COMMONWEALTH OF VIRGINIA

BENEFICIARY MITIGATION PLAN

FOR THE VOLKSWAGEN ENVIRONMENTAL MITIGATION STATE TRUST AGREEMENT

August 9, 2018

Prepared by the
Virginia Department of Environmental Quality
Division of Air and Renewable Energy

Table of Contents

List of Figures

I. INTRODUCTION

This Beneficiary Mitigation Plan (Plan) contains the eligible mitigation actions or project categories that the Commonwealth of Virginia plans to fund with the $93.6 million allocated to it under the fully executed *Environmental Mitigation Trust Agreement for State Beneficiaries* (State Trust Agreement) that took effect October 2, 2017, in the case, *In Re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation*. The State Trust Agreement is an element to the settlements resolving allegations that Volkswagen (VW) violated the Clean Air Act by the sale of approximately 590,000 2.0 and 3.0 liter engines model year 2009 to 2016 diesel motor vehicles equipped with "defeat devices" in the form of computer software designed to cheat on federal emissions tests including approximately 16,000 vehicles in Virginia. Use of these "defeat devices" has increased air emissions of nitrogen oxide (NO_x), resulting in adverse impacts to air quality and violating the federal Clean Air Act.

As provided in two-court approved Partial Consent Decrees (CDs), the Environmental Mitigation Trust (Trust) is intended to fully mitigate the lifetime excess NO_x emissions caused by VW's actions. Under these CDs and in accordance with the State Trust Agreement, the Commonwealth submitted the required certification for Beneficiary status in November 2017 to Wilmington Trust, N.A., the court-appointed Trustee of the Mitigation Trust. Virginia was approved as a 'Beneficiary' of the Mitigation Trust on January 28, 2018. The Virginia Department of Environmental Quality (DEQ) is the designated Lead Agency acting on the State's behalf as beneficiary to implement Virginia's allocation of the $2.95 billion Trust (see Section III).

Virginia's Plan has been developed in accordance with the terms of the State Mitigation Trust, and includes:

- Overall goal for the use of mitigation funds;
- Categories of eligible mitigation action/projects anticipated to be appropriate to achieve the stated goal(s) and percentages of funds to be used for each category of eligible mitigation project;
- Consideration of potential beneficial impacts of the selected eligible mitigation projects on air quality in areas that historically bear a disproportionate share of the air pollution burden;
- Anticipated NO_x emission reductions and environmental benefits; and
- Process for seeking and considering public input on the Plan.

Under the terms of the State Mitigation Trust, Virginia may revise its Plan to reflect shifting public or state priorities, changes in market demand, or available funds in future years. DEQ will periodically evaluate implementation of the Plan, and will determine whether any major revisions to the Plan are appropriate or necessary. If future

revisions to the Plan are necessary, DEQ intends to seek public input on major Plan revisions, including publishing a notice of the opportunity for public comment regarding the proposed revisions.

II. GOALS FOR VIRGINIA'S BENEFICIARY MITIGATION PLAN

The overall goal of the Plan is to protect human health and the environment by mitigating approximately 2,095 short tons of excess lifetime NO_x emitted by more than 16,000 subject VW diesel vehicles in violation of federal emission standards registered in Virginia.

Other goals include minimizing administrative costs allowing more funds to be spent on actual mitigation projects, attaining and maintaining federal air quality standards for ground-level ozone, reducing air pollution in disproportionately impacted areas of the state, improving visibility under the regional haze program, reducing nitrogen loads to the Chesapeake Bay, and advancing statewide energy goals, including transportation electrification and markets for clean fuels technologies.

III. AVAILABLE FUNDING AND ELIGIBLE APPLICANTS

Virginia's allocation of the Trust is $93,633,980. Virginia may request one-third of its allocation during the first year and another one-third in the second year. Beneficiaries have up to ten years from the Trust Effective Date (October 2, 2017) to spend these funds. Governmental and non-governmental projects are eligible for funding from the Trust. Funds from the Trust are not awarded directly to a state. DEQ will select eligible projects and then submit funding requests to the Trustee for approval. Upon approval, Wilmington Trust will transmit funds directly to each project sponsor as directed by DEQ.

DEQ will maintain and make publically available on its *VW Mitigation Website* public records supporting funding requests submitted to the Trustee and semi-annual reports in accordance with the State Trust Agreement.

IV. FUNDING PRIORITIES FOR CATEGORIES OF ELIGIBLE MITIGATION PROJECT TYPES

DEQ will strive to ensure that the selection of Eligible Mitigation Actions will, on whole, maximize the use of Trust funds in reducing the excess NOx emissions emitted by the subject VW vehicles. To achieve this goal, funding may be prioritized on the basis to:

- Achieve cost-effective and greatest near-term emission reductions, such as:
    - Ozone nonattainment area

    - Areas with historical issues concerning compliance meeting and maintaining federal air quality standards (e.g., ozone and $PM_{2.5}$ maintenance areas)
    - Areas with toxic air pollution concerns
    - Designated Federal Class I/II areas
    - Areas that are disproportionally impacted by air pollution, such as areas in close proximity to traffic, ports, rail yards, truck stops, airports, passenger/freight terminals and bus depots, etc.
- Achieve the greatest long-term emission reductions in critical areas or throughout Virginia;
- Reduce nitrogen loads to the Chesapeake Bay;
- Advance state clean energy and climate goals;
- Implement large-scale, near-term or long-term emission reductions projects within 1-2 years of the award date; and
- Provide cost-share and/or leveraged funding.

V. ELIGIBLE MITIGATION ACTIONS

Public input supports taking a diverse approach by investing in a range of technologies that provide cost-effective, near-term emission benefits (i.e., low NOx) coupled with investments in zero-emission technologies that cost more in the near-term but provide long-term emission benefits. Therefore, this Plan includes all categories of eligible mitigation projects. Including all eligible mitigation projects provides maximum flexibility to meet the Plan's stated goals and to adjust to changing state priorities and changes in market demand.

The Plan is intended to provide a high-level vision for the use of mitigation funds. Implementation details for each category of eligible mitigation projects will be developed by DEQ, including timelines and solicitation processes, percent funding allocation for each category of eligible mitigation project (15% has been allocated for light-duty zero-emission supply equipment), cost-share requirements, reporting requirements, operational requirements, and other implementation details. The implementation phase will be informed by public input received to date. DEQ's public outreach efforts will continue as implementation processes are developed and requests for projects are released. Eligible mitigation projects include the following categories:

a. Mobile On-road Light-Duty Vehicle Sources

Light-duty vehicles emitted 82,097 tons or 41% of all mobile source NO_x emissions (diesel and non-diesel) in Virginia during 2014. Infrastructure investments would expedite the deployment of ZEVs and help mitigate the largest source of NO_x emissions in Virginia.

Eligible Project Types: Eligible light-duty ZEV supply equipment includes Level 1, Level 2 or fast-charging equipment located in a public place, workplace, or multi-unit dwelling; and light-duty hydrogen fuel cell vehicle supply equipment including hydrogen-dispensing equipment that is located in a public place. A maximum of 15% of Virginia's allocation can be used for funding ZEV supply equipment.

Under the Plan, Virginia will use the full 15% (or approximately $14 million) to pay for up to 80% of all the necessary cost to purchase, install, and maintain eligible light-duty electric vehicle supply equipment that will be available to the public at government-owned or non-government owned properties.

b. Mobile On-Road Heavy-Duty Diesel Sources

On-road heavy-duty diesel sources eligible for Trust funding emitted 57,392 tons or 53% of diesel NO_x emissions in Virginia during 2014.

Eligible Project Types: Eligible heavy-duty sources include Class 8 Local Freight Trucks and Port Drayage Trucks (Large Trucks), Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Buses), and Class 4-7 Local Freight Trucks (Medium Trucks).

Eligible trucks and buses include 1992 - 2009 engine model years. Eligible trucks and buses may be repowered with any new diesel, alternate fueled, or all-electric engine, or may be replaced with any new diesel, alternate fueled, or all-electric vehicle, with the engine model year in which the mitigation action occurs or one engine model year prior. Eligible trucks and buses must be scrapped.

Expenditures for Non-government Owned Eligible Large and Medium Local Freight Truck, and Eligible Buses:

- 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 the engine;

- Up to 25% of the cost of a new diesel or alternate fueled (e.g., CNG, propane, hybrid) vehicle;

- 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; and

- Up to 75% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

Expenditures for Non-government Owned Eligible Drayage Trucks:

- Up to 40% of the cost for a repower with a new diesel or alternate fueled (e.g., CNG, propane, hybrid) engine, including the costs of installation of the engine;

- Up to 50% of the cost for a new diesel or alternate fueled (e.g., CNG, propane, hybrid) vehicle;

- Up to 75% of the cost for 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; and

- Up to 75% of the cost for a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

Expenditures for Government-owned Eligible Large Trucks:

- 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;

- Up to 100% of the cost of a new diesel or alternate fueled (e.g., CNG, propane, hybrid) vehicle;

- 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; and

- Up to 100% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

c. Mobile Non-Road Diesel Sources

Mobile non-road sources eligible for Trust funding emitted 51,250 tons or 47% of diesel NO_x emissions in Virginia during 2014.

i. Airport Ground Support Equipment and Forklifts, and Port Cargo Handling Equipment

Eligible Project Types: Eligible airport ground support equipment includes Tier 0, Tier 1, or Tier 2 diesel-powered airport ground support equipment, and uncertified, or certified to 3 grams per brake horsepower-hour or higher emissions, spark-ignition engine-powered airport ground-support equipment. Eligible forklifts include reach stackers, side loaders, and top loaders with greater than 8,000 pounds lift capacity. Eligible port cargo handling equipment includes rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hostlers and yard tractors that operate within ports. Eligible equipment and forklifts must be scrapped.

Expenditures for Non-government Owned Eligible Airport Ground Support, and Forklifts and Port Cargo Handling Equipment:

- Up to 75% of the cost of a repower with a new all-electric engine, including the costs of installation of the engine, and charging infrastructure associated with the new all-electric engine, and

- Up to 75% of the cost of new all-electric equipment, including charging infrastructure associated with the new all-electric equipment.

Expenditures for Government-Owned Eligible Expenditures Airport Ground Support, and Forklifts and Port Cargo Handling Equipment:

- 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, and

- Up to 100% of the cost of new all-electric equipment, including charging infrastructure associated with the new all-electric equipment.

ii. Freight Switchers

Eligible Project Types: Eligible freight switchers include pre-Tier 4 switcher locomotives that operate 1,000 or more hours per year. Eligible freight switchers may be repowered with any new diesel or alternate-fueled or all-electric engines (including generator sets), or may be replaced with any new diesel or alternate-fueled or all-electric (including generator sets) freight switchers that are certified to meet the applicable Environmental Protection Agency (EPA) emissions standards as published in the federal code for the engine model year in which the

eligible freight-switcher mitigation action occurs. Eligible freight switchers must be scrapped.

Expenditures for Non-government Owned Freight Switchers:

- Up to 40% of the cost for a repower with new diesel or alternate-fueled (e.g., CNG, propane, hybrid) engines or generator sets, including the costs of installation;

- Up to 25% of the cost for a new diesel or alternate fueled (e.g., CNG, propane, hybrid) freight switcher;

- Up to 75% of the cost for a repower with new all-electric engines, including the costs of installation and associated charging infrastructure; and

- Up to 75% of the cost for new all-electric freight switchers, including associated charging infrastructure.

Expenditures for Government-Owned Freight Switchers:

- Up to 100% of the cost for a repower with new diesel or alternate fueled (e.g., CNG, propane, hybrid) engines or generator sets, including the costs of installation;

- Up to 100% of the cost for a new diesel or alternate fueled (e.g., CNG, propane, hybrid) freight switcher;

- Up to 100% of the cost for a repower with new all-electric engines, including the costs of installation and associated charging infrastructure; and

- Up to 100% of the cost for new all-electric freight switchers, including associated charging infrastructure.

iii. Commercial Marine Vessels

Eligible Project Types: Eligible commercial marine vessels include ferries or tugs and shore power for ocean-going vessels. Eligible ferries or tugs include unregulated, Tier 1 or Tier 2 marine engines. Eligible ferries 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.

Eligible marine shore-power comprises systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth and include cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution.

Expenditures for Non-government Owned Eligible Ferries or Tugs and Shore Power for Ocean-going Vessels:

- Up to 40% of the cost of a repower with a new diesel or alternate-fueled (e.g., CNG, propane, hybrid) engines, including the costs of installation of the engines for ferries or tugs;

- Up to 75% of the cost of a repower with new all-electric engines, including the costs of installation and associated charging infrastructure; and

- Up to 25% for the costs associated with the shore-side system, including cables, cable management systems, shore power coupler systems, distribution control systems, installation, and power distribution systems.

Expenditures for Government-Owned Eligible Ferries or Tugs and Shore Power for Ocean-going Vessels:

- Up to 100% of the cost of a repower with new diesel or alternate-fueled (e.g., CNG, propane, hybrid) engines, including the costs of installation;

- Up to 100% of the cost of a repower with new all-electric engines, including the costs of installation and associated charging infrastructure; and

- Up to 100% for the costs associated with the shore-side system, including cables, cable management systems, shore-power coupler systems, distribution control systems, installation, and power distribution systems.

d. DERA Option

The "DERA Option" allows Virginia to use Trust funds for their non-federal voluntary match on state DERA grants for heavy-duty diesel emissions mitigation projects not specifically enumerated in Appendix D-2 of the State Trust Agreement but "otherwise" eligible for funding through state DERA. Many types of projects are eligible under the State Trust Agreement and the DERA Option. However, there are some differences between the options in terms of project eligibility and funding limits for certain types of projects. A detailed comparison between the mitigation actions eligible under the State Trust Agreement and the

DERA Option can be found at: *www.epa.gov/cleandiesel/vw-dera-option-states-supporting-documents*.

VI. ANTICIPATED NO_X REDUCTIONS AND ENVIRONMENTAL BENEFITS

a. Estimating Excess NO_X and Anticipated NO_X Reductions

The mitigation projects eligible for funding in the Plan and under the CD are wide-ranging in scope as well as emissions benefits. To inform funding decisions, DEQ estimated the excess NO_x emissions emitted by subject VW vehicles.

Using estimates of excess NO_X emissions published in late 2015, DEQ assumed that every mile driven by subject vehicles (14,075 2.0-liter and 1,993 3.0-liter vehicles) would, on average, emit 1.4661 grams of excess NO_x.[12] DEQ used average annual vehicle mileage estimates published by the Federal Highway Administration to determine total miles driven per year by all subject vehicles.[3] With these vehicle emission/usage estimates and assumptions relating to the rate of recall and the terms of the 2.0 and 3.0 liter partial settlements, DEQ estimates that the 2.0 and 3.0 liter subject vehicles will emit more than 2,095 short tons of excess lifetime NO_x emissions throughout Virginia.

DEQ will work to ensure that the selection of Eligible Mitigation Actions will, on whole, strive to maximize the use of Trust funds in reducing NOx emissions in Virginia. Actual NOx reductions will be determined on a project-by-project basis using the appropriate and publicly available tool(s) (e.g., EPA Diesel Emissions Quantifier) in order to compare project effectiveness and to ensure transparency. These NOx reductions will be used in determining what projects to fund through this Trust. Funding will be prioritized based upon reducing the excess NOx emissions emitted by the subject vehicles to achieve the goals of this Plan.

b. Anticipated Environmental and Human Health Benefits

Anticipated environmental and human health benefits include:

- Attaining air quality standards for ground level ozone;
- Improved ambient air quality and human health in communities located in nonattainment areas, areas with historical air quality issues, or in areas that bear a disproportionate share of the air pollution burden;

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[1] Barrett, Speth, Eastham, Dedoussi, Ashok, Malina, and Keith, *Impact of the Volkswagen Emissions Control Defeat Device on US Public Health*, 10 Envtl. Res. Letter 11 (October 29, 2015), *at* http://iopscience.iop.org/article/10.1088/1748-9326/10/11/114005.

[2] Barrett et al. estimated the typical NOx emissions factor based on FTP-75 drive cycle to be 0.019 grams per kilometer and then estimated the average NOx emissions factor for affected vehicles to be 0.93 grams per kilometer. Taking the difference between the two and converting to grams per mile results in 1.4661 grams per mile.

[3] Federal Highway Administration, https://www.fhwa.dot.gov/policyinformation/statistics/2015/vm1.cfm, (accessed June 21, 2017).

- Reduced human exposure to diesel particulate matter, which the EPA has classified as a likely human carcinogen;
- Reduced greenhouse gases;
- Improved visibility under the regional haze program; and
- Reduced nitrogen loads to the Chesapeake Bay in support of Virginia's Chesapeake Bay Watershed Implementation Plan (WIP).[4]

VII. PUBLIC INPUT PROCESS

DEQ is committed to an open, robust, and transparent process in developing the Plan. This section describes the public input process implemented in the development of the Plan, the process for continued outreach and public input, and the public input process to be employed when revising this Plan. To provide transparency and accountability, DEQ will post and regularly update information on its *VW Mitigation website*.[5]

On November 16, 2016, DEQ announced a public comment period and public meeting on a proposed Plan. A public meeting was held at the Administration Board Room, Henrico County Government Center, 4301 East Parham Road, Henrico, Virginia on December 7, 2016, from 5 to 8 p.m. Notice of this meeting was given to the public on November 16, 2016, on DEQ and Town Hall websites. Thirty people attended the public meeting, with nine of those offering comments. In addition, written comments were accepted from November 17 to December 16, 2016. DEQ received approximately 103 written comments during the public comment period, and more than 50 additional written comments were submitted through August 9, 2018.

To gather additional information on the best use of VW Trust funds for Virginia, DEQ issued a Request for Information (RFI) on April 4, 2017, seeking potential VW mitigation project ideas, funding priorities, and methods to increase participation in future requests for projects. DEQ received 39 project ideas from governmental and non-governmental entities totaling approximately $600 million. DEQ received three (3) additional project ideas through August 9, 2018, totaling approximately $14 million. In addition, DEQ has held conference calls or meetings with more than 40 interested stakeholders at their request.

As a whole, public input supports taking a broad, balanced approach to investing in technologies that provide cost-effective, near-term emissions benefits (e.g., low NO_x) in areas most impacted by air pollution coupled with investments in zero emission

[4] DEQ collaborated with the U.S Environmental Protection Agency (EPA) to develop a white paper entitled *Influence of Volkswagen Settlement Agreements on Chesapeake Water Quality,* which provides a standard method for converting reductions in NOx emissions achieved through the implementation of VW mitigation to reduced nitrogen loads to the Bay. This standard method can be used by all Chesapeake Bay Partner states.
[5] https://www.deq.virginia.gov/Programs/Air/VWMitigation.aspx.

technologies to accelerate deployment of light-duty vehicles, buses, trucks, and equipment that may cost more in the near-term but provide long-term emissions benefits.

Continued Public Outreach Efforts: Virginia outreach efforts will continue as competitive processes are developed and requests for projects are released.

Periodic Evaluation: This Plan was submitted to Wilmington Trust on August 9, 2018. DEQ will periodically evaluate implementation of the Plan and will determine whether any revisions to the Plan are appropriate or necessary. If future revisions to the Plan are necessary, DEQ intends to seek public input on major Plan revisions, including publishing a notice of the opportunity for public comment regarding the proposed revisions.

Virginia DEQ will post the following on the *Virginia VW Website*:

- Draft and final Plans and public process documentation (e.g., public comments);
- Trust implementation details, including timelines, solicitation requirements for competitive projects, selection metrics, etc.;
- Public records supporting funding requests submitted to the Trustee, subject to confidentiality laws and the termination dates of the State Trust Agreement;
- Semi-annual reports; and
- Department contact information.

APPENDIX A: NO_X EMISSIONS DATA FOR VIRGINIA

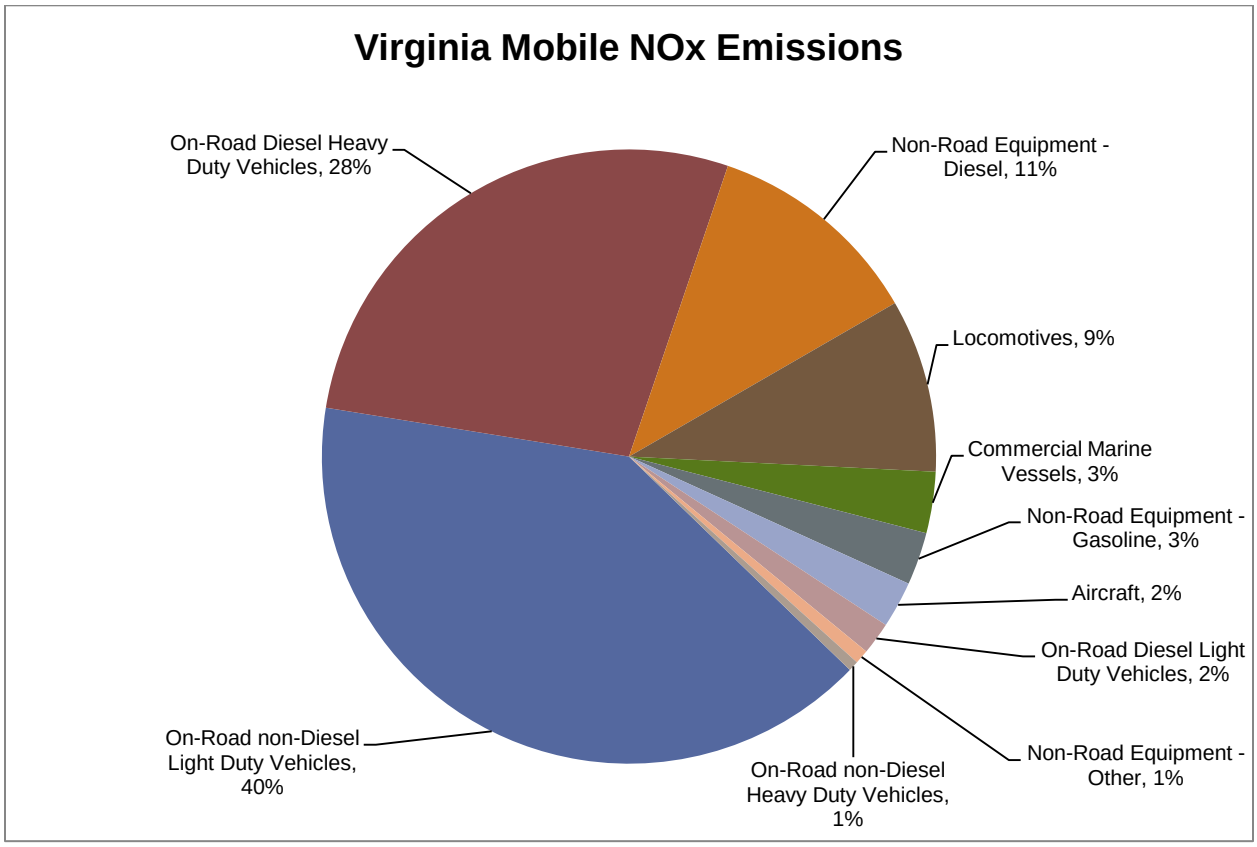

Figure A-1: Percent VA Mobile NOx Emissions, 2014 National Emissions Inventory Data

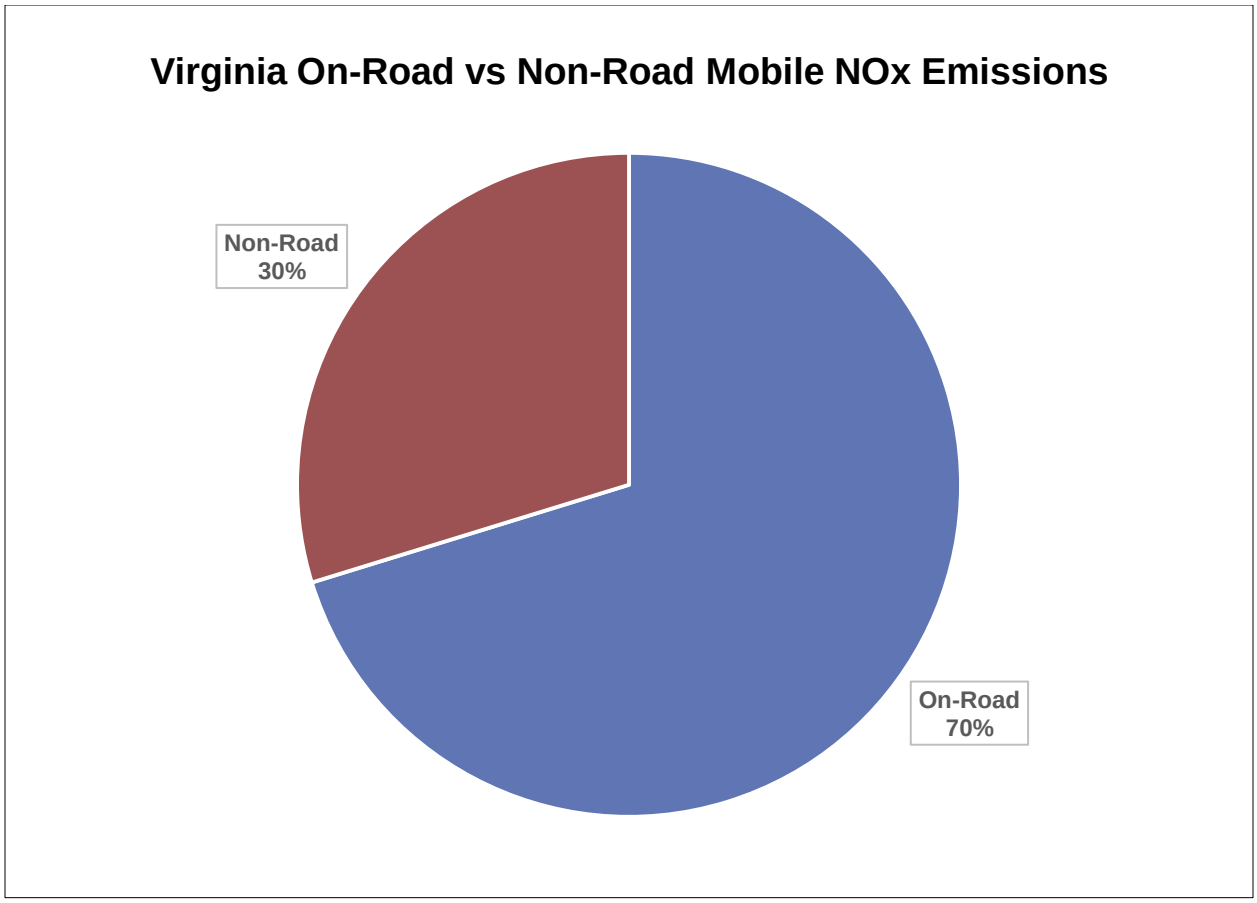

Figure A-2: Percent Non-Road and On-Road Mobile NO_x Emissions, 2014 National Emissions Inventory Data

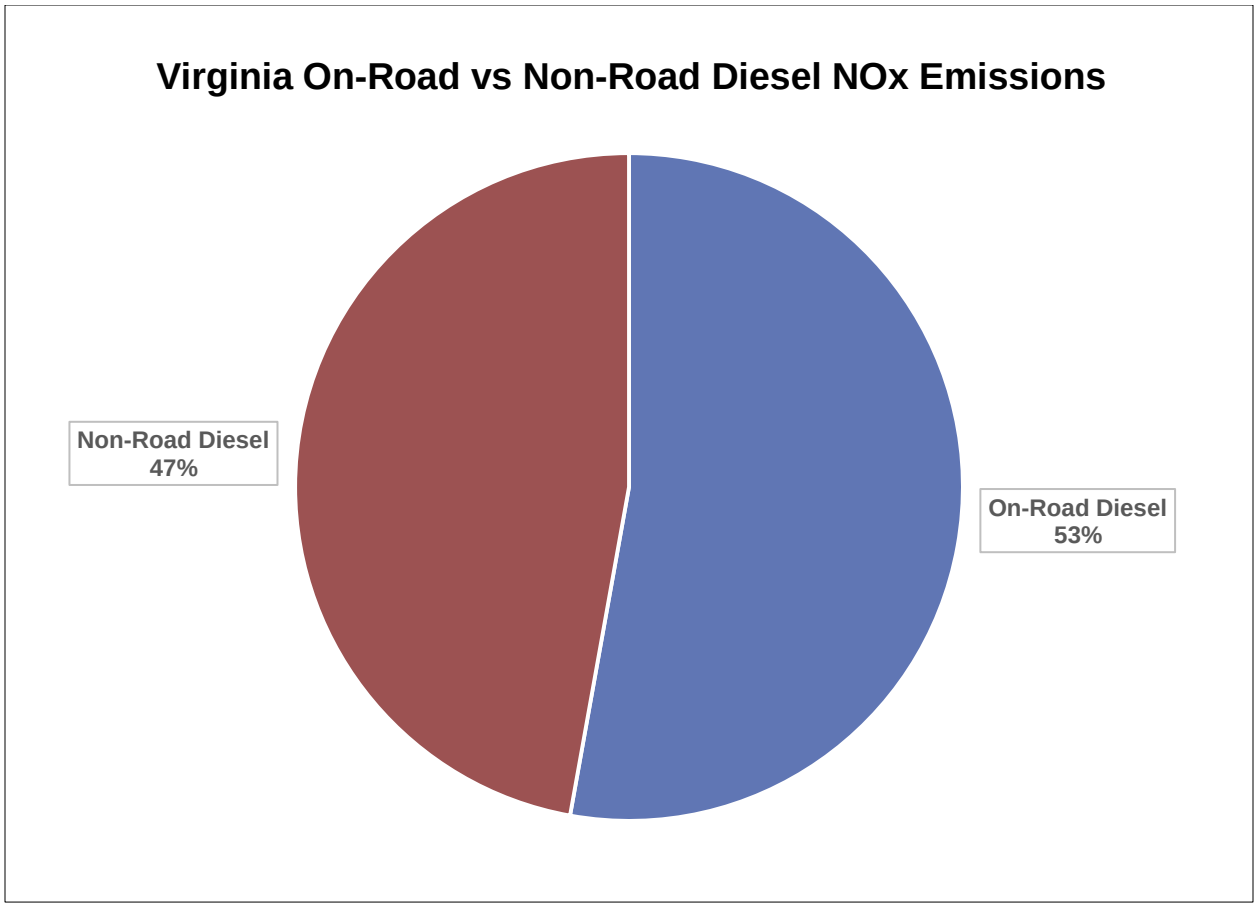

Figure A-3: Percent Non-Road and On-Road Mobile Diesel NOx Emissions, 2014 National Emissions Inventory Data

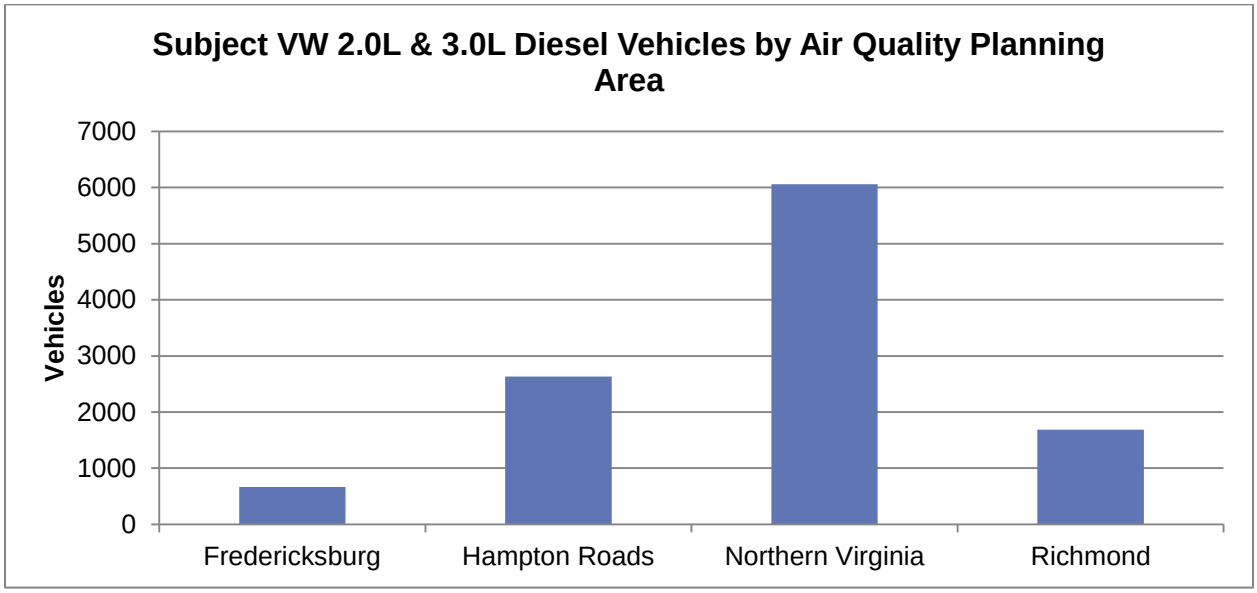

Figure A-4: Subject VW Vehicles by Air Quality Planning Area

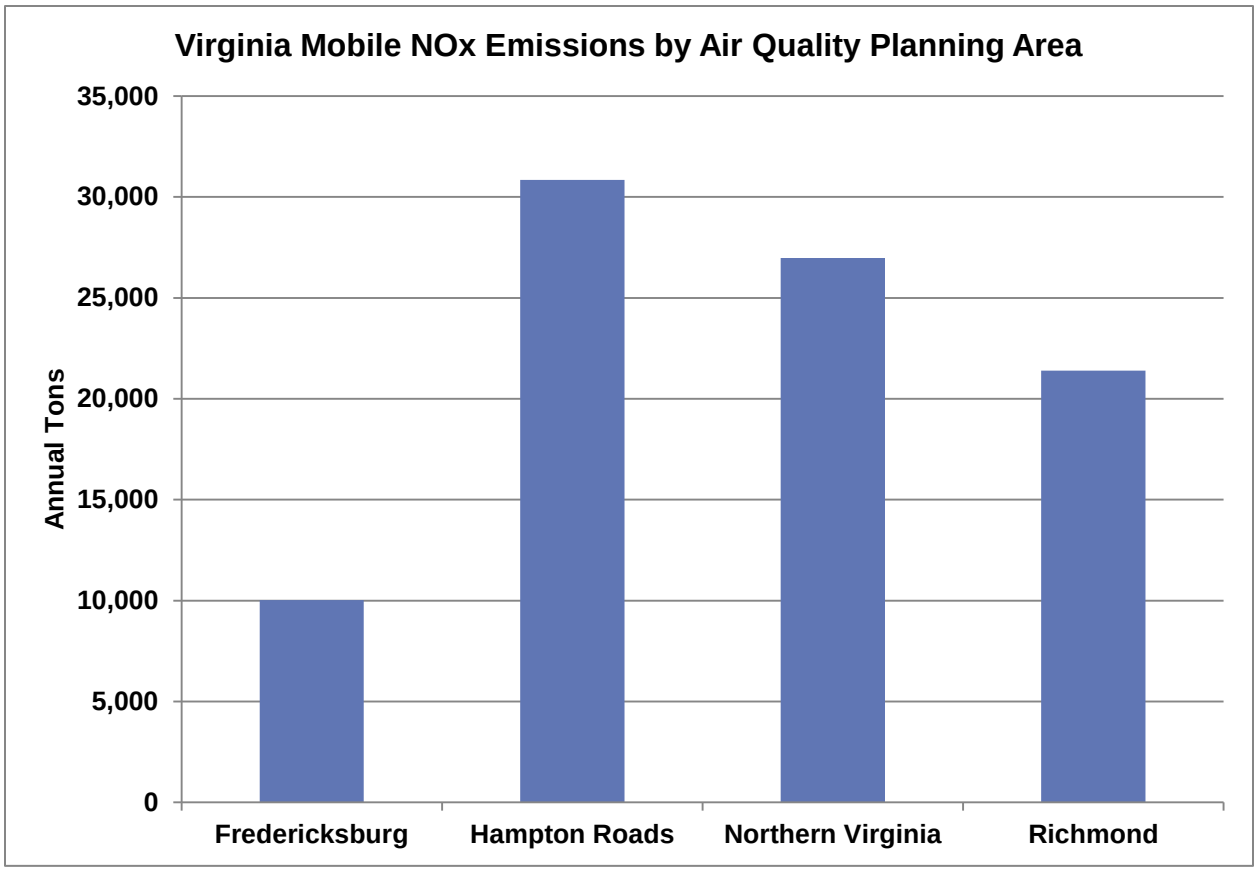

Figure A-5: Virginia Mobile NO_x Emissions by Air Quality Planning Area

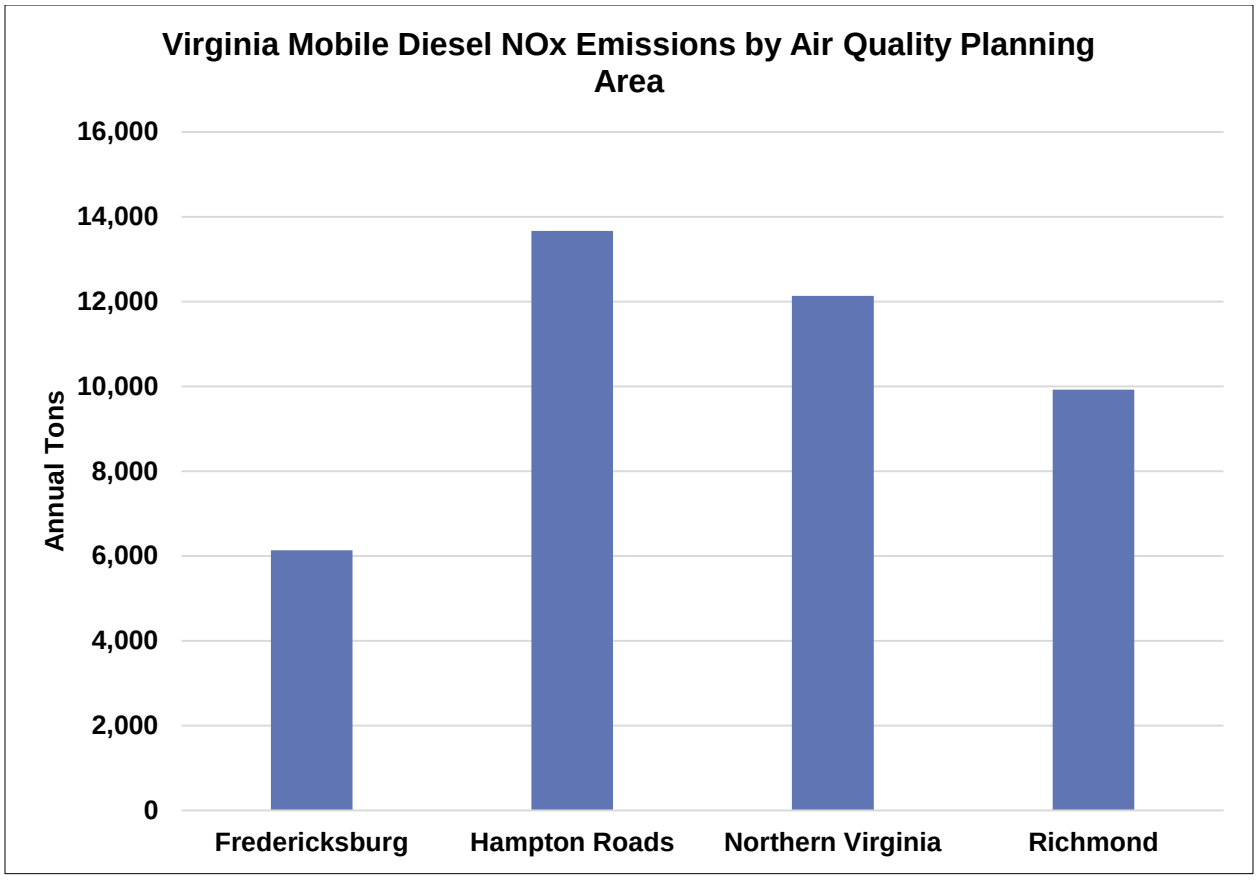

Figure A-6: Virginia Mobile Diesel NO_x Emissions by Air Quality Planning Area

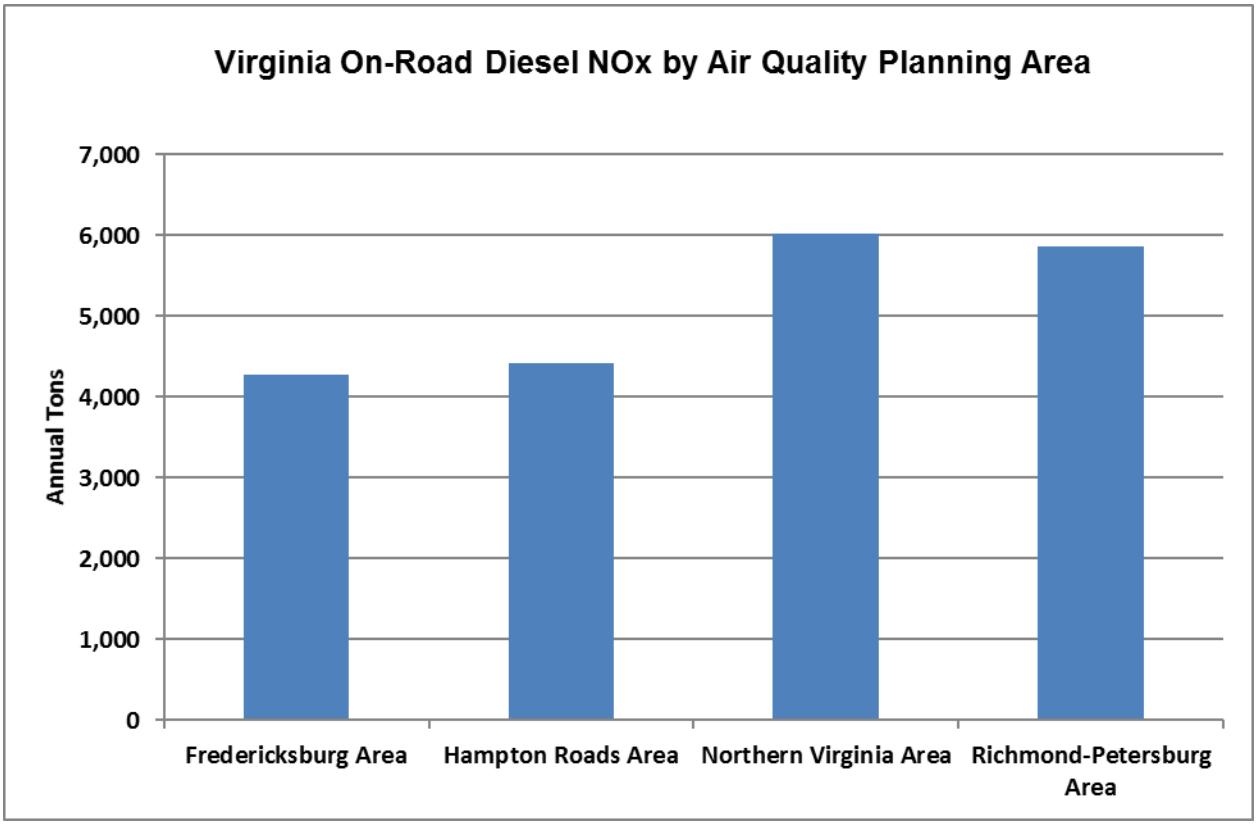

Figure A-7: Virginia On-Road Diesel NO_x Emissions by Air Quality Planning Area

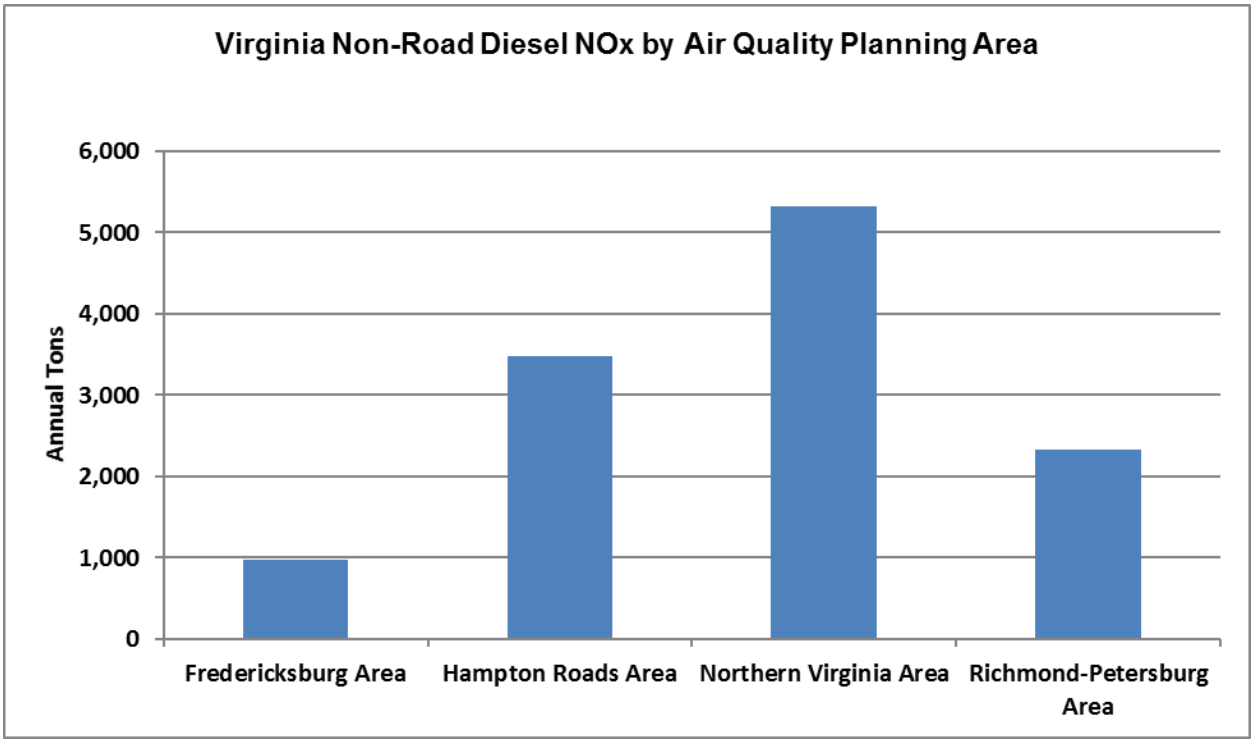

Figure A-8: Virginia Non-Road Diesel NOx by Air Quality Planning Area

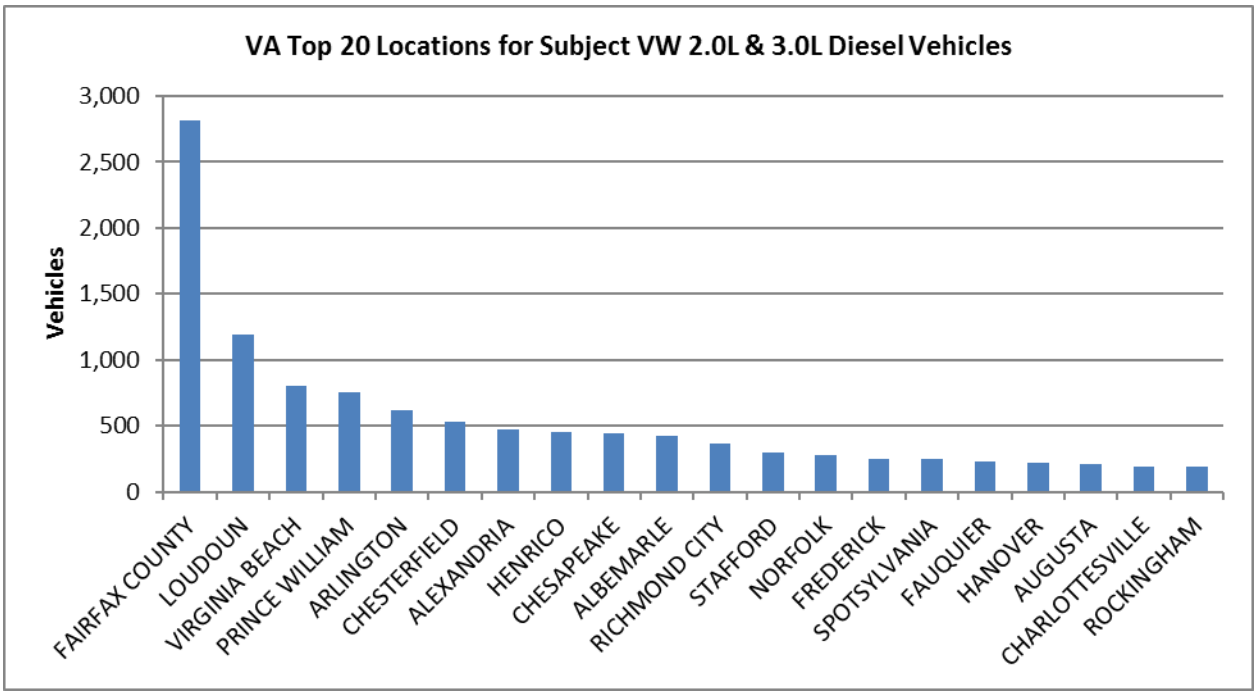

Figure A-9: Top VA Counties for Subject VW Vehicles

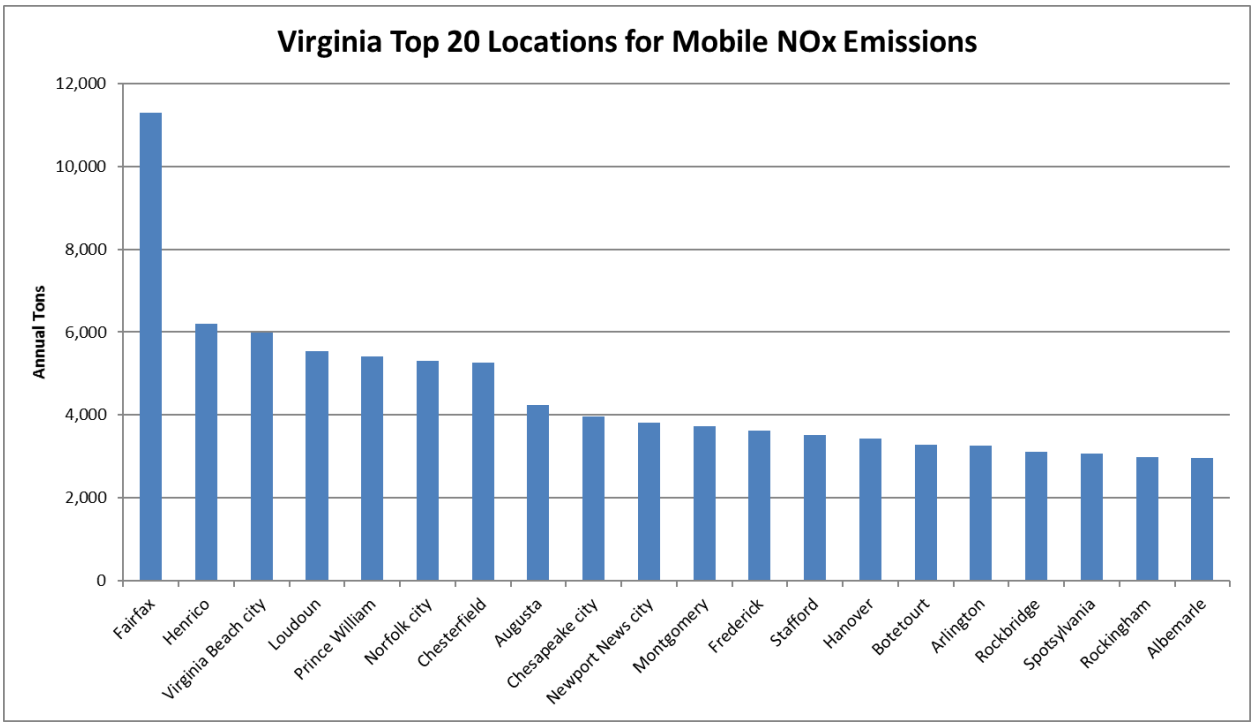

Figure A-10: Virginia Top 20 Counties for Mobile NO_x Emissions

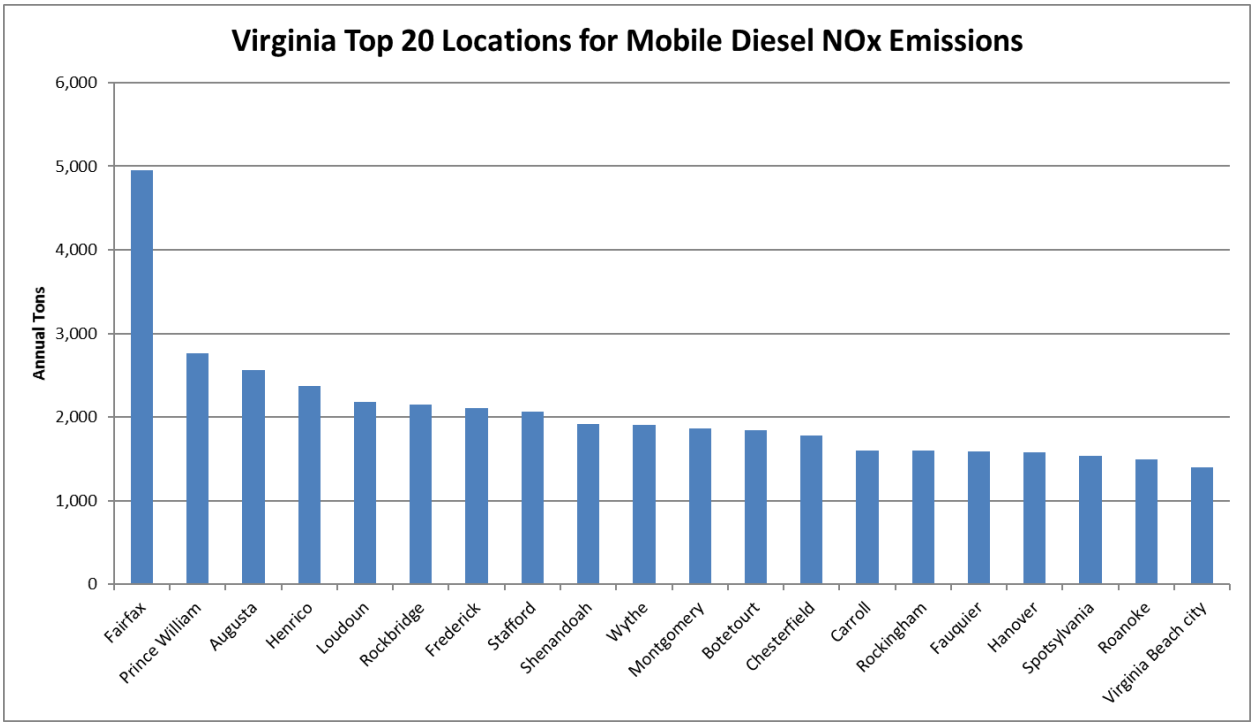

Figure A-11: Virginia Top 20 Counties for Mobile Diesel NO_x Emissions

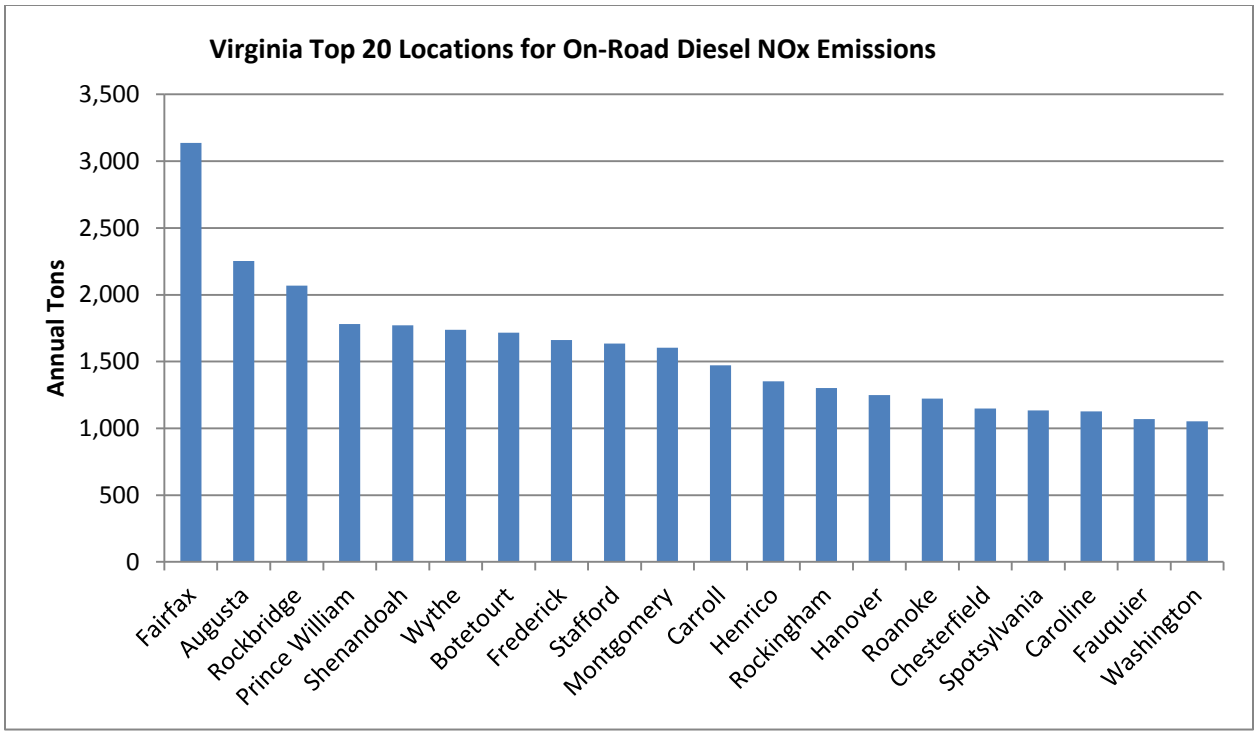

Figure A-12: Virginia Top 20 Locations for On-Road Diesel NOx Emissions

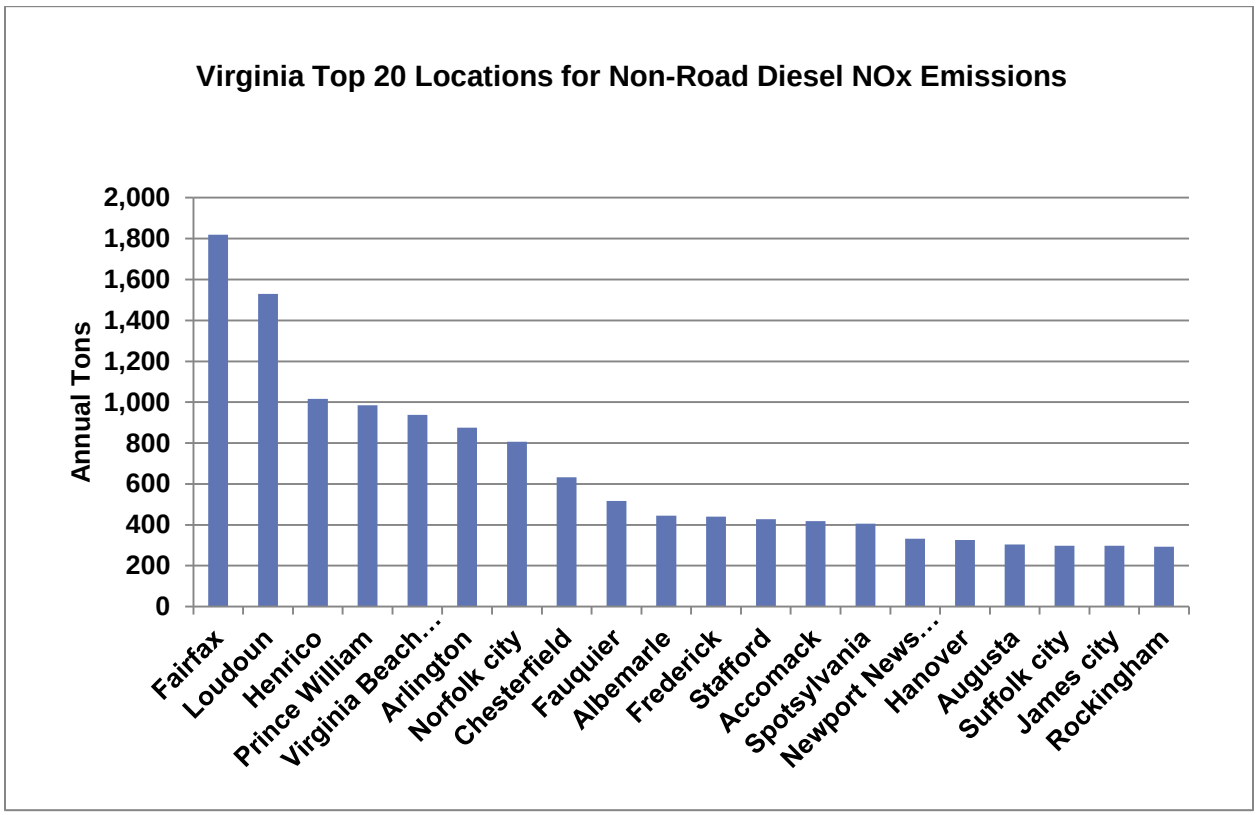

Figure A-13: Virginia Top 20 Locations for Non-Road Diesel NOx Emissions

APPENDIX B: ELIGIBLE MITIGATION PROJECT ADMINISTRATIVE EXPENDITURES

For any eligible mitigation project, Trust Funds can be used for the actual administrative expenditures associated with implementing such eligible mitigation project, but may not exceed 15% of the total cost of such eligible mitigation project. The 15% cap includes the aggregated amount of eligible administrative expenditures incurred by the Beneficiary and any third-party contractors. These eligible administrative expenditures include the following:

- Personnel, including costs of employee salaries and wages, but not consultants.
- Fringe Benefits, including costs of employee fringe benefits such as health insurance, Federal Insurance Contributions Act, retirement, life insurance, and payroll taxes.
- Travel, including costs of mitigation project-related travel by program staff, not including consultant travel.
- Supplies, including tangible property purchased in support of the mitigation project that will be expensed on the "Statement of Activities," such as educational publications, office supplies, etc.
- Contractual costs, including all contracted services and goods except for those charged under other categories such as supplies, construction, etc. Contracts for evaluation and consulting services and contracts with sub-recipient organizations must be included.
- Construction, including costs associated with ordinary or normal rearrangement and alteration of facilities.
- Other costs, including insurance, professional services, occupancy and equipment leases, printing and publication, training, indirect costs, and accounting.

APPENDIX C: DEFINITIONS

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

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

Alternate Fueled means an engine, or a vehicle or piece of equipment that is powered by an engine, which uses a fuel different from or in addition to gasoline or diesel fuel (e.g., compressed natural gas, propane, diesel-electric hybrid).

Certified Remanufacture System or Verified Engine Upgrade means engine upgrades certified or verified by the Environmental Protection Agency (EPA) or California Air Resources Board (CARB) to achieve a reduction in emissions.

Class 4-7 Local Freight Trucks (Medium Trucks) means 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 pounds (lbs.).

Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Buses) means vehicles with a GVWR greater than 14,001 lbs. used for transporting people.

Class 8 Local Freight and Port Drayage Trucks means trucks with a GVWR greater than 33,000 lbs. used for port drayage and/or freight/cargo delivery, including waste haulers, dump trucks, and concrete mixers.

Drayage Trucks means trucks hauling cargo to and from ports and intermodal rail yards.

Forklift means non-road equipment used to lift and move materials short distances, and generally include tines to lift objects. Eligible types of forklifts include reach stackers, side loaders, and top loaders.

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

Generator Set means 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 means 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.

Gross Vehicle Weight Rating (GVWR) means the maximum weight of the vehicle, as specified

by the manufacturer. GVWR includes the following total vehicle weight plus fluids, passengers, and cargo:

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

Hybrid means a vehicle that combines an internal combustion engine with a battery and electric motor.

Infrastructure means the equipment used to enable the use of electric powered vehicles (e.g., electric charging stations).

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

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

Repower means 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 or tugs with an EPA Certified Remanufacture System, and/or diesel engine upgrades in ferries or tugs with an EPA Verified Engine Upgrade. All-Electric and fuel cell repowers do not require EPA or CARB certification.

School Bus means a Class 4-8 bus sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events.

Scrapped means to render inoperable and available for recycle, and, at a minimum, to specifically cut a 3-inch hole in the engine block for all engines. If any eligible vehicle will be replaced as part of an eligible project, “scrapped” shall also include the disabling of the chassis by cutting the vehicle’s frame rails completely in half.

Tier 0, 1, 2, 3, and 4 refers to corresponding EPA engine emission classifications for non-road, locomotive and marine engines.

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

Zero Emission Vehicle (ZEV) means a vehicle that produces no emissions from the onboard source of power (e.g., all-electric or hydrogen fuel cell vehicles).