and on the DEQ's web page before the Plan is finalized and submitted to the Trustee. The DEQ may also share the information through various public and industry outreach methods. The draft Plan will also be available for public review on the DEQ's VW website, https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/Volkswagen _Settlement.

    b. Public Informational Meetings and Comments – The public notice and agency webpage will include information about submitting comments during a 45-day public comment period and details for public informational meetings and/or webinars that will be held concerning the draft Beneficiary Mitigation Plan. **Comments on this draft plan may be emailed to:** daq.NC_VWGrants@ncdenr.gov **through May 3, 2018.**

    c. Final Beneficiary Mitigation Plan – The DEQ will consider all comments received, review any new or revised requirements the trustee develops, make any relevant revisions, and post the final Plan on the DEQ's VW website, https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/Volkswagen _Settlement, described below. After revisions, the final Plan will be submitted to the trustee of the Mitigation Trust.

2. Periodic Evaluation - The DEQ will periodically evaluate implementation of the Plan and implementation of the Eligible Mitigation Actions after the initial round of funding and will

determine whether any revisions to the Plan and funding levels are appropriate or necessary. If future revisions to the Plan are necessary, the DEQ will seek public input on major plan revisions generally consistent with the process outlined above, including publishing a notice of the opportunity for public comment and providing a 45-day public comment period regarding the proposed revisions.

3. Department VW Website – The DEQ has created a public website as a clearinghouse for information relating to the VW Partial Consent Decrees, Mitigation plans, and implementation information, which can be accessed at: https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-air-quality/Volkswagen _Settlement. Information relating to both the Mitigation Trust and VW's ZEV Investment Plan will be posted here. The DEQ will post the following:
    a. General information on the Partial Consent Decrees, including a link to the documents;
    b. North Carolina's draft and final Plans, including information about the public participation process for the Plan;
    c. Information about new and existing funding programs the DEQ uses to distribute funding from the Mitigation Trust;
    d. All public records supporting funding requests the DEQ submits to the trustee, and all public records supporting all expenditures of the Trust Fund, subject to confidentiality laws and until the termination dates of the Partial Consent Decrees;
    e. DEQ contact information; and
    f. Information about Electrify America's National ZEV Investment Plan:
        i. The DEQ does not submit requests for project funding under the National ZEV Investment Plan; it can only make suggestions for projects.
        ii. Electrify America will make the final National ZEV project selections.
        iii. The DEQ may provide links to the project submission portal established by Electrify America and may provide technical assistance or support for proposal development.

4. Project Planning

    This section identifies the mechanisms available to the DEQ to fund projects and the potential local, state, and regional partners working with the DEQ on educational outreach and project development. Any programs the DEQ develops under the Plan will be designed to:
    a. Be consistent with all requirements of the trust agreement;
    b. Require appropriate documentation to ensure accountability; and
    c. Comply with the state laws, regulations, and policies.

5. Funding Mechanisms

    All funding award decisions are made by the trustee. The state will employ funding mechanisms and programs to determine which projects are submitted to the trustee for a final decision on funding.
    1. The DEQ may use a variety of funding mechanisms to evaluate funding requests for the Eligible Mitigation Actions, including but not limited to:
        a. Competitive grant awards - Funds awarded based on scoring of specific criteria;
        b. Sole-source grant awards - Funds awarded based on restrictions of location, product, service, or time;
        c. Rebate programs - Funds awarded based on proof of purchase of a specific product or service;
        d. Pilot projects - Funds awarded in a variety of formats, and

e. Memoranda of Understanding or Letters of Understanding (MOU/LOU) - Funds awarded as an agreement between the DEQ and other state agencies or local governments.

2. The DEQ will determine the most appropriate funding mechanism and programs to evaluate proposals for Eligible Mitigation Actions and will modify existing or develop new programs to evaluate eligible projects for the Mitigation Trust. The DEQ will incorporate any eligibility requirements contained in the Partial Consent Decrees into existing programs and into new programs as they are developed.

6. Project Partners

In addition to the general public, the DEQ has identified several local, state, regional and national organizations as potential project partners. The DEQ may work with these organizations on educational outreach and eligible project development. Organizations other than those listed here may also be considered as partners.

1. State Partners – The DEQ may partner with organizations within the state to identify and complete projects. Below are examples of the types of organizations within the state that may have experience in participating in grant or other funding programs, are linked to government agencies, and/or have knowledge of local fleets and interest in Eligible Mitigation Actions within their jurisdictions. Organizations other than those listed here may also be considered as partners.
    a. Other state agencies;
    b. Local air pollution control agencies (Forsyth County Office of Environmental Assistance and Protection, Mecklenburg County Air Quality and Western North Carolina Regional Air Quality Agency);
    c. Municipal governments and authorities;
    d. Metropolitan and rural planning organizations;
    e. The North Carolina Rural Center;
    f. Clean Cities Coalitions;
    g. Environmental advocacy groups, and
    h. Clean transportation advocacy groups.
2. Regional and National Partners – The DEQ may partner with organizations located inside and outside of the state. Below are examples of organizations that may be useful to identify and complete projects involving vehicles or equipment involved in interstate transport or multi-state transportation corridors, such as rail projects, port projects, airport projects, and light-duty ZEV supply equipment development. Organizations other than those listed here may also be considered as partners.
    a. The Mid-Atlantic Regional Air Management Association;
    b. The Southeast Diesel Collaborative;
    c. The Association of Air Pollution Control Agencies;
    d. The National Association of Clean Air Agencies, or
    e. Neighboring states.
3. Business and Industry Partners – In addition to public and non-profit organizations, the DEQ may also partner with private businesses or industry groups that have an interest in or information about the Eligible Mitigation Actions.

Appendix A

Eligible Mitigation Actions and Mitigation Action Expenditures

1. Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)
    a. Eligible Large Trucks include 1992-2009 engine model year Class 8 Local Freight or Drayage. For beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed Eligible Mitigation Action, Eligible Large Trucks shall also include 2010-2012 engine model year Class 8 Local Freight or Drayage.
    b. Eligible Large Trucks must be scrapped.
    c. Eligible Large Trucks may be repowered with any new diesel or alternate fueled engine or all-electric engine, or may be replaced with any new diesel or alternate fueled or all-electric vehicle, with the engine model year in which the Eligible Large Trucks Mitigation Action occurs or one engine model year prior.
    d. For Non-Government Owned Eligible Class 8 Local Freight Trucks, beneficiaries may only draw funds from the trust in the amount of:
        1. Up to 40% of the cost of a repower with a new diesel or alternate fueled (e.g. compressed natural gas (CNG), propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 25% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 75% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 75% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.
    e. For Non-Government Owned Eligible Drayage Trucks, Beneficiaries may only draw funds from the trust in the amount of:
        1. Up to 40% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 50% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 75% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 75% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.
    f. For Government Owned Eligible Class 8 Large Trucks, beneficiaries may draw funds from the trust in the amount of:
        1. Up to 100% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 100% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 100% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 100% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

2. Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)
    a. Eligible buses include 2009 engine model year or older class 4-8 school buses, shuttle buses, or transit buses. For beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year buses at the time of the proposed Eligible Mitigation Action, eligible buses shall also include 2010-2012 engine model year class 4-8 school buses, shuttle buses, or transit buses.
    b. Eligible buses must be scrapped.
    c. Eligible buses may be repowered with any new diesel or alternate fueled or all-electric engine, or may be replaced with any new diesel or alternate fueled or all-electric vehicle, with the engine model year in which the Eligible Bus Mitigation Action occurs or one engine model year prior.
    d. For Non-Government Owned Buses, beneficiaries may draw funds from the trust in the amount of:
        1. Up to 40% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 25% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 75% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 75% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.
    e. For Government Owned Eligible Buses, and Privately-Owned School Buses Under Contract with a Public-School District, beneficiaries may draw funds from the trust in the amount of:
        1. Up to 100% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 100% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 100% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 100% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

3. Freight Switchers
    a. Eligible freight switchers include pre-Tier 4 switcher locomotives that operate 1,000 or more hours per year.
    b. Eligible freight switchers must be scrapped.
    c. Eligible Freight Switchers may be repowered with any new diesel or alternate fueled or all-electric engine(s) (including generator sets), or may be replaced with any new diesel or alternate fueled or all-electric (including generator sets) freight switcher, that is certified to meet the applicable EPA emissions standards (or other more stringent equivalent State standard) as published in the CFR for the engine model year in which the Eligible Freight Switcher Mitigation Action occurs.
    d. For Non-Government Owned Freight Switchers, beneficiaries may draw funds from the Trust in the amount of:
        1. Up to 40% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine(s) or generator sets, including the costs of installation of such engine(s).
        2. Up to 25% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) freight switcher.

3. Up to 75% of the cost of a repower with a new all-electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new all-electric engine(s).
4. Up to 75% of the cost of a new all-electric freight switcher, including charging infrastructure associated with the new all-electric freight switcher.

e. For Government Owned Eligible Freight Switchers, beneficiaries may draw funds from the trust in the amount of:
    1. Up to 100% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine(s) or generator sets, including the costs of installation of such engine(s).
    2. Up to 100% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) freight switcher.
    3. Up to 100% of the cost of a repower with a new all-electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new all-electric engine(s).
    4. Up to 100% of the cost of a new all-electric freight switcher, including charging infrastructure associated with the new all-electric freight switcher.

4. Ferries/Tugs
    a. Eligible ferries and/or tugs include unregulated, Tier 1, or Tier 2 marine engines.
    b. Eligible ferry and/or tug engines that are replaced must be scrapped.
    c. Eligible ferries and/or tugs may be repowered with any new Tier 3 or Tier 4 diesel or alternate fueled engines, or with all-electric engines, or may be upgraded with an EPA Certified Remanufacture System or an EPA Verified Engine Upgrade.
    d. For Non-Government Owned Eligible Ferries and/or Tugs, beneficiaries may only draw funds from the trust in the amount of:
        1. Up to 40% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine(s), including the costs of installation of such engine(s).
        2. Up to 75% of the cost of a repower with a new all-electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new all-electric engine(s).
    e. For Government Owned Eligible Ferries and/or Tugs, beneficiaries may draw funds from the trust in the amount of:
        1. Up to 100% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine(s), including the costs of installation of such engine(s).
        2. Up to 100% of the cost of a repower with a new all-electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new all-electric engine(s).
5. Ocean Going Vessels (OGV) Shorepower
    a. Eligible marine shorepower includes systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth. Components of such systems eligible for reimbursement are limited to cables, cable management systems, shorepower coupler systems, distribution control systems, and power distribution. Marine shorepower systems must comply with international shore power design standards (ISO/IEC/IEEE 80005-1-2012 High Voltage Shore Connection Systems or the IEC/PAS 80005-3:2014 Low Voltage Shore Connection Systems) and should be supplied with power sourced from the local utility grid. Eligible Marine Shorepower includes equipment for vessels that operate within the Great Lakes.
    b. For Non-Government Owned Marine Shorepower, beneficiaries may only draw funds from the trust in the amount of up to 25% for the costs associated with the shore-side system,

including cables, cable management systems, shorepower coupler systems, distribution control systems, installation, and power distribution components.

c. For Government Owned Marine Shorepower, beneficiaries may draw funds from the trust in the amount of up to 100% for the costs associated with the shore-side system, including cables, cable management systems, shorepower coupler systems, distribution control systems, installation, and power distribution components.

6. Class 4-7 Local Freight Trucks (Medium Trucks)
    a. Eligible medium trucks include 1992-2009 engine model year class 4-7 local freight trucks, and for beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed Eligible Mitigation Action, eligible trucks shall also include 2010-2012 engine model year class 4-7 local freight trucks.
    b. Eligible medium trucks must be scrapped.
    c. Eligible medium trucks may be repowered with any new diesel or alternate fueled or all-electric engine, or may be replaced with any new diesel or alternate fueled or all-electric vehicle, with the engine model year in which the Eligible Medium Trucks Mitigation Action occurs or one engine model year prior.
    d. For Non-Government Owned Eligible medium trucks, beneficiaries may draw funds from the trust in the amount of:
        1. Up to 40% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 25% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 75% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 75% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.
    e. For Government Owned Eligible Medium Trucks, beneficiaries may draw funds from the trust in the amount of:
        1. Up to 100% of the cost of a repower with a new diesel or alternate fueled (e.g. CNG, propane, hybrid) engine, including the costs of installation of such engine.
        2. Up to 100% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.
        3. Up to 100% of the cost of a repower with a new all-electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new all-electric engine.
        4. Up to 100% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.
7. Airport Ground Support Equipment
    a. Eligible airport ground support equipment includes:
        1. Tier 0, Tier 1, or Tier 2 diesel powered airport ground support equipment; and
        2. Uncertified, or certified to 3 g/bhp-hr or higher emissions, spark ignition engine powered airport ground support equipment.
    b. Eligible airport ground Support Equipment must be scrapped.
    c. Eligible airport ground support equipment may be repowered with an all-electric engine, or may be replaced with the same airport ground support equipment in an all-electric form.
    d. For Non-Government Owned eligible airport ground support equipment, beneficiaries may only draw funds from the trust in the amount of:

1. Up to 75% of the cost of a repower with a new all-electric engine, including costs of installation of such engine, and charging infrastructure associated with such new all-electric engine.
2. Up to 75% of the cost of a new all-electric airport ground support equipment, including charging infrastructure associated with such new all-electric airport ground support equipment.

e. For Government Owned eligible airport ground support equipment, beneficiaries may draw funds from the trust in the amount of:
1. Up to 100% of the cost of a repower with a new all-electric engine, including costs of installation of such engine, and charging infrastructure associated with such new all-electric engine.
2. Up to 100% of the cost of a new all-electric airport ground support equipment, including charging infrastructure associated with such new all-electric airport ground support equipment.

8. Forklifts and Port Cargo Handling Equipment
   a. Eligible forklifts includes forklifts with greater than 8,000 pounds lift capacity.
   b. Eligible forklifts and port cargo handling equipment must be scrapped.
   c. Eligible forklifts and port cargo handling equipment may be repowered with an all-electric engine, or may be replaced with the same equipment in an all-electric form.
   d. For Non-Government Owned eligible forklifts and port cargo handling equipment, beneficiaries may draw funds from the trust in the amount of:
      1. Up to 75% of the cost of a repower with a new all-electric engine, including costs of installation of such engine, and charging infrastructure associated with such new all-electric engine.
      2. Up to 75% of the cost of a new all-electric forklift or port cargo handling equipment, including charging infrastructure associated with such new all-electric forklift or port cargo handling equipment.
   e. For Government Owned eligible forklifts and port cargo handling equipment, beneficiaries may draw funds from the trust in the amount of:
      1. Up to 100% of the cost of a repower with a new all-electric engine, including costs of installation of such engine, and charging infrastructure associated with such new all-electric engine.
      2. Up to 100% of the cost of a new all-electric forklift or port cargo handling equipment, including charging infrastructure associated with such new all-electric forklift or port cargo handling equipment.

9. Light Duty Zero Emission Vehicle Supply Equipment. Each beneficiary may use up to 15% of its allocation of trust funds on the costs necessary for, and directly connected to, the acquisition, installation, operation and maintenance of new light duty zero emission vehicle supply equipment for projects as specified below. Provided, however, that trust funds shall not be made available or used to purchase or rent real estate, other capital costs (e.g., construction of buildings, parking facilities, etc.) or general maintenance (i.e., maintenance other than of the supply equipment).
   a. Light duty electric vehicle supply equipment includes Level 1, Level 2 or fast charging equipment (or analogous successor technologies) that is located in a public place, workplace, or multi-unit dwelling and is not consumer light duty electric vehicle supply equipment (i.e., not located at a private residential dwelling that is not a multi-unit dwelling).
   b. Light duty hydrogen fuel cell vehicle supply equipment includes hydrogen dispensing equipment capable of dispensing hydrogen at a pressure of 70 megapascals (MPa) (or analogous successor technologies) that is located in a public place.

c. Subject to the 15% limitation above, each beneficiary may draw funds from the trust in the amount of:
    1. Up to 100% of the cost to purchase, install and maintain eligible light duty electric vehicle supply equipment that will be available to the public at a government owned property.
    2. Up to 80% of the cost to purchase, install and maintain eligible light duty electric vehicle supply equipment that will be available to the public at a Non-Government Owned property.
    3. Up to 60% of the cost to purchase, install and maintain eligible light duty electric vehicle supply equipment that is available at a workplace but not to the general public.
    4. Up to 60% of the cost to purchase, install and maintain eligible light duty electric vehicle supply equipment that is available at a multi-unit dwelling but not to the general public.
    5. Up to 33% of the cost to purchase, install and maintain eligible light duty hydrogen fuel cell vehicle supply equipment capable of dispensing at least 250 kg/day that will be available to the public.
    6. Up to 25% of the cost to purchase, install and maintain eligible light duty hydrogen fuel cell vehicle supply equipment capable of dispensing at least 100 kg/day that will be available to the public.

10. Diesel Emission Reduction Act (DERA) Option. beneficiaries may use trust funds for their non-federal voluntary match, pursuant to Title VII, Subtitle G, Section 793 of the DERA Program in the Energy Policy Act of 2005 (codified at 42 U.S.C. § 16133), or Section 792 (codified at 42 U.S.C. § 16132) in the case of tribes, thereby allowing beneficiaries to use such trust funds for actions not specifically enumerated in this Appendix D-2, but otherwise eligible under DERA pursuant to all DERA guidance documents available through the EPA. Trust funds shall not be used to meet the non-federal mandatory cost share requirements, as defined in applicable DERA program guidance, of any DERA grant. The DERA program is a Congressionally-authorized project that enables the U.S. EPA to offer assistance for actions reducing diesel emissions. Thirty percent of the annual DERA funds are allocated to the DERA Clean Diesel State Grant Program. States and territories that match the base amount dollar per dollar receive an additional amount of EPA DERA funding to add to the grant (50% of the base amount). Trust funds can be used for states or territories non-federal match on a 1:1 basis. See Appendix B for EPAs Detailed Comparison of VW Eligible Mitigation Actions 1-9 and Eligible Mitigation Action #10 (DERA Option).

Appendix B

Detailed Comparison of VW Eligible Mitigation Action 1-9 and Eligible Mitigation Action #10 (DERA Option)

Eligible Mitigation Actions 1-9* **Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)** **Class 4-7 Local Freight Trucks (Eligible Medium Trucks)** For, 1) Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed EMA, and 2) Eligible Trucks shall also include 2010-2012 engine model year trucks.				**Eligible Mitigation Action 10: DERA Option**** **Class 5-8 Medium and Heavy Duty Highway Vehicles (including Drayage Trucks)**		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Engine replacement with new diesel or alternate fueled engine, MY (model year) in which the EMA occurs or one engine model year prior	1992-2009	40%	100%	Engine replacement with diesel or alternate fueled engine, 2017 MY or newer	1995-2006	40%
				Engine replacement with engine certified to CARB's Optional Low-NOx standards, 2017 MY or newer	1995-2006	50%
Engine replacement with new all-electric engine, engine MY in which the EMA occurs or one engine MY prior	1992-2009	75%	100%	Engine replacement with an electric motor or an electric power source, 2017 MY or newer	1995-2009	60%
Vehicle replacement with new diesel or alternate fueled vehicle, engine MY in which the EMA occurs or one engine MY prior	1992-2009	25% (50% for Drayage)	100%	Vehicle replacement with diesel or alternate fueled vehicle, 2017 MY or newer engine (2012 MY or newer engine for Drayage)	1995-2006	25% (50% for Drayage)
				Vehicle replacement with vehicle powered by engine certified to CARB's Optional Low-NOx standards, 2017 MY or newer engine	1995-2006	35% (50% for Drayage)
Vehicle Replacement with all-electric vehicle, engine MY in which the EMA occurs or one engine MY prior	1992-2009	75%	100%	Vehicle replacement with all-electric vehicle, 2017 MY or newer engine	1995-2009	45% (50% for Drayage)
				Retrofits with verified exhaust control technologies (SCR is the only eligible retrofit technology for vehicles with 2007-2009 MY engines)	1995-2009	100%
				Verified Aerodynamic Technologies and Low Rolling Resistance Tires (in conjunction with above activities)	1995-2009	100%
				Verified Idle Reduction Technologies (APUs and generators are not eligible on vehicles with 2007-2009 MY engines)	1995-2009	25%
				Clean Alternative Fuel Conversion	1995-2009	40%

Eligible Mitigation Actions 1-9*				Eligible Mitigation Action 10: DERA Option**		
Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses) For, 1) Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year buses at the time of the proposed EMA, and 2) Eligible Buses shall also include 2010-2012 engine model year class 4-8 school buses, shuttle buses, or transit buses.				**Type A, B, C, D Buses** **Class 5-8 Transit, Shuttle, or other buses**		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Engine replacement with new diesel or alternate fueled engine, engine MY in which the EMA occurs or one engine model year prior	2009 and older	40%	100%	Engine replacement with diesel or alternate fueled engine, 2017 MY or newer	1995-2006	40%
				Engine replacement with engine certified to CARB's Optional Low-NOx standards, 2017 MY or newer	1995-2006	50%
Engine replacement with new all-electric engine, engine MY in which the EMA occurs or one engine MY prior	2009 and older	75%	100%	Engine replacement with an electric motor or an electric power source, 2017 MY or newer	1995-2009	60%
Vehicle replacement with new diesel or alternate fueled vehicle, engine MY in which the EMA occurs or one engine MY prior	2009 and older	25%	100%	Vehicle replacement with diesel or alternate fueled vehicle, 2017 MY or newer engine	1995-2006	25%
				Vehicle replacement with vehicle powered by engine certified to CARB's Optional Low-NOx standards, 2017 MY or newer engine	1995-2006	35%
Vehicle Replacement with all-electric vehicle with the engine MY in which the EMA occurs or one engine MY prior	2009 and older	75%	100%	Vehicle replacement with all-electric vehicle, 2017 MY or newer engine	1995-2009	45%
				Retrofits with verified exhaust control technologies (SCR is the only eligible retrofit technology for vehicles with 2007-2009 MY engines)	1995-2009	100%
				Verified Idle Reduction Technologies (APUs and generators are not eligible on vehicles with MY 2007-2009 engines)	1995-2009	25%
				Clean Alternative Fuel Conversion	1995-2009	40%

Eligible Mitigation Actions 1-9*				Eligible Mitigation Action 10: DERA Option**		
Freight Switchers Must currently operate 1000+ hours per year.				**Line Haul (freight and passenger) and Switcher Locomotives** Must currently operate 1000+ hours per year		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Engine replacement with new diesel or alternate fueled engine or generator sets that are EPA certified for the engine MY in which the EMA occurs	Pre-Tier 4	40%	100%	Engine replacement with 2017 MY or newer Tier 4 engine	Unregulated – Tier 2; Tier 2+ switcher	40%
Engine replacement with new all-electric engine	Pre-Tier 4	75%	100%	Engine replacement with 2017 MY or newer all-electric engine	Unregulated – Tier 2; Tier 2+ switcher	60%
Locomotive replacement with new diesel or alternate fueled freight switcher that is EPA certified for the engine MY in which the EMA occurs	Pre-Tier 4	25%	100%	Locomotive replacement with equipment powered by a 2017 MY or newer engine (diesel or alternate fuel)	Unregulated – Tier 2; Tier 2+ switcher	25%
Locomotive replacement with new all-electric freight switcher	Pre-Tier 4	75%	100%	Locomotive replacement with 2017 MY or newer all-electric equipment	Unregulated – Tier 2; Tier 2+ switcher	45%
				Certified Remanufacture System or Verified Engine Upgrade	Unregulated - Tier 2+	40%
				Retrofit with verified exhaust control technology	Unregulated - Tier 2+	100%
				Idle reduction technology, including shore power	Unregulated – Tier 2+	40%
Ferries/Tugs				**Marine Engines** Must currently operate 1000+ hours per year.		
Engine replacement with new Tier 3 or 4 diesel or alternate fueled engine	Pre-Tier 3	40%	100%	Engine replacement with a 2017 MY or newer Tier 3 or Tier 4 engine (diesel or alternative fuel)	Pre-Tier 3	40%
Engine replacement with new all-electric engine	Pre-Tier 3	75%	100%	Engine replacement with 2017 MY or newer all-electric engine	Pre-Tier 3	60%
Certified Remanufacture System or Verified Engine Upgrade	Pre-Tier 3	40%	100%	Certified Remanufacture System or Verified Engine Upgrade	Pre-Tier 3	40%

Eligible Mitigation Actions 1-9*				Eligible Mitigation Action 10: DERA Option**		
Ocean Going Vessels (OGV) Shore Power				**Marine Shore Power Connection System**		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Costs associated with shore-side system	n/a	25%	100%	Costs associated with shore-side system	n/a	25%
Airport Ground Support Equipment Forklifts and Port Cargo Handling Equipment				**Nonroad Diesel Engines**		
Engine replacement with new all-electric engine	GSE: Pre-Tier 3 diesel; 3 g/bhp-hr and higher spark ignition Forklifts and Port CHE: Greater than 8000 lbs lift capacity	75%	100%	Engine replacement with all-electric engine	0-50 HP = 2005 and newer; 51-300 HP = 1995 and newer; 301+HP = 1985 and newer; See FY2017 State Clean Diesel Program Guide for complete engine tier restrictions	60%
Equipment replacement with new all-electric equipment		75%	100%	Equipment Replacement with 2017 MY or newer all-electric equipment		45%
				Engine replacement with a 2017 MY or newer engine (diesel or alternative fuel)		40%
				Equipment replacement with equipment powered by 2017 MY or newer engine (diesel or alternative fuel)		25%
				Retrofit with verified exhaust control technologies		100%
				Verified Engine Upgrade		40%
				Electrified Parking Spaces (Truck Stop Electrification)		
				Labor and equipment of eligible EPA SmartWay verified electrified parking space technologies	n/a	30%
Light Duty Zero Emission Vehicle Supply Equipment Level 1, level 2, or fast charging equipment that is not consumer light duty electric vehicle supply equipment						
See Appendix D-2 for details						

* The term "Repower" in the Consent Decree has been changed to "Engine replacement" for ease of comparison.

** DERA Option eligibility and cost-shares are based on the FY2017 State Clean Diesel Program Guide. Subsequent years are subject to change.

Definitions/Glossary of Terms from Appendix D-2 to Partial Consent Decree MDL No. 2672 CRB (JSC)

"Airport Ground Support Equipment" shall mean vehicles and equipment used at an airport to service aircraft between flights.

"All-Electric" shall mean powered exclusively by electricity provided by a battery, fuel cell, or the grid.

"Alternate Fueled" shall mean an engine, or a vehicle or piece of equipment which is powered by an engine, which uses a fuel different from or in addition to gasoline fuel or diesel fuel (e.g., CNG, propane, diesel-electric Hybrid).

"Certified Remanufacture System or Verified Engine Upgrade" shall mean engine upgrades certified or verified by EPA or CARB to achieve a reduction in emissions.

"Class 4-7 Local Freight Trucks (Medium Trucks)" shall mean trucks, including commercial trucks, used to deliver cargo and freight (e.g., courier services, delivery trucks, box trucks moving freight, waste haulers, dump trucks, concrete mixers) with a Gross Vehicle Weight Rating (GVWR) between 14,001 and 33,000 lbs.

"Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Buses)" shall mean vehicles with a Gross Vehicle Weight Rating (GVWR) greater than 14,001 lbs used for transporting people. See definition for School Bus below.

"Class 8 Local Freight, and Port Drayage Trucks (Eligible Large Trucks)" shall mean trucks with a Gross Vehicle Weight Rating (GVWR) greater than 33,000 lbs used for port drayage and/or freight/cargo delivery (including waste haulers, dump trucks, concrete mixers).

"Drayage Trucks" shall mean trucks hauling cargo to and from ports and intermodal rail yards.

"Forklift" shall mean nonroad equipment used to lift and move materials short distances; generally includes tines to lift objects. Eligible types of forklifts include reach stackers, side loaders, and top loaders.

"Freight Switcher" shall mean a locomotive that moves rail cars around a rail yard as compared to a line-haul engine that move freight long distances.

"Generator Set" shall mean a switcher locomotive equipped with multiple engines that can turn off one or more engines to reduce emissions and save fuel depending on the load it is moving.

"Government" shall mean a State or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority, owning fleets purchased with government funds), and a tribal government or native village. The term 'State' means the several States, the District of Columbia, and the Commonwealth of Puerto Rico.

"Gross Vehicle Weight Rating (GVWR)" shall mean the maximum weight of the vehicle, as specified by the manufacturer. GVWR includes total vehicle weight plus fluids, passengers, and cargo.

> Class 1: < 6000 lb; Class 2: 6001-10,000 lb; Class 3: 10,001-14,000 lb; Class 4: 14,001-16,000 lb; Class 5: 16,001-19,500 lb; Class 6: 19,501-26,000 lb; Class 7: 26,001-33,000 lb; Class 8: > 33,001 lb

"Hybrid" shall mean a vehicle that combines an internal combustion engine with a battery and electric motor.

"Intermodal Rail Yard" shall mean a rail facility in which cargo is transferred from drayage truck to train or vice-versa.

"Port Cargo Handling Equipment" shall mean rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hostlers and yard tractors that operate within ports.

"Repower" shall mean to replace an existing engine with a newer, cleaner engine or power source that is certified by EPA and, if applicable, CARB, to meet a more stringent set of engine emission standards. Repower includes, but is not limited to, diesel engine replacement with an engine certified for use with diesel or a clean alternate fuel, diesel engine replacement with an electric power source (grid, battery), diesel engine replacement with a fuel cell, diesel engine replacement with an electric generator(s) (genset), diesel engine upgrades in Ferries/Tugs with an EPA Certified Remanufacture System, and/or diesel engine upgrades in Ferries/Tugs with an EPA Verified Engine Upgrade. All-Electric and fuel cell Repowers do not require EPA or CARB certification.

"School Bus" shall mean a Class 4-8 bus sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events. May be Type A-D.

"Tier 0, 1, 2, 3, 4" shall refer to corresponding EPA engine emission classifications for nonroad, locomotive and marine engines.

"Tugs" shall mean dedicated vessels that push or pull other vessels in ports, harbors, and inland waterways (e.g., tugboats and towboats).

"Zero Emission Vehicle (ZEV)" shall mean a vehicle that produces no emissions from the on-board source of power (e.g., All-Electric or hydrogen fuel cell vehicles).

Appendix C

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Alamance	Nitrogen Oxides	CAP	804.100584	TON
Mobile - Non-Road Equipment - Diesel	NC	Alamance	Nitrogen Oxides	CAP	262.0564107	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Alamance	Nitrogen Oxides	CAP	70.07413	TON
Mobile - Locomotives	NC	Alamance	Nitrogen Oxides	CAP	37.794	TON
Mobile - Aircraft	NC	Alamance	Nitrogen Oxides	CAP	5.3232509	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Alexander	Nitrogen Oxides	CAP	108.255025	TON
Mobile - Non-Road Equipment - Diesel	NC	Alexander	Nitrogen Oxides	CAP	70.5403377	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Alexander	Nitrogen Oxides	CAP	23.826144	TON
Mobile - Locomotives	NC	Alexander	Nitrogen Oxides	CAP	8.3939	TON
Mobile - Aircraft	NC	Alexander	Nitrogen Oxides	CAP	0.02540963	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Alleghany	Nitrogen Oxides	CAP	39.6885002	TON
Mobile - Non-Road Equipment - Diesel	NC	Alleghany	Nitrogen Oxides	CAP	35.65605842	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Alleghany	Nitrogen Oxides	CAP	10.816242	TON
Mobile - Aircraft	NC	Alleghany	Nitrogen Oxides	CAP	0.00219906	TON
Mobile - Locomotives	NC	Alleghany	Nitrogen Oxides	CAP	0	TON
Mobile - Locomotives	NC	Anson	Nitrogen Oxides	CAP	181.387	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Anson	Nitrogen Oxides	CAP	142.224643	TON
Mobile - Non-Road Equipment - Diesel	NC	Anson	Nitrogen Oxides	CAP	48.15462432	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Anson	Nitrogen Oxides	CAP	14.960174	TON
Mobile - Aircraft	NC	Anson	Nitrogen Oxides	CAP	0.3067157	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Ashe	Nitrogen Oxides	CAP	102.60928	TON
Mobile - Non-Road Equipment - Diesel	NC	Ashe	Nitrogen Oxides	CAP	65.66870195	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Ashe	Nitrogen Oxides	CAP	20.182475	TON
Mobile - Aircraft	NC	Ashe	Nitrogen Oxides	CAP	3.13343207	TON
Mobile - Locomotives	NC	Ashe	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Avery	Nitrogen Oxides	CAP	86.878582	TON
Mobile - Non-Road Equipment - Diesel	NC	Avery	Nitrogen Oxides	CAP	59.2199548	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Avery	Nitrogen Oxides	CAP	15.715333	TON
Mobile - Aircraft	NC	Avery	Nitrogen Oxides	CAP	5.9197414	TON
Mobile - Locomotives	NC	Avery	Nitrogen Oxides	CAP	0	TON
Mobile - Commercial Marine Vessels	NC	Beaufort	Nitrogen Oxides	CAP	301.7787786	TON
Mobile - Non-Road Equipment - Diesel	NC	Beaufort	Nitrogen Oxides	CAP	278.2369691	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Beaufort	Nitrogen Oxides	CAP	211.73655	TON
Mobile - Locomotives	NC	Beaufort	Nitrogen Oxides	CAP	58.6148	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - On-Road Diesel Light Duty Vehicles	NC	Beaufort	Nitrogen Oxides	CAP	31.30193	TON
Mobile - Aircraft	NC	Beaufort	Nitrogen Oxides	CAP	28.3399561	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Bertie	Nitrogen Oxides	CAP	127.311945	TON
Mobile - Non-Road Equipment - Diesel	NC	Bertie	Nitrogen Oxides	CAP	123.2473672	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Bertie	Nitrogen Oxides	CAP	16.532987	TON
Mobile - Locomotives	NC	Bertie	Nitrogen Oxides	CAP	10.7694	TON
Mobile - Commercial Marine Vessels	NC	Bertie	Nitrogen Oxides	CAP	0.327588	TON
Mobile - Aircraft	NC	Bertie	Nitrogen Oxides	CAP	0.0059268	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Bladen	Nitrogen Oxides	CAP	202.593998	TON
Mobile - Non-Road Equipment - Diesel	NC	Bladen	Nitrogen Oxides	CAP	105.746728	TON
Mobile - Locomotives	NC	Bladen	Nitrogen Oxides	CAP	44.383	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Bladen	Nitrogen Oxides	CAP	18.876504	TON
Mobile - Aircraft	NC	Bladen	Nitrogen Oxides	CAP	3.92864565	TON
Mobile - Commercial Marine Vessels	NC	Bladen	Nitrogen Oxides	CAP	0.05357444	TON
Mobile - Commercial Marine Vessels	NC	Brunswick	Nitrogen Oxides	CAP	1549.549443	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Brunswick	Nitrogen Oxides	CAP	605.46518	TON
Mobile - Non-Road Equipment - Diesel	NC	Brunswick	Nitrogen Oxides	CAP	301.5585927	TON
Mobile - Locomotives	NC	Brunswick	Nitrogen Oxides	CAP	68.4558	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Brunswick	Nitrogen Oxides	CAP	53.7701	TON
Mobile - Aircraft	NC	Brunswick	Nitrogen Oxides	CAP	22.7884466	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Buncombe	Nitrogen Oxides	CAP	1486.19285	TON
Mobile - Non-Road Equipment - Diesel	NC	Buncombe	Nitrogen Oxides	CAP	422.6885429	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Buncombe	Nitrogen Oxides	CAP	165.6001	TON
Mobile - Locomotives	NC	Buncombe	Nitrogen Oxides	CAP	162.5142	TON
Mobile - Aircraft	NC	Buncombe	Nitrogen Oxides	CAP	70.67842859	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Burke	Nitrogen Oxides	CAP	454.921755	TON
Mobile - Non-Road Equipment - Diesel	NC	Burke	Nitrogen Oxides	CAP	112.0628876	TON
Mobile - Locomotives	NC	Burke	Nitrogen Oxides	CAP	87.1749	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Burke	Nitrogen Oxides	CAP	69.43175	TON
Mobile - Aircraft	NC	Burke	Nitrogen Oxides	CAP	7.7108358	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Cabarrus	Nitrogen Oxides	CAP	992.93745	TON
Mobile - Non-Road Equipment - Diesel	NC	Cabarrus	Nitrogen Oxides	CAP	347.2510259	TON
Mobile - Locomotives	NC	Cabarrus	Nitrogen Oxides	CAP	162.92264	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Cabarrus	Nitrogen Oxides	CAP	95.21381	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Aircraft	NC	Cabarrus	Nitrogen Oxides	CAP	12.92623326	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Caldwell	Nitrogen Oxides	CAP	258.74717	TON
Mobile - Non-Road Equipment - Diesel	NC	Caldwell	Nitrogen Oxides	CAP	134.3626029	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Caldwell	Nitrogen Oxides	CAP	59.23849	TON
Mobile - Locomotives	NC	Caldwell	Nitrogen Oxides	CAP	12.8313	TON
Mobile - Aircraft	NC	Caldwell	Nitrogen Oxides	CAP	3.49426324	TON
Mobile - Commercial Marine Vessels	NC	Camden	Nitrogen Oxides	CAP	299.8162124	TON
Mobile - Non-Road Equipment - Diesel	NC	Camden	Nitrogen Oxides	CAP	98.30298199	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Camden	Nitrogen Oxides	CAP	62.5599943	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Camden	Nitrogen Oxides	CAP	10.209451	TON
Mobile - Locomotives	NC	Camden	Nitrogen Oxides	CAP	4.56984	TON
Mobile - Aircraft	NC	Camden	Nitrogen Oxides	CAP	0.0000325	TON
Mobile - Commercial Marine Vessels	NC	Carteret	Nitrogen Oxides	CAP	1408.796838	TON
Mobile - Non-Road Equipment - Diesel	NC	Carteret	Nitrogen Oxides	CAP	380.1191737	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Carteret	Nitrogen Oxides	CAP	250.627401	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Carteret	Nitrogen Oxides	CAP	44.27313	TON
Mobile - Aircraft	NC	Carteret	Nitrogen Oxides	CAP	17.55256604	TON
Mobile - Locomotives	NC	Carteret	Nitrogen Oxides	CAP	4.39023	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Caswell	Nitrogen Oxides	CAP	127.195516	TON
Mobile - Locomotives	NC	Caswell	Nitrogen Oxides	CAP	53.18482	TON
Mobile - Non-Road Equipment - Diesel	NC	Caswell	Nitrogen Oxides	CAP	35.28580015	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Caswell	Nitrogen Oxides	CAP	15.486114	TON
Mobile - Aircraft	NC	Caswell	Nitrogen Oxides	CAP	0.29086095	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Catawba	Nitrogen Oxides	CAP	690.676204	TON
Mobile - Non-Road Equipment - Diesel	NC	Catawba	Nitrogen Oxides	CAP	349.3037617	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Catawba	Nitrogen Oxides	CAP	81.0789	TON
Mobile - Locomotives	NC	Catawba	Nitrogen Oxides	CAP	71.84041	TON
Mobile - Aircraft	NC	Catawba	Nitrogen Oxides	CAP	0.48718431	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Chatham	Nitrogen Oxides	CAP	397.062105	TON
Mobile - Non-Road Equipment - Diesel	NC	Chatham	Nitrogen Oxides	CAP	193.2738837	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Chatham	Nitrogen Oxides	CAP	50.96842	TON
Mobile - Locomotives	NC	Chatham	Nitrogen Oxides	CAP	13.74058	TON
Mobile - Aircraft	NC	Chatham	Nitrogen Oxides	CAP	6.2964487	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Cherokee	Nitrogen Oxides	CAP	129.848357	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Non-Road Equipment - Diesel	NC	Cherokee	Nitrogen Oxides	CAP	54.67196026	TON
Mobile - Locomotives	NC	Cherokee	Nitrogen Oxides	CAP	22.7407	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Cherokee	Nitrogen Oxides	CAP	18.437624	TON
Mobile - Aircraft	NC	Cherokee	Nitrogen Oxides	CAP	3.6153496	TON
Mobile - Non-Road Equipment - Diesel	NC	Chowan	Nitrogen Oxides	CAP	77.70285791	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Chowan	Nitrogen Oxides	CAP	74.5593524	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Chowan	Nitrogen Oxides	CAP	6.558965	TON
Mobile - Aircraft	NC	Chowan	Nitrogen Oxides	CAP	3.3235733	TON
Mobile - Locomotives	NC	Chowan	Nitrogen Oxides	CAP	2.29022	TON
Mobile - Commercial Marine Vessels	NC	Chowan	Nitrogen Oxides	CAP	2.026274	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Clay	Nitrogen Oxides	CAP	44.8826657	TON
Mobile - Non-Road Equipment - Diesel	NC	Clay	Nitrogen Oxides	CAP	26.64024632	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Clay	Nitrogen Oxides	CAP	8.045968	TON
Mobile - Aircraft	NC	Clay	Nitrogen Oxides	CAP	0.00275736	TON
Mobile - Locomotives	NC	Clay	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Cleveland	Nitrogen Oxides	CAP	578.881442	TON
Mobile - Non-Road Equipment - Diesel	NC	Cleveland	Nitrogen Oxides	CAP	171.5036493	TON
Mobile - Locomotives	NC	Cleveland	Nitrogen Oxides	CAP	107.79248	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Cleveland	Nitrogen Oxides	CAP	77.245	TON
Mobile - Aircraft	NC	Cleveland	Nitrogen Oxides	CAP	1.73914054	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Columbus	Nitrogen Oxides	CAP	389.138599	TON
Mobile - Non-Road Equipment - Diesel	NC	Columbus	Nitrogen Oxides	CAP	160.11018	TON
Mobile - Locomotives	NC	Columbus	Nitrogen Oxides	CAP	39.1421	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Columbus	Nitrogen Oxides	CAP	34.33149	TON
Mobile - Aircraft	NC	Columbus	Nitrogen Oxides	CAP	6.39572598	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Craven	Nitrogen Oxides	CAP	385.781266	TON
Mobile - Non-Road Equipment - Diesel	NC	Craven	Nitrogen Oxides	CAP	198.2865395	TON
Mobile - Commercial Marine Vessels	NC	Craven	Nitrogen Oxides	CAP	86.54943729	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Craven	Nitrogen Oxides	CAP	36.86642	TON
Mobile - Locomotives	NC	Craven	Nitrogen Oxides	CAP	23.2561	TON
Mobile - Aircraft	NC	Craven	Nitrogen Oxides	CAP	15.59150083	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Cumberland	Nitrogen Oxides	CAP	1488.8846	TON
Mobile - Aircraft	NC	Cumberland	Nitrogen Oxides	CAP	669.3904324	TON
Mobile - Non-Road Equipment - Diesel	NC	Cumberland	Nitrogen Oxides	CAP	411.894585	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Locomotives	NC	Cumberland	Nitrogen Oxides	CAP	264.6694	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Cumberland	Nitrogen Oxides	CAP	86.88281	TON
Mobile - Commercial Marine Vessels	NC	Currituck	Nitrogen Oxides	CAP	598.24079	TON
Mobile - Non-Road Equipment - Diesel	NC	Currituck	Nitrogen Oxides	CAP	237.5586458	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Currituck	Nitrogen Oxides	CAP	171.32586	TON
Mobile - Aircraft	NC	Currituck	Nitrogen Oxides	CAP	39.7634355	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Currituck	Nitrogen Oxides	CAP	33.71513	TON
Mobile - Locomotives	NC	Currituck	Nitrogen Oxides	CAP	13.1962	TON
Mobile - Commercial Marine Vessels	NC	Dare	Nitrogen Oxides	CAP	2480.486422	TON
Mobile - Non-Road Equipment - Diesel	NC	Dare	Nitrogen Oxides	CAP	492.5649483	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Dare	Nitrogen Oxides	CAP	275.022119	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Dare	Nitrogen Oxides	CAP	40.65496	TON
Mobile - Aircraft	NC	Dare	Nitrogen Oxides	CAP	7.906430062	TON
Mobile - Locomotives	NC	Dare	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Davidson	Nitrogen Oxides	CAP	740.176777	TON
Mobile - Locomotives	NC	Davidson	Nitrogen Oxides	CAP	414.0703	TON
Mobile - Non-Road Equipment - Diesel	NC	Davidson	Nitrogen Oxides	CAP	242.025412	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Davidson	Nitrogen Oxides	CAP	115.10279	TON
Mobile - Aircraft	NC	Davidson	Nitrogen Oxides	CAP	6.30402226	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Davie	Nitrogen Oxides	CAP	395.892128	TON
Mobile - Non-Road Equipment - Diesel	NC	Davie	Nitrogen Oxides	CAP	92.94228175	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Davie	Nitrogen Oxides	CAP	42.55828	TON
Mobile - Aircraft	NC	Davie	Nitrogen Oxides	CAP	6.5936825	TON
Mobile - Locomotives	NC	Davie	Nitrogen Oxides	CAP	0.510868	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Duplin	Nitrogen Oxides	CAP	427.859202	TON
Mobile - Non-Road Equipment - Diesel	NC	Duplin	Nitrogen Oxides	CAP	184.2364738	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Duplin	Nitrogen Oxides	CAP	37.76948	TON
Mobile - Aircraft	NC	Duplin	Nitrogen Oxides	CAP	17.2531733	TON
Mobile - Locomotives	NC	Duplin	Nitrogen Oxides	CAP	12.2135	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Durham	Nitrogen Oxides	CAP	1323.07905	TON
Mobile - Non-Road Equipment - Diesel	NC	Durham	Nitrogen Oxides	CAP	752.4004115	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Durham	Nitrogen Oxides	CAP	59.19457	TON
Mobile - Locomotives	NC	Durham	Nitrogen Oxides	CAP	37.0551	TON
Mobile - Aircraft	NC	Durham	Nitrogen Oxides	CAP	1.5126868	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Edgecombe	Nitrogen Oxides	CAP	258.870706	TON
Mobile - Non-Road Equipment - Diesel	NC	Edgecombe	Nitrogen Oxides	CAP	162.2666101	TON
Mobile - Locomotives	NC	Edgecombe	Nitrogen Oxides	CAP	86.9923	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Edgecombe	Nitrogen Oxides	CAP	15.626189	TON
Mobile - Aircraft	NC	Edgecombe	Nitrogen Oxides	CAP	3.07126224	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Forsyth	Nitrogen Oxides	CAP	1108.46219	TON
Mobile - Non-Road Equipment - Diesel	NC	Forsyth	Nitrogen Oxides	CAP	570.2990246	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Forsyth	Nitrogen Oxides	CAP	109.7847	TON
Mobile - Locomotives	NC	Forsyth	Nitrogen Oxides	CAP	39.1231	TON
Mobile - Aircraft	NC	Forsyth	Nitrogen Oxides	CAP	11.64082617	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Franklin	Nitrogen Oxides	CAP	240.996988	TON
Mobile - Non-Road Equipment - Diesel	NC	Franklin	Nitrogen Oxides	CAP	101.8610552	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Franklin	Nitrogen Oxides	CAP	34.23858	TON
Mobile - Aircraft	NC	Franklin	Nitrogen Oxides	CAP	16.94678478	TON
Mobile - Locomotives	NC	Franklin	Nitrogen Oxides	CAP	3.42578	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Gaston	Nitrogen Oxides	CAP	1061.8948	TON
Mobile - Non-Road Equipment - Diesel	NC	Gaston	Nitrogen Oxides	CAP	300.838754	TON
Mobile - Locomotives	NC	Gaston	Nitrogen Oxides	CAP	178.48392	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Gaston	Nitrogen Oxides	CAP	120.75524	TON
Mobile - Aircraft	NC	Gaston	Nitrogen Oxides	CAP	2.0700288	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Gates	Nitrogen Oxides	CAP	61.7207695	TON
Mobile - Non-Road Equipment - Diesel	NC	Gates	Nitrogen Oxides	CAP	60.75925129	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Gates	Nitrogen Oxides	CAP	8.424376	TON
Mobile - Aircraft	NC	Gates	Nitrogen Oxides	CAP	0.0000325	TON
Mobile - Locomotives	NC	Gates	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Graham	Nitrogen Oxides	CAP	34.4834315	TON
Mobile - Non-Road Equipment - Diesel	NC	Graham	Nitrogen Oxides	CAP	13.58270665	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Graham	Nitrogen Oxides	CAP	6.997054	TON
Mobile - Locomotives	NC	Graham	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Granville	Nitrogen Oxides	CAP	388.189344	TON
Mobile - Non-Road Equipment - Diesel	NC	Granville	Nitrogen Oxides	CAP	179.3864115	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Granville	Nitrogen Oxides	CAP	34.31519	TON
Mobile - Aircraft	NC	Granville	Nitrogen Oxides	CAP	7.54233332	TON
Mobile - Locomotives	NC	Granville	Nitrogen Oxides	CAP	2.40888	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Greene	Nitrogen Oxides	CAP	113.601761	TON
Mobile - Non-Road Equipment - Diesel	NC	Greene	Nitrogen Oxides	CAP	89.37539316	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Greene	Nitrogen Oxides	CAP	11.11215	TON
Mobile - Locomotives	NC	Greene	Nitrogen Oxides	CAP	7.70024	TON
Mobile - Aircraft	NC	Greene	Nitrogen Oxides	CAP	0.00222296	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Guilford	Nitrogen Oxides	CAP	2331.75737	TON
Mobile - Non-Road Equipment - Diesel	NC	Guilford	Nitrogen Oxides	CAP	1272.694583	TON
Mobile - Locomotives	NC	Guilford	Nitrogen Oxides	CAP	388.55244	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Guilford	Nitrogen Oxides	CAP	167.1137	TON
Mobile - Aircraft	NC	Guilford	Nitrogen Oxides	CAP	156.5552239	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Halifax	Nitrogen Oxides	CAP	438.128218	TON
Mobile - Locomotives	NC	Halifax	Nitrogen Oxides	CAP	215.2373	TON
Mobile - Non-Road Equipment - Diesel	NC	Halifax	Nitrogen Oxides	CAP	154.0097841	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Halifax	Nitrogen Oxides	CAP	21.595682	TON
Mobile - Aircraft	NC	Halifax	Nitrogen Oxides	CAP	1.84986325	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Harnett	Nitrogen Oxides	CAP	478.36588	TON
Mobile - Non-Road Equipment - Diesel	NC	Harnett	Nitrogen Oxides	CAP	155.647176	TON
Mobile - Locomotives	NC	Harnett	Nitrogen Oxides	CAP	58.9372	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Harnett	Nitrogen Oxides	CAP	50.533	TON
Mobile - Aircraft	NC	Harnett	Nitrogen Oxides	CAP	40.656613	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Haywood	Nitrogen Oxides	CAP	574.805105	TON
Mobile - Non-Road Equipment - Diesel	NC	Haywood	Nitrogen Oxides	CAP	115.175871	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Haywood	Nitrogen Oxides	CAP	75.93029	TON
Mobile - Locomotives	NC	Haywood	Nitrogen Oxides	CAP	21.03676	TON
Mobile - Aircraft	NC	Haywood	Nitrogen Oxides	CAP	0.0059268	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Henderson	Nitrogen Oxides	CAP	547.825733	TON
Mobile - Non-Road Equipment - Diesel	NC	Henderson	Nitrogen Oxides	CAP	206.1369394	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Henderson	Nitrogen Oxides	CAP	72.08948	TON
Mobile - Locomotives	NC	Henderson	Nitrogen Oxides	CAP	22.650738	TON
Mobile - Aircraft	NC	Henderson	Nitrogen Oxides	CAP	3.64272718	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Hertford	Nitrogen Oxides	CAP	90.3794542	TON
Mobile - Non-Road Equipment - Diesel	NC	Hertford	Nitrogen Oxides	CAP	82.12184001	TON
Mobile - Locomotives	NC	Hertford	Nitrogen Oxides	CAP	12.012	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Hertford	Nitrogen Oxides	CAP	8.366173	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Aircraft	NC	Hertford	Nitrogen Oxides	CAP	1.03160828	TON
Mobile - Commercial Marine Vessels	NC	Hertford	Nitrogen Oxides	CAP	0.0705856	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Hoke	Nitrogen Oxides	CAP	151.440921	TON
Mobile - Non-Road Equipment - Diesel	NC	Hoke	Nitrogen Oxides	CAP	82.9495914	TON
Mobile - Aircraft	NC	Hoke	Nitrogen Oxides	CAP	67.68827977	TON
Mobile - Locomotives	NC	Hoke	Nitrogen Oxides	CAP	34.1957	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Hoke	Nitrogen Oxides	CAP	11.392917	TON
Mobile - Commercial Marine Vessels	NC	Hyde	Nitrogen Oxides	CAP	953.3035392	TON
Mobile - Non-Road Equipment - Diesel	NC	Hyde	Nitrogen Oxides	CAP	341.1711331	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Hyde	Nitrogen Oxides	CAP	24.6993003	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Hyde	Nitrogen Oxides	CAP	5.5189824	TON
Mobile - Aircraft	NC	Hyde	Nitrogen Oxides	CAP	3.20853286	TON
Mobile - Locomotives	NC	Hyde	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Iredell	Nitrogen Oxides	CAP	1290.39575	TON
Mobile - Non-Road Equipment - Diesel	NC	Iredell	Nitrogen Oxides	CAP	374.2868014	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Iredell	Nitrogen Oxides	CAP	139.08025	TON
Mobile - Locomotives	NC	Iredell	Nitrogen Oxides	CAP	63.0851	TON
Mobile - Aircraft	NC	Iredell	Nitrogen Oxides	CAP	2.99362132	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Jackson	Nitrogen Oxides	CAP	257.705042	TON
Mobile - Non-Road Equipment - Diesel	NC	Jackson	Nitrogen Oxides	CAP	107.823408	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Jackson	Nitrogen Oxides	CAP	43.70915	TON
Mobile - Locomotives	NC	Jackson	Nitrogen Oxides	CAP	20.918489	TON
Mobile - Aircraft	NC	Jackson	Nitrogen Oxides	CAP	1.28726795	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Johnston	Nitrogen Oxides	CAP	1521.20631	TON
Mobile - Non-Road Equipment - Diesel	NC	Johnston	Nitrogen Oxides	CAP	366.7353618	TON
Mobile - Locomotives	NC	Johnston	Nitrogen Oxides	CAP	246.587841	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Johnston	Nitrogen Oxides	CAP	103.69493	TON
Mobile - Aircraft	NC	Johnston	Nitrogen Oxides	CAP	8.07921523	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Jones	Nitrogen Oxides	CAP	92.143725	TON
Mobile - Non-Road Equipment - Diesel	NC	Jones	Nitrogen Oxides	CAP	58.28465873	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Jones	Nitrogen Oxides	CAP	9.528965	TON
Mobile - Locomotives	NC	Jones	Nitrogen Oxides	CAP	1.88598	TON
Mobile - Aircraft	NC	Jones	Nitrogen Oxides	CAP	0.00695944	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Lee	Nitrogen Oxides	CAP	253.925266	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Non-Road Equipment - Diesel	NC	Lee	Nitrogen Oxides	CAP	156.0009661	TON
Mobile - Locomotives	NC	Lee	Nitrogen Oxides	CAP	41.51436	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Lee	Nitrogen Oxides	CAP	27.90134	TON
Mobile - Aircraft	NC	Lee	Nitrogen Oxides	CAP	7.96650482	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Lenoir	Nitrogen Oxides	CAP	240.666008	TON
Mobile - Non-Road Equipment - Diesel	NC	Lenoir	Nitrogen Oxides	CAP	143.0210773	TON
Mobile - Aircraft	NC	Lenoir	Nitrogen Oxides	CAP	57.2392676	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Lenoir	Nitrogen Oxides	CAP	29.382593	TON
Mobile - Locomotives	NC	Lenoir	Nitrogen Oxides	CAP	9.78754	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Lincoln	Nitrogen Oxides	CAP	330.637201	TON
Mobile - Non-Road Equipment - Diesel	NC	Lincoln	Nitrogen Oxides	CAP	126.9968111	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Lincoln	Nitrogen Oxides	CAP	59.03434	TON
Mobile - Locomotives	NC	Lincoln	Nitrogen Oxides	CAP	44.0777	TON
Mobile - Aircraft	NC	Lincoln	Nitrogen Oxides	CAP	6.1722796	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Macon	Nitrogen Oxides	CAP	148.658519	TON
Mobile - Non-Road Equipment - Diesel	NC	Macon	Nitrogen Oxides	CAP	80.34487676	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Macon	Nitrogen Oxides	CAP	29.1305	TON
Mobile - Aircraft	NC	Macon	Nitrogen Oxides	CAP	1.7163606	TON
Mobile - Locomotives	NC	Macon	Nitrogen Oxides	CAP	1.3875	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Madison	Nitrogen Oxides	CAP	143.850532	TON
Mobile - Locomotives	NC	Madison	Nitrogen Oxides	CAP	88.8807	TON
Mobile - Non-Road Equipment - Diesel	NC	Madison	Nitrogen Oxides	CAP	34.09319885	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Madison	Nitrogen Oxides	CAP	18.57766	TON
Mobile - Aircraft	NC	Madison	Nitrogen Oxides	CAP	0.00222311	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Martin	Nitrogen Oxides	CAP	142.808618	TON
Mobile - Non-Road Equipment - Diesel	NC	Martin	Nitrogen Oxides	CAP	92.47883637	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Martin	Nitrogen Oxides	CAP	15.882905	TON
Mobile - Locomotives	NC	Martin	Nitrogen Oxides	CAP	4.4726	TON
Mobile - Aircraft	NC	Martin	Nitrogen Oxides	CAP	2.9288399	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	McDowell	Nitrogen Oxides	CAP	469.504817	TON
Mobile - Locomotives	NC	McDowell	Nitrogen Oxides	CAP	331.609	TON
Mobile - Non-Road Equipment - Diesel	NC	McDowell	Nitrogen Oxides	CAP	74.17617949	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	McDowell	Nitrogen Oxides	CAP	49.23128	TON
Mobile - Aircraft	NC	McDowell	Nitrogen Oxides	CAP	0.43507342	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Mecklenburg	Nitrogen Oxides	CAP	4895.42003	TON
Mobile - Non-Road Equipment - Diesel	NC	Mecklenburg	Nitrogen Oxides	CAP	2792.72088	TON
Mobile - Aircraft	NC	Mecklenburg	Nitrogen Oxides	CAP	2407.61729	TON
Mobile - Locomotives	NC	Mecklenburg	Nitrogen Oxides	CAP	464.4034	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Mecklenburg	Nitrogen Oxides	CAP	267.1813	TON
Mobile - Locomotives	NC	Mitchell	Nitrogen Oxides	CAP	209.705	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Mitchell	Nitrogen Oxides	CAP	60.3973812	TON
Mobile - Non-Road Equipment - Diesel	NC	Mitchell	Nitrogen Oxides	CAP	26.09433278	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Mitchell	Nitrogen Oxides	CAP	9.902447	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Montgomery	Nitrogen Oxides	CAP	216.681207	TON
Mobile - Non-Road Equipment - Diesel	NC	Montgomery	Nitrogen Oxides	CAP	61.61051528	TON
Mobile - Locomotives	NC	Montgomery	Nitrogen Oxides	CAP	38.767459	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Montgomery	Nitrogen Oxides	CAP	20.326649	TON
Mobile - Aircraft	NC	Montgomery	Nitrogen Oxides	CAP	11.2685922	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Moore	Nitrogen Oxides	CAP	325.177375	TON
Mobile - Non-Road Equipment - Diesel	NC	Moore	Nitrogen Oxides	CAP	166.3776754	TON
Mobile - Locomotives	NC	Moore	Nitrogen Oxides	CAP	73.29097	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Moore	Nitrogen Oxides	CAP	38.86332	TON
Mobile - Aircraft	NC	Moore	Nitrogen Oxides	CAP	1.154649616	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Nash	Nitrogen Oxides	CAP	796.899927	TON
Mobile - Non-Road Equipment - Diesel	NC	Nash	Nitrogen Oxides	CAP	195.8079905	TON
Mobile - Locomotives	NC	Nash	Nitrogen Oxides	CAP	160.4088	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Nash	Nitrogen Oxides	CAP	55.8128	TON
Mobile - Aircraft	NC	Nash	Nitrogen Oxides	CAP	5.190322453	TON
Mobile - Commercial Marine Vessels	NC	New Hanover	Nitrogen Oxides	CAP	1057.866162	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	New Hanover	Nitrogen Oxides	CAP	704.994831	TON
Mobile - Non-Road Equipment - Diesel	NC	New Hanover	Nitrogen Oxides	CAP	529.501688	TON
Mobile - Aircraft	NC	New Hanover	Nitrogen Oxides	CAP	74.91005312	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	New Hanover	Nitrogen Oxides	CAP	63.66861	TON
Mobile - Locomotives	NC	New Hanover	Nitrogen Oxides	CAP	7.5183	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Northampton	Nitrogen Oxides	CAP	165.699797	TON
Mobile - Locomotives	NC	Northampton	Nitrogen Oxides	CAP	152.9176	TON
Mobile - Non-Road Equipment - Diesel	NC	Northampton	Nitrogen Oxides	CAP	111.1712013	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Northampton	Nitrogen Oxides	CAP	13.750426	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Aircraft	NC	Northampton	Nitrogen Oxides	CAP	0.00455476	TON
Mobile - Commercial Marine Vessels	NC	Onslow	Nitrogen Oxides	CAP	804.4169131	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Onslow	Nitrogen Oxides	CAP	747.713558	TON
Mobile - Non-Road Equipment - Diesel	NC	Onslow	Nitrogen Oxides	CAP	235.0020401	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Onslow	Nitrogen Oxides	CAP	73.58384	TON
Mobile - Aircraft	NC	Onslow	Nitrogen Oxides	CAP	64.01174511	TON
Mobile - Locomotives	NC	Onslow	Nitrogen Oxides	CAP	0.144217	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Orange	Nitrogen Oxides	CAP	1154.110615	TON
Mobile - Non-Road Equipment - Diesel	NC	Orange	Nitrogen Oxides	CAP	315.3634951	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Orange	Nitrogen Oxides	CAP	63.8625	TON
Mobile - Locomotives	NC	Orange	Nitrogen Oxides	CAP	38.8023	TON
Mobile - Aircraft	NC	Orange	Nitrogen Oxides	CAP	0.68258266	TON
Mobile - Commercial Marine Vessels	NC	Pamlico	Nitrogen Oxides	CAP	519.5926641	TON
Mobile - Non-Road Equipment - Diesel	NC	Pamlico	Nitrogen Oxides	CAP	142.0688261	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Pamlico	Nitrogen Oxides	CAP	55.738216	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Pamlico	Nitrogen Oxides	CAP	9.429031	TON
Mobile - Aircraft	NC	Pamlico	Nitrogen Oxides	CAP	0.0079533	TON
Mobile - Locomotives	NC	Pamlico	Nitrogen Oxides	CAP	0	TON
Mobile - Aircraft	NC	Pasquotank	Nitrogen Oxides	CAP	246.3098817	TON
Mobile - Non-Road Equipment - Diesel	NC	Pasquotank	Nitrogen Oxides	CAP	177.3250418	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Pasquotank	Nitrogen Oxides	CAP	173.94972	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Pasquotank	Nitrogen Oxides	CAP	17.392416	TON
Mobile - Locomotives	NC	Pasquotank	Nitrogen Oxides	CAP	10.4334	TON
Mobile - Commercial Marine Vessels	NC	Pasquotank	Nitrogen Oxides	CAP	1.298268609	TON
Mobile - Commercial Marine Vessels	NC	Pender	Nitrogen Oxides	CAP	468.2942782	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Pender	Nitrogen Oxides	CAP	451.1574	TON
Mobile - Non-Road Equipment - Diesel	NC	Pender	Nitrogen Oxides	CAP	118.040173	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Pender	Nitrogen Oxides	CAP	42.2361	TON
Mobile - Aircraft	NC	Pender	Nitrogen Oxides	CAP	7.24171114	TON
Mobile - Locomotives	NC	Pender	Nitrogen Oxides	CAP	0	TON
Mobile - Non-Road Equipment - Diesel	NC	Perquimans	Nitrogen Oxides	CAP	125.5339839	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Perquimans	Nitrogen Oxides	CAP	74.577911	TON
Mobile - Locomotives	NC	Perquimans	Nitrogen Oxides	CAP	14.3113	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Perquimans	Nitrogen Oxides	CAP	8.141021	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Commercial Marine Vessels	NC	Perquimans	Nitrogen Oxides	CAP	1.00226	TON
Mobile - Aircraft	NC	Perquimans	Nitrogen Oxides	CAP	0.01070282	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Person	Nitrogen Oxides	CAP	126.528985	TON
Mobile - Non-Road Equipment - Diesel	NC	Person	Nitrogen Oxides	CAP	87.38169567	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Person	Nitrogen Oxides	CAP	19.159557	TON
Mobile - Locomotives	NC	Person	Nitrogen Oxides	CAP	14.42	TON
Mobile - Aircraft	NC	Person	Nitrogen Oxides	CAP	7.98200569	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Pitt	Nitrogen Oxides	CAP	576.913859	TON
Mobile - Non-Road Equipment - Diesel	NC	Pitt	Nitrogen Oxides	CAP	361.2659564	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Pitt	Nitrogen Oxides	CAP	50.66908	TON
Mobile - Locomotives	NC	Pitt	Nitrogen Oxides	CAP	44.4224	TON
Mobile - Aircraft	NC	Pitt	Nitrogen Oxides	CAP	15.00521976	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Polk	Nitrogen Oxides	CAP	312.109327	TON
Mobile - Non-Road Equipment - Diesel	NC	Polk	Nitrogen Oxides	CAP	36.05523656	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Polk	Nitrogen Oxides	CAP	30.2748	TON
Mobile - Aircraft	NC	Polk	Nitrogen Oxides	CAP	0.01407484	TON
Mobile - Locomotives	NC	Polk	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Randolph	Nitrogen Oxides	CAP	744.327856	TON
Mobile - Non-Road Equipment - Diesel	NC	Randolph	Nitrogen Oxides	CAP	237.4407943	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Randolph	Nitrogen Oxides	CAP	99.55134	TON
Mobile - Locomotives	NC	Randolph	Nitrogen Oxides	CAP	14.113661	TON
Mobile - Aircraft	NC	Randolph	Nitrogen Oxides	CAP	3.5366987	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Richmond	Nitrogen Oxides	CAP	274.336353	TON
Mobile - Locomotives	NC	Richmond	Nitrogen Oxides	CAP	227.49967	TON
Mobile - Non-Road Equipment - Diesel	NC	Richmond	Nitrogen Oxides	CAP	93.09481147	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Richmond	Nitrogen Oxides	CAP	20.348578	TON
Mobile - Aircraft	NC	Richmond	Nitrogen Oxides	CAP	0.687119719	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Robeson	Nitrogen Oxides	CAP	970.652699	TON
Mobile - Locomotives	NC	Robeson	Nitrogen Oxides	CAP	385.59214	TON
Mobile - Non-Road Equipment - Diesel	NC	Robeson	Nitrogen Oxides	CAP	307.6717044	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Robeson	Nitrogen Oxides	CAP	49.077	TON
Mobile - Aircraft	NC	Robeson	Nitrogen Oxides	CAP	12.0991358	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Rockingham	Nitrogen Oxides	CAP	402.291678	TON
Mobile - Locomotives	NC	Rockingham	Nitrogen Oxides	CAP	219.36225	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Non-Road Equipment - Diesel	NC	Rockingham	Nitrogen Oxides	CAP	129.791002	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Rockingham	Nitrogen Oxides	CAP	55.74026	TON
Mobile - Aircraft	NC	Rockingham	Nitrogen Oxides	CAP	1.51998222	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Rowan	Nitrogen Oxides	CAP	857.975248	TON
Mobile - Locomotives	NC	Rowan	Nitrogen Oxides	CAP	312.4526	TON
Mobile - Non-Road Equipment - Diesel	NC	Rowan	Nitrogen Oxides	CAP	205.4710544	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Rowan	Nitrogen Oxides	CAP	135.74537	TON
Mobile - Aircraft	NC	Rowan	Nitrogen Oxides	CAP	23.37938159	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Rutherford	Nitrogen Oxides	CAP	280.560006	TON
Mobile - Locomotives	NC	Rutherford	Nitrogen Oxides	CAP	175.82129	TON
Mobile - Non-Road Equipment - Diesel	NC	Rutherford	Nitrogen Oxides	CAP	101.2339897	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Rutherford	Nitrogen Oxides	CAP	43.99925	TON
Mobile - Aircraft	NC	Rutherford	Nitrogen Oxides	CAP	3.939532692	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Sampson	Nitrogen Oxides	CAP	399.658508	TON
Mobile - Non-Road Equipment - Diesel	NC	Sampson	Nitrogen Oxides	CAP	221.7408049	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Sampson	Nitrogen Oxides	CAP	35.57799	TON
Mobile - Locomotives	NC	Sampson	Nitrogen Oxides	CAP	4.63141	TON
Mobile - Aircraft	NC	Sampson	Nitrogen Oxides	CAP	3.53501178	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Scotland	Nitrogen Oxides	CAP	182.308105	TON
Mobile - Aircraft	NC	Scotland	Nitrogen Oxides	CAP	168.8316528	TON
Mobile - Locomotives	NC	Scotland	Nitrogen Oxides	CAP	87.2077	TON
Mobile - Non-Road Equipment - Diesel	NC	Scotland	Nitrogen Oxides	CAP	69.07831981	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Scotland	Nitrogen Oxides	CAP	8.362231	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Stanly	Nitrogen Oxides	CAP	245.571797	TON
Mobile - Non-Road Equipment - Diesel	NC	Stanly	Nitrogen Oxides	CAP	134.3208847	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Stanly	Nitrogen Oxides	CAP	57.28571	TON
Mobile - Locomotives	NC	Stanly	Nitrogen Oxides	CAP	48.61201	TON
Mobile - Aircraft	NC	Stanly	Nitrogen Oxides	CAP	29.8456025	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Stokes	Nitrogen Oxides	CAP	173.397258	TON
Mobile - Non-Road Equipment - Diesel	NC	Stokes	Nitrogen Oxides	CAP	68.35829137	TON
Mobile - Locomotives	NC	Stokes	Nitrogen Oxides	CAP	36.0598	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Stokes	Nitrogen Oxides	CAP	31.43651	TON
Mobile - Aircraft	NC	Stokes	Nitrogen Oxides	CAP	0.43615106	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Surry	Nitrogen Oxides	CAP	650.953145	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Non-Road Equipment - Diesel	NC	Surry	Nitrogen Oxides	CAP	150.3008293	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Surry	Nitrogen Oxides	CAP	94.48833	TON
Mobile - Locomotives	NC	Surry	Nitrogen Oxides	CAP	45.4596	TON
Mobile - Aircraft	NC	Surry	Nitrogen Oxides	CAP	4.2315678	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Swain	Nitrogen Oxides	CAP	112.865067	TON
Mobile - Non-Road Equipment - Diesel	NC	Swain	Nitrogen Oxides	CAP	42.57941656	TON
Mobile - Locomotives	NC	Swain	Nitrogen Oxides	CAP	27.1558	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Swain	Nitrogen Oxides	CAP	16.244156	TON
Mobile - Aircraft	NC	Swain	Nitrogen Oxides	CAP	0.0514462	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Transylvania	Nitrogen Oxides	CAP	106.631884	TON
Mobile - Non-Road Equipment - Diesel	NC	Transylvania	Nitrogen Oxides	CAP	75.84480804	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Transylvania	Nitrogen Oxides	CAP	24.42215	TON
Mobile - Locomotives	NC	Transylvania	Nitrogen Oxides	CAP	6.643	TON
Mobile - Aircraft	NC	Transylvania	Nitrogen Oxides	CAP	0.326187105	TON
Mobile - Commercial Marine Vessels	NC	Tyrrell	Nitrogen Oxides	CAP	416.1091499	TON
Mobile - Non-Road Equipment - Diesel	NC	Tyrrell	Nitrogen Oxides	CAP	143.3325633	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Tyrrell	Nitrogen Oxides	CAP	39.5107295	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Tyrrell	Nitrogen Oxides	CAP	4.6442505	TON
Mobile - Locomotives	NC	Tyrrell	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Union	Nitrogen Oxides	CAP	810.72207	TON
Mobile - Non-Road Equipment - Diesel	NC	Union	Nitrogen Oxides	CAP	648.3397334	TON
Mobile - Locomotives	NC	Union	Nitrogen Oxides	CAP	184.61848	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Union	Nitrogen Oxides	CAP	112.00153	TON
Mobile - Aircraft	NC	Union	Nitrogen Oxides	CAP	9.30156291	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Vance	Nitrogen Oxides	CAP	286.989177	TON
Mobile - Non-Road Equipment - Diesel	NC	Vance	Nitrogen Oxides	CAP	82.85792788	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Vance	Nitrogen Oxides	CAP	16.258676	TON
Mobile - Locomotives	NC	Vance	Nitrogen Oxides	CAP	1.62478	TON
Mobile - Aircraft	NC	Vance	Nitrogen Oxides	CAP	0.0085402	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Wake	Nitrogen Oxides	CAP	3686.13197	TON
Mobile - Non-Road Equipment - Diesel	NC	Wake	Nitrogen Oxides	CAP	2154.972398	TON
Mobile - Aircraft	NC	Wake	Nitrogen Oxides	CAP	613.5738261	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Wake	Nitrogen Oxides	CAP	267.0982	TON
Mobile - Locomotives	NC	Wake	Nitrogen Oxides	CAP	122.762	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Warren	Nitrogen Oxides	CAP	177.559345	TON
Mobile - Non-Road Equipment - Diesel	NC	Warren	Nitrogen Oxides	CAP	49.72232385	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Warren	Nitrogen Oxides	CAP	11.65767	TON
Mobile - Aircraft	NC	Warren	Nitrogen Oxides	CAP	0.599488	TON
Mobile - Locomotives	NC	Warren	Nitrogen Oxides	CAP	0.11141	TON
Mobile - Non-Road Equipment - Diesel	NC	Washington	Nitrogen Oxides	CAP	140.61213	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Washington	Nitrogen Oxides	CAP	78.090379	TON
Mobile - Locomotives	NC	Washington	Nitrogen Oxides	CAP	12.760497	TON
Mobile - Aircraft	NC	Washington	Nitrogen Oxides	CAP	11.63501012	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Washington	Nitrogen Oxides	CAP	6.984959	TON
Mobile - Commercial Marine Vessels	NC	Washington	Nitrogen Oxides	CAP	3.122306	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Watauga	Nitrogen Oxides	CAP	241.168333	TON
Mobile - Non-Road Equipment - Diesel	NC	Watauga	Nitrogen Oxides	CAP	166.8969081	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Watauga	Nitrogen Oxides	CAP	35.75933	TON
Mobile - Aircraft	NC	Watauga	Nitrogen Oxides	CAP	0.01482099	TON
Mobile - Locomotives	NC	Watauga	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Wayne	Nitrogen Oxides	CAP	445.984266	TON
Mobile - Aircraft	NC	Wayne	Nitrogen Oxides	CAP	308.6522924	TON
Mobile - Non-Road Equipment - Diesel	NC	Wayne	Nitrogen Oxides	CAP	263.5869588	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Wayne	Nitrogen Oxides	CAP	46.0284	TON
Mobile - Locomotives	NC	Wayne	Nitrogen Oxides	CAP	26.6165	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Wilkes	Nitrogen Oxides	CAP	302.080091	TON
Mobile - Non-Road Equipment - Diesel	NC	Wilkes	Nitrogen Oxides	CAP	108.7361949	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Wilkes	Nitrogen Oxides	CAP	55.91102	TON
Mobile - Locomotives	NC	Wilkes	Nitrogen Oxides	CAP	15.9757	TON
Mobile - Aircraft	NC	Wilkes	Nitrogen Oxides	CAP	0.9270865	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Wilson	Nitrogen Oxides	CAP	522.033483	TON
Mobile - Locomotives	NC	Wilson	Nitrogen Oxides	CAP	246.2146	TON
Mobile - Non-Road Equipment - Diesel	NC	Wilson	Nitrogen Oxides	CAP	216.8070838	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Wilson	Nitrogen Oxides	CAP	36.17356	TON
Mobile - Aircraft	NC	Wilson	Nitrogen Oxides	CAP	4.40143483	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Yadkin	Nitrogen Oxides	CAP	428.928162	TON
Mobile - Non-Road Equipment - Diesel	NC	Yadkin	Nitrogen Oxides	CAP	92.89223756	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Yadkin	Nitrogen Oxides	CAP	42.64284	TON

SECTOR	STATE	COUNTY	POLLUTANT	POLLUTANT TYPE	EMISSIONS	UNIT OF MEASURE
Mobile - Aircraft	NC	Yadkin	Nitrogen Oxides	CAP	0.4412201	TON
Mobile - Locomotives	NC	Yadkin	Nitrogen Oxides	CAP	0	TON
Mobile - On-Road Diesel Heavy Duty Vehicles	NC	Yancey	Nitrogen Oxides	CAP	83.281114	TON
Mobile - Locomotives	NC	Yancey	Nitrogen Oxides	CAP	28.49	TON
Mobile - Non-Road Equipment - Diesel	NC	Yancey	Nitrogen Oxides	CAP	24.44908046	TON
Mobile - On-Road Diesel Light Duty Vehicles	NC	Yancey	Nitrogen Oxides	CAP	14.67261	TON
Mobile - Aircraft	NC	Yancey	Nitrogen Oxides	CAP	0.0059593	TON

Appendix D

Emission Reduction Calculations

The DEQ used the following methods and assumptions to calculate estimated emissions reductions for potential Phase 1 projects of the VW Settlement funding.

Heavy-duty on-road vehicles

The DEQ used the Argonne National Laboratory Heavy-Duty Vehicle Emissions Calculator (HDVEC) to estimate emissions from heavy-duty on-road vehicles. The HDVEC was developed to estimate the vehicle operation nitrogen oxide (NOx) and particulate matter ($PM_{2.5}$), as well as the well-to-wheel greenhouse gas emissions (GHGs) of commercially available alternative fuel medium- and heavy-duty vehicles.

HDVEC Parameters

Table 3 shows the parameters used for estimating the emissions for school and transit buses and refuse trucks. The HDVEC was used to estimate emissions for diesel, propane and electric school buses. Table 4 shows the combination of vehicle types and fuels modeled. The DEQ used values from preliminary project proposals received during the Request for Information (RFI). The DEQ ran the HDVEC for 1 vehicle in each category.

Table 3: HDVEC Parameters

Primary Vehicle Location	North Carolina
Predicted lifetime of vehicle	15 years – transit bus 20 years – school bus, refuse truck
Model year of original vehicle	2003 – school bus, transit bus 2005 – refuse truck
Annual miles of old vehicle	35,000 – transit bus 15,000 – school bus, refuse truck
Annual miles of new vehicle	35,000 – transit bus 15,000 – school bus, refuse truck
Output used: Annual emissions in lbs.	Vehicle operation: NOx, $PM_{2.5}$

Table 4: Vehicle and Fuel Type Combinations Modeled

Model Year	Fuel	Refuse truck	School bus	Transit bus
2003	Diesel		x	x
2005	Diesel	x		
2019	Diesel	x	x	x
2019	CNG	x	x	x
2019	All-Electric		x	x
2019	Hybrid-Electric			x
2019	Propane		x	

Calculations

The HDVEC outputs NOx and $PM_{2.5}$ emissions reduced in pounds per year. The DEQ used the following equations to convert the emissions to tons per year (Eq. 1). The next step was to multiply each emissions output by the number of corresponding vehicles estimated for each alternative fuel type.

Eq. 1: Pounds to tons per year conversion: Emissions reduced (tpy) = Emissions reduced (lb./yr.) * 2,000
Eq. 2: Total annual emissions reduced = Emissions reduced (tpy) * Number of vehicles replaced
tpy: tons per year
lb./yr: pounds per year

Heavy-duty off-road vehicles

The DEQ used the EPA Diesel Emission Quantifier (EPA-DEQ) to estimate emissions from heavy-duty off-road vehicles and marine vessels. The EPA-DEQ evaluates clean diesel projects and upgrade options for medium-heavy and heavy-heavy duty diesel engines. The EPA-DEQ estimates baseline emissions, annual reduced emissions, and lifetime reduced emissions.

EPA-DEQ Parameters

Table 5 shows the parameters used for estimating the emissions for agricultural mowers, construction equipment (crawler tractor) and marine ferry repowers. The EPA-DEQ was used to estimate emissions for the replacement of diesel agricultural mowers, crawler tractors and ferry engines with propane agricultural mowers, clean diesel crawler tractors and a clean diesel engine repower of ferry vessels. Table 6 shows the combination of vehicle types and fuels modeled. The DEQ used values from previously awarded Diesel Emission Reduction Act grant applications and preliminary project proposals received during the RFI. The DEQ ran the EPA-DEQ for 1 vehicle in each category.

Table 5: EPA-DEQ Parameters

Primary vehicle location	North Carolina
Remaining life of baseline engine (in years at time of upgrade)	3 years – agricultural mowers 3 years – crawler tractor 1 year – marine ferry *
Model year – original	2005 – agricultural mowers 1998 – crawler tractor 1996 – marine ferry
Model year – new	2019 – agricultural mowers 2019 – crawler tractor 2019 – marine ferry
Original horsepower	31 – agricultural mowers 125 – crawler tractor 450 – marine ferry
New horsepower	31 – agricultural mowers 130 – crawler tractor 600 – marine ferry
Original engine Tier	2 – agricultural mowers 1 – crawler tractor Uncontrolled – marine ferry
New engine Tier	4 – agricultural mowers 4 – crawler tractor 3 – marine ferry
Output used: Annual emissions in tons	Vehicle operation: NOx, $PM_{2.5}$

*Predicted marine ferry lifetime of vehicle determined by DEQ. For a marine propulsion engine with a base tier and engine displacement of $\geq$5 liters/cylinder, the median life is 23 years with a maximum of 46 years. The DEQ used the median life to determine the remaining life.

Table 6: Vehicle and Fuel Type Combinations Modeled

Model Year	Fuel	Mower	Crawler Tractor	Marine Ferry Repower
2005	Diesel	x		
2010	Diesel	x	x	x
2019	Diesel	x	x	x
2019	CNG	x		

Calculations

The EPA-DEQ outputs NOx and $PM_{2.5}$ emissions reduced in tons per year. The emissions outputs were multiplied by the number of corresponding vehicles estimated for each alternative fuel.

Eq. 2: Total emissions reduced = Emissions reduced (tpy) * Number of vehicles replaced
tpy: tons per year
lb./yr.: pounds per year