2018
Updated January 2020

Maine Beneficiary Mitigation Plan

Pursuant to Volkswagen Partial Consent Decree, Appendix D

Maine Department of Transportation, Lead Agency

Maine Department of Environmental Protection

Governor's Energy Office

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Maine Beneficiary Mitigation Plan

I. BACKGROUND

On October 25, 2016, the U.S. District Court in Northern California ("Court") approved the U.S. Environmental Protection Agency (EPA), California, and the Federal Trade Commission partial consent decree with Volkswagen and Audi (collectively "VW") to settle allegations of installing defeat devices on 2.0-liter diesel vehicles sold or leased in the United States. These defeat devices detected when the vehicle was being tested and switched on or increased operability of emission control equipment during the emissions test. Under normal driving conditions the emission control equipment was turned off, defeated, or rendered less effective allowing the emissions of nitrogen oxide ("NOx") to exceed up to 40 times the vehicle emission standard. Nearly 500,000 of the 2.0-liter diesel vehicles were sold or leased in the United States, including 3,630 in Maine between 2008 and 2015.

The settlement for the 2.0-liter vehicles is $14.7 billion dollars, which includes $10 billion for vehicle buy-back and compensation to consumers, $2.7 billion allocated to the states for mitigation of excess NOx emissions, and $1.2 billion directed toward a national Zero Emission Vehicle (ZEV) plan to improve infrastructure, access and education to support and advance zero emission (fuel cell and electric) vehicles.

On May 17, 2017, the U.S. District Court in Northern California approved the EPA and California second partial consent decree for the 3.0-liter diesel vehicles manufactured by VW, Audi and Porsche that also had emission control defeat devices. The proposed settlement for the 3.0-liter diesel vehicles is $225,000,000 for approximately 80,000 vehicles sold between 2008 and 2016 nationwide. Details of the settlements can be found at https://www.epa.gov/enforcement/volkswagen-clean-air-act-partial-settlement

On October 2, 2017, the Department of Justice filed the executed trust documents with the Court, making this the Trust Effective Date. States had 60 days from this date (until December 1, 2017) to file for Beneficiary status. Wilmington Trust is the court approved Trustee for the Environmental Mitigation Trust ("Trust"). Maine was designated as a Beneficiary of the Trust on January 29, 2018.

The first Partial Consent Decree established the Trust to achieve mitigation of excess NOx emissions resulting from use of the emission control defeat devices on the VW light-duty diesel vehicles. NOx when combined with volatile organic compounds and sunlight forms ground level ozone which adversely affects the respiratory system and cardiovascular health. States will implement actions as developed through a State Beneficiary Mitigation Plan (BMP) that reduces NOx emissions to improve air quality and provide health benefits. The Mitigation Trust

Agreement allocates Maine $20,256,436 based on the number of 2.0-liter diesel vehicles and $796,628 based on the number of 3.0-liter diesel vehicles registered in Maine. The total allocation for Maine is $21,053,064.

II. MAINE ENVIRONMENTAL MITIGATION PLAN GOALS

The Environmental Mitigation Trust Agreement requires Beneficiaries to create a publicly available BMP that describes how the Beneficiary (i.e., State of Maine) will use the funds allocated to it under this Trust. In accordance with Appendix D of the Partial Consent Decree, the BMP specifically describes:

- The Beneficiary's overall goal for use of the funds to achieve NOx reductions;
- The funding priorities established to guide the planning, solicitation, and project selection processes;
- The categories of Eligible Mitigation Actions anticipated to 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 project;
- What consideration will be given to the potential beneficial impact of selected eligible mitigation projects on air quality in areas that bear a disproportionate share of the State's air pollution burden;
- The extent to which the Beneficiary intends to fund projects in accordance with the DERA Program; and
- The anticipated ranges of emission benefits that would be realized by implementation of the Eligible Mitigation Actions identified in the BMP.

The State of Maine developed its BMP to provide the overall approach for uses of the mitigation funds allocated under the Trust. The primary goal of the BMP is to improve and protect ambient air quality by implementing eligible mitigation projects that will:

- Achieve significant and sustained cost effective reductions in NOx emissions from vehicles, engines and equipment in terms of annual tons of reductions; and
- Expedite deployment of electric vehicle infrastructure to support adoption of zero emission and near-zero emission vehicles and engines.

The Beneficiary may adjust the goals and specific spending plans at their discretion when necessary to achieve the BMP's goal The Beneficiary will provide updates regarding Maine's actions for meeting the requirements of the Partial Consent Decree and the Mitigation Trust to the Trustee and these updates will be made available to the public on the Maine Department of Transportation's ("MaineDOT)") public webpage at www.mainedot/vw. Public comments have been received via this webpage and during two public meetings held on November 8, 2017 in Bangor and November 14, 2017 in Portland prior to filing the Beneficiary designation request with the Trustee. This BMP is not a solicitation for projects and does not include detail on the competitive application or project selection process.

III. AVAILABLE FUNDING

Upon becoming a Beneficiary, Maine is eligible to receive $21,053,064 from the Trust as specified in Appendix D to the Partial Consent Decree. The State anticipates that Trust funds will first be made available for mitigation projects in 2018, and at that time eligible mitigation project proposal applications will be solicited by MaineDOT, as the lead agency delegated by Governor Paul LePage, or its designees. The time frame is subject to change based on certain federal actions required prior to the State's access to the Trust funds. A Beneficiary is limited to dispersing up to one third of its allocation during the first funding year, and up to two thirds by the end of the second year. The Trust will be in place for ten years from the Trust Effective Date, with provisions for an extension based on fund dispersal.

Both non-government and government entities are eligible to apply for funding to implement eligible mitigation projects that reduce diesel emission exhaust exposure. Project funding will be awarded largely through open and competitive processes that will comply with all applicable Maine state and federal procurement requirements. MaineDOT will maintain and make publicly available all documentation submitted in support of each funding request and all records of eligible mitigation project expenditures.

IV. FUNDING PRIORITIES

The State and the Trustee will ensure that projects ultimately funded support the goal of the BMP. The BMP establishes funding priorities that guide the planning, solicitation, and project selection processes. The funding priorities are based on the assessment of statewide NOx emissions from mobile sources, anticipated regulatory NOx emission reductions from mobile sources and equity considerations for the distribution of funds across categories and across the state. These are not eligibility criteria, but funding priorities, which include, but are not limited to:

- Projects scaled to achieve the greatest NOx emission reductions or offset per dollar invested (i.e., capital cost effectiveness in dollars/ton);

- Projects that demonstrate community and air quality benefits;

- Projects proposed by government and non-government entities with demonstrated experience and existing administrative and programmatic structure in place for implementing diesel emission reduction or offset projects;

- Projects in areas that receive a disproportionate quantity of air pollution from diesel fleets such as ports, rail yards, terminals, school depots/yards, and freight distribution areas;

- Projects that impact designated Federal Class I areas: Acadia National Park, Roosevelt Campobello International Park, and Moosehorn Wilderness Area located within Moosehorn National Wildlife Refuge Area;

- Projects with verified match (i.e., for projects that require a cost-share) or leveraged funding;

- Projects that can be implemented within two years of the award date; and

- Projects with sustained emission benefits over the ten year Trust effective period.

The funding priorities in this plan are subject to change based on public input, new or supplemental air quality data or other data and factors.

V. ELIGIBLE MITIGATION ACTIONS

Eligible mitigation project actions are listed in Appendix D-2 of the Partial Consent Decree; projects not specifically enumerated in Appendix D-2 of the Trust may be eligible under the Diesel Emission Reduction Act ("DERA"). DERA was created under the Energy Policy Act of 2005 and reauthorized in 2011 to fund projects that reduce harmful diesel exhaust emissions from the older diesel legacy engines. The intent of the DERA Program is to improve air quality and reduce public health risk from exposure to harmful diesel exhaust by reducing diesel emissions from existing diesel engines that do not meet current federal emission standards. EPA is responsible for overseeing and distributing DERA funds via an established program at the Maine Department of Environmental Protection's Air Bureau. Approximately 30% of the DERA funding is allocated to the DERA State Clean Diesel Program. According to EPA, every

$1 dollar spent on DERA upgrades has resulted in $13 worth of health and environmental benefits.

The following categories are eligible projects pursuant to Appendix D-2 of the first VW Partial Consent Decree:

1. <u>Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks), Class 4-7 Local Freight Trucks (Medium Trucks)</u>

a. Eligible Large and Medium Trucks with 1992-2009 engine model year Class 8 and Class 4-7 Local Freight or Drayage Trucks.

b. Eligible Large and Medium Trucks must be scrapped.

c. Eligible Large and Medium 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 and Class 4-7 Medium 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 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 and Class 4-7 Medium Trucks, Beneficiaries may only draw funds from the Trust in the amount of:

1. Up to 80% 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 80% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.

3. Up to 80% 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 80% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

2. <u>Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)</u>

a. Eligible Buses include 2009 engine model year or older, 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 80% 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 80% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) vehicle.

3. Up to 80% 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 80% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new all-electric vehicle.

3. <u>Freight Switchers</u>

a. Eligible Freight Switchers include pre-Tier 4 switcher locomotives that operate 1000 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 cost of installation of such engines(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 80% 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 80% of the cost of a new diesel or alternate fueled (e.g. CNG, propane, hybrid) Freight Switcher.

3. Up to 80% 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 80% of the cost of a new all-electric Freight Switcher, including charging infrastructure associated with the new all-electric Freight Switcher.

4. <u>Ferries and Tugs</u>

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. Government Owned Eligible Ferries and/or Tugs, Beneficiaries may draw funds from the Trust in the amount of:

1. Up to 80% 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 80% 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. <u>Ocean Going Vessels Shorepower</u>

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, shore power coupler systems, distribution control systems, and power distribution. Marine shore power 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, shore power 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 80% 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 components.

6. <u>Airport Ground Support Equipment</u>

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 80% 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 80% 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.

7. **<u>Forklifts and Port Cargo Handling Equipment</u>**

a. Eligible Forklifts includes forklifts with greater than 8000 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 80% 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 80% 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.

8. Light Duty Zero Emission Vehicle Supply Equipment

Each Beneficiary may use up to fifteen percent (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.

9. 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), thereby allowing Beneficiaries to use such Trust Funds for actions not specifically stated under Eligible Mitigations Actions listed above, but otherwise eligible under DERA pursuant to all DERA guidance documents available through EPA.

DERA will fund the following projects:

a. *Verified Exhaust Control Technologies*: DERA will fund up to 100% of the cost (labor and equipment) of eligible verified exhaust control technologies.

b. *Verified Engine Upgrades and Certified Remanufacture Systems*: DERA will fund up to 40% of the cost (labor and equipment) of eligible EPA verified engine upgrades and certified remanufacture systems.

c. *Verified/Certified Cleaner Fuel Use*: DERA will not fund stand-alone cleaner fuels use. DERA will fund the cost differential between the eligible cleaner fuels and conventional diesel fuels if the cleaner fuels are used in combination, and on the same vehicles, with new eligible verified exhaust controls or eligible engine upgrades or eligible certified engine repowers or eligible certified vehicle/equipment replacements funded under this Plan.

d. *Verified Idle Reduction Technologies*:

a. Verified On-highway Idle Reduction Technologies: Funding will cover up to 25% of the cost (labor and equipment) of verified idle reduction technologies on school buses and long-haul trucks.

b. Verified Locomotive Idle Reduction Technologies: DERA will fund up to 40% of the cost (labor and equipment) of eligible idle reduction technologies for locomotives.

c. Marine Shore Connection Systems: DERA will fund up to 25% of the cost (labor and equipment) of eligible marine shore connection systems.

d. Electrified Parking Spaces: DERA will fund up to 30% of the cost (labor and equipment) of eligible shore connection systems.

- *Verified Aerodynamic Technologies and Low Rolling Resistance Tires*: DERA will not fund stand-alone aerodynamic technologies or low rolling resistance tires. DERA will fund up to 100% of the cost (labor and equipment) of verified aerodynamic technologies or verified low rolling resistance tires if the technology is combined on the same vehicle with a new eligible verified exhaust control technology funded under this Plan

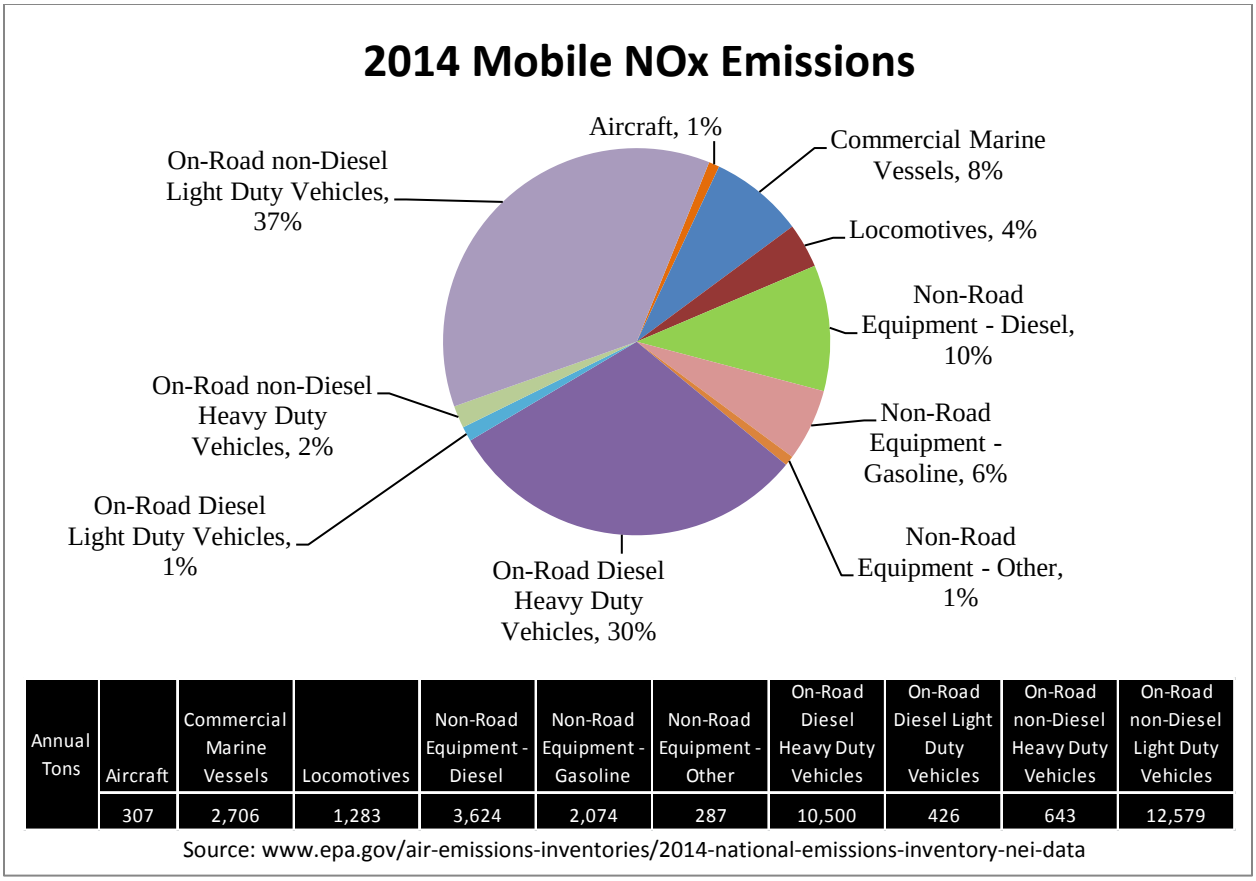
- *Certified Engine Repower:* DERA will fund up to 40% of the cost (labor and equipment) of replacing a diesel engine with a diesel or alternative fueled engine (including hybrids) certified to EPA emission standards. DERA will fund up to 50% of the cost of replacing diesel engines with an engine certified to meet CARB's Optional Low-NOx Standards. DERA will fund up to 60% of the cost (labor and equipment) of replacing a diesel engine with an all-electric motor or electric power source.

- *Certified Vehicle/Equipment Replacement*: DERA will fund up to 25% of the cost of a replacement vehicle or piece of equipment powered by a diesel or alternate fueled engine (including hybrids) certified to EPA emission standards. DERA will fund up to 35% of the cost of a replacement vehicle or equipment powered by an engine certified to meet CARB's Optional Low-NOx Standards. DERA will fund up to 45% of the cost of a replacement diesel vehicle or equipment powered by an all-electric motor or electric power source.

    a. Replacement of Drayage Trucks: DERA will fund up to 50% of the cost of a replacement drayage truck.

VI. FUNDING ALLOCATIONS FOR ELIGIBLE MITIGATION ACTIONS

The categories of eligible mitigation projects deemed appropriate to achieve the stated goals in Maine's BMP are based on mobile NOx emission sources in Maine as shown in Figures 1 and 2. Considerations for funding allocations include, but are not limited to, projected NOx emissions reductions, options to maximize funding, and use of Trust funds for projects not listed in Appendix D-2, but eligible under the DERA Program.



Annual Tons	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment - Diesel	Non-Road Equipment - Gasoline	Non-Road Equipment - Other	On-Road Diesel Heavy Duty Vehicles	On-Road Diesel Light Duty Vehicles	On-Road non-Diesel Heavy Duty Vehicles	On-Road non-Diesel Light Duty Vehicles
	307	2,706	1,283	3,624	2,074	287	10,500	426	643	12,579

Source: www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data

Figure 1: Distribution of NOx emissions across the transportation sectors in Maine based on the 2014 U.S. EPA National Emissions Inventory.

Transportation emissions impact Maine's air quality and contribute 62% to the state's total NOx emissions, a ground level ozone precursor. NOx reacts in the atmosphere in the presence of sunlight, to form ground-level ozone (smog). The adverse health effects of ozone and diesel exhaust are well documented. These studies show that exposure to diesel exhaust and ground-level ozone can lead to adverse health conditions like asthma and respiratory illnesses and can worsen existing heart and lung disease, especially in children and the elderly. These conditions can result in increased numbers of emergency room visits, hospital admissions, absences from work and school, and premature deaths. [1]

Ozone levels in the State are also significantly affected by the transport of ozone, as well as NOx and other precursors, from upwind states. Predominant weather patterns combined with Maine's location relative to upwind emissions sources makes the state particularly vulnerable to levels of pollution transport that at times exceed the 8-hour ozone National Ambient Air Quality Standards. Mobile source emissions combined with pollution from upwind sources generates air pollution that negatively impacts air quality and public health in the State of Maine.

[1] Impacts of Diesel Emissions https://www.epa.gov/cleandiesel/learn-about-clean-diesel

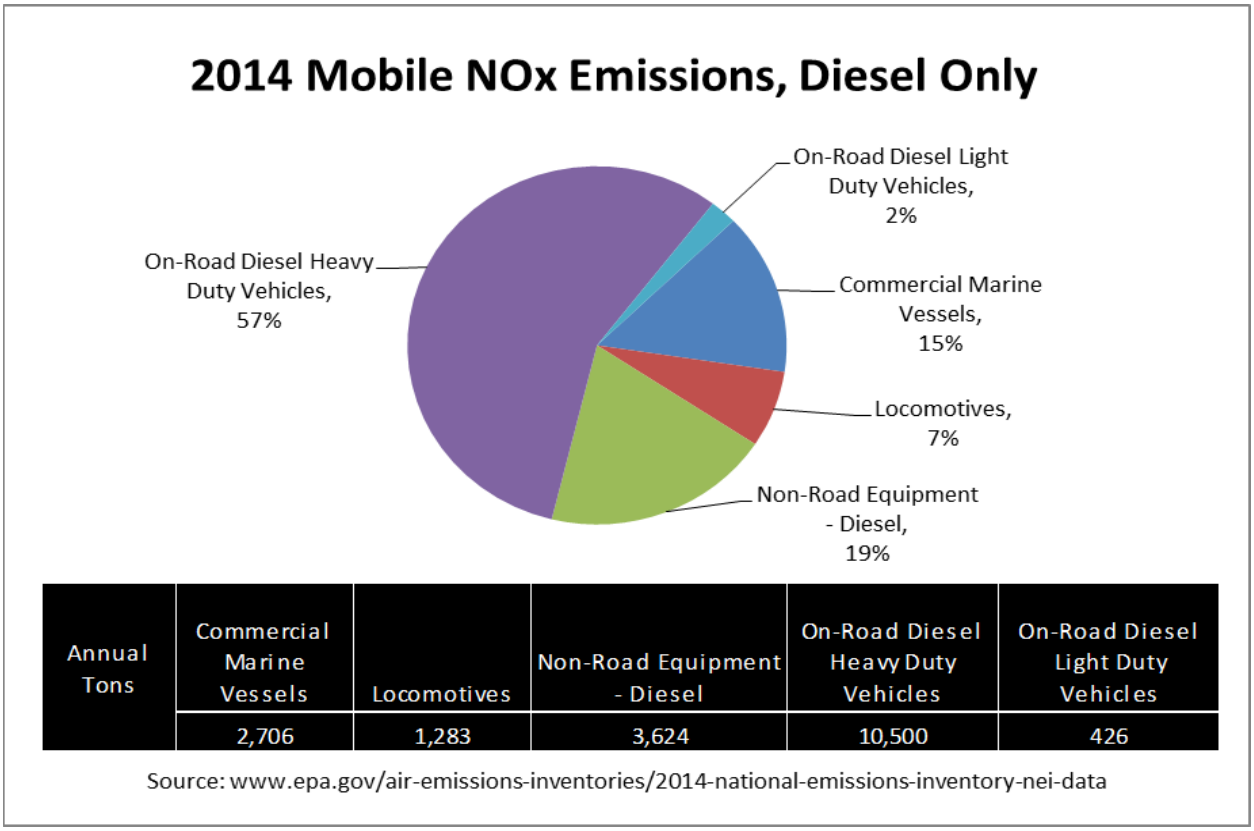


Figure 2: NOx contribution from the transportation sector for only diesel engines, vehicles and equipment.

The State proposes to allocate up to 35% of the Trust funds to eligible priority multimodal transportation improvements via MaineDOT. The ports and their associated rail yards contribute disproportionately to air pollution in Maine, risking exposure to levels of air pollution that contribute to health problems. The vessels, port cargo equipment, and drayage trucks have high baseline NOx and diesel particulate emissions (PM). Repowering port tugboats, replacing cargo equipment, and drayage trucks with engines that meet current EPA emission standards is a cost-effective method to reduce NOx and PM emissions. These investments provide improvements to air quality and health benefits to the many people who live near and work at ports. Updating cargo equipment also improves the efficiency of movement of goods and port operations which are important to Maine's economic development.

To address emissions from the non-road unregulated engines that do not meet current emission standards and are high emitters of NOx, the State proposes to allocate 20% of the funding to the DERA program. Funding under the DERA program will expand eligible projects to repowering commercial fishing vessels; replacing, repowering or engine upgrades on long-haul locomotives; replacement or repowering of agricultural, forest or construction equipment; exhaust control technologies; and support reduced idling technologies including auxiliary power units and shore

power for locomotives, and marine vessels. Repowering extends the useful life of the vessels, locomotives, and equipment and provides air quality and health benefits beyond the ten-year program. In addition, DERA will fund no-idling technologies for school buses and long haul-trucks.

To reduce emissions from on-road light-duty vehicles, the State proposes to allocate the maximum allowed (15%) of the Trust funds to the deployment of light-duty zero emission vehicle infrastructure. Installation of electric vehicle service equipment (EVSE) will support adoption of electric vehicles, reduce range anxiety that can limit travel from outside the state, and enable visitorship from surrounding states and provinces with higher densities of electric vehicles. Proposals for eligible mitigation projects submitted under the light-duty zero emission vehicle infrastructure category will also be evaluated to determine the extent to which there are leveraged additional resources to support transformative technological changes. Funding priority will be granted to proposals for EVSE installed on Electric Vehicle Corridors designated by the Federal Highway Administration, and by the State, including the U.S. RT 201 corridor from Jackman to Augusta.

The remainder of the allocated Trust funds will fund the eligible mitigation actions specifically listed in Appendix D-2 of the first Partial Consent Decree based on funding priorities stated in this BMP. Types of expenditures under this BMP were subject to public input, and will depend on solicitation criteria and actual eligible project applications received for funding consideration.

Summary of Funding Allocations for Maine VW Settlement Funds

Funding Designation	Percent of total allocation
State Multimodal Priorities	35%
Appendix D-2 Eligible Mitigation Actions	30%
Diesel Emission Reduction Act program	20%
Zero Emission Electric Vehicle Service Equipment	15%

VII. ANTICIPATED BENEFITS FROM ELIGIBLE ACTIONS

Air pollution from the transportation sector is a product of vehicle emissions, carbon dioxide emissions from combustion of fossil fuels, and vehicle miles traveled. Greenhouse gas emissions will continue to rise from the transportation sector unless there is a significant reduction in the combustion of fossil fuels and an increase in vehicle fuel economy. Although overall emissions from new vehicles have gone down, the vehicle miles traveled has increased by 3.71 percent from 2012 to 2015. There are many environmental, economic, and health benefits from implementation of the mitigation action projects outlined in this Plan.

Benefits include:

- Tons of pollution reduced or eliminated over the lifetime of the engines/vehicles, specifically for NOx, PM, and GHGs;

- Net reductions, or elimination of diesel fuel use;

- Improved ambient air quality and human health in communities located in areas that bear a disproportionate share of the air pollution burden;

- Support for local economies;

- Reduced public exposure to diesel particulate matter, which EPA has classified as a likely human carcinogen;

- Support for the development of zero emission vehicle infrastructure and adoption of cleaner alternative fuels vehicles; and

- Reduced greenhouse gas (GHG) emissions from diesel engines through improved fuel economy or idle reduction strategies to help address climate change.

The retrofit, repower, or replacement of eligible vehicles and equipment may provide a wide range of emission benefits based on many variables, including the type of vehicle or engine replaced, the initial age of the engine, and the engine power rating. Based on current EPA exhaust emission standards for NOx: [2]

- Heavy duty highway vehicles may provide up to a 96% reduction in NOx emissions per vehicle, based on replacing a model year 1992 engine with a model year 2007 engine;

- Non-road equipment replacements, depending on the type of equipment and engine power rating, may provide between a 20% and 95% reduction in NOx emissions for each engine;

- Locomotives, replacing the oldest (Tier 0) engine with the newest (Tier 4) engine may provide up to an 89% NOx reduction per engine;

- Commercial marine vessels, an upgrade or repower of a ferry or tug engine may provide up to an 80% NOx reduction for each vessel; and

- Shorepower projects reduce all NOx exhaust emissions from many oceangoing vessels while at port.

These anticipated emission benefits were considered in the BMP's funding priorities, categories of eligible mitigation projects, and funding allocation considerations for each category of eligible mitigation projects. The range of emission benefits mentioned above are for individual engines and actual NOx emissions reductions will vary based on the type of projects received for funding consideration and the eligible mitigation projects ultimately funded. However, to achieve the goal of the state mitigation plan, it is a priority to fund sizeable projects designed to achieve the greatest emission reduction for the dollar (i.e., capital cost effectiveness in dollars/ton).

[2] EPA exhaust emission standard data: https://www.epa.gov/emission-standards-reference-guide

APPENDICES

Appendix A: Eligible Mitigation Action Administrative Expenditures

For any Eligible Mitigation Action, Beneficiaries may use Trust Funds for actual administrative expenditures (described below) associated with implementing such Eligible Mitigation Action, but not to exceed 15% of the total cost of such Eligible Mitigation Action. The 15% cap includes the aggregated amount of eligible administrative expenditures incurred by the Beneficiary and any third-party contractor(s).

1. Personnel including costs of employee salaries and wages, but not consultants.

2. Fringe Benefits including costs of employee fringe benefits such as health insurance, FICA, retirement, life insurance, and payroll taxes.

3. Travel including costs of Mitigation Action-related travel by program staff, but does not include consultant travel.

4. Supplies including tangible property purchased in support of the Mitigation Action that will be expensed on the Statement of Activities, such as educational publications, office supplies, etc. Identify general categories of supplies and their Mitigation Action costs.

5. Contractual 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 are included.

6. Construction including costs associated with ordinary or normal rearrangement and alteration of facilities.

7. Other costs including insurance, professional services, occupancy and equipment leases, printing and publication, training, indirect costs, and accounting.

Appendix B: Definitions/Glossary of Terms

"*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 which is powered by an engine, which uses a fuel different from or in addition to gasoline fuel 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 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.

"*CNG*" means Compressed Natural Gas.

"*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 include the following total vehicle weight plus fluids, passengers, and cargo:

Class 1: < 6000 lbs
Class 2: 6001-10,000 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).

"*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 Kit. 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. May be Type A-D.

"*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 nonroad, locomotive and marine engines.

"*Tugs*" means 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).