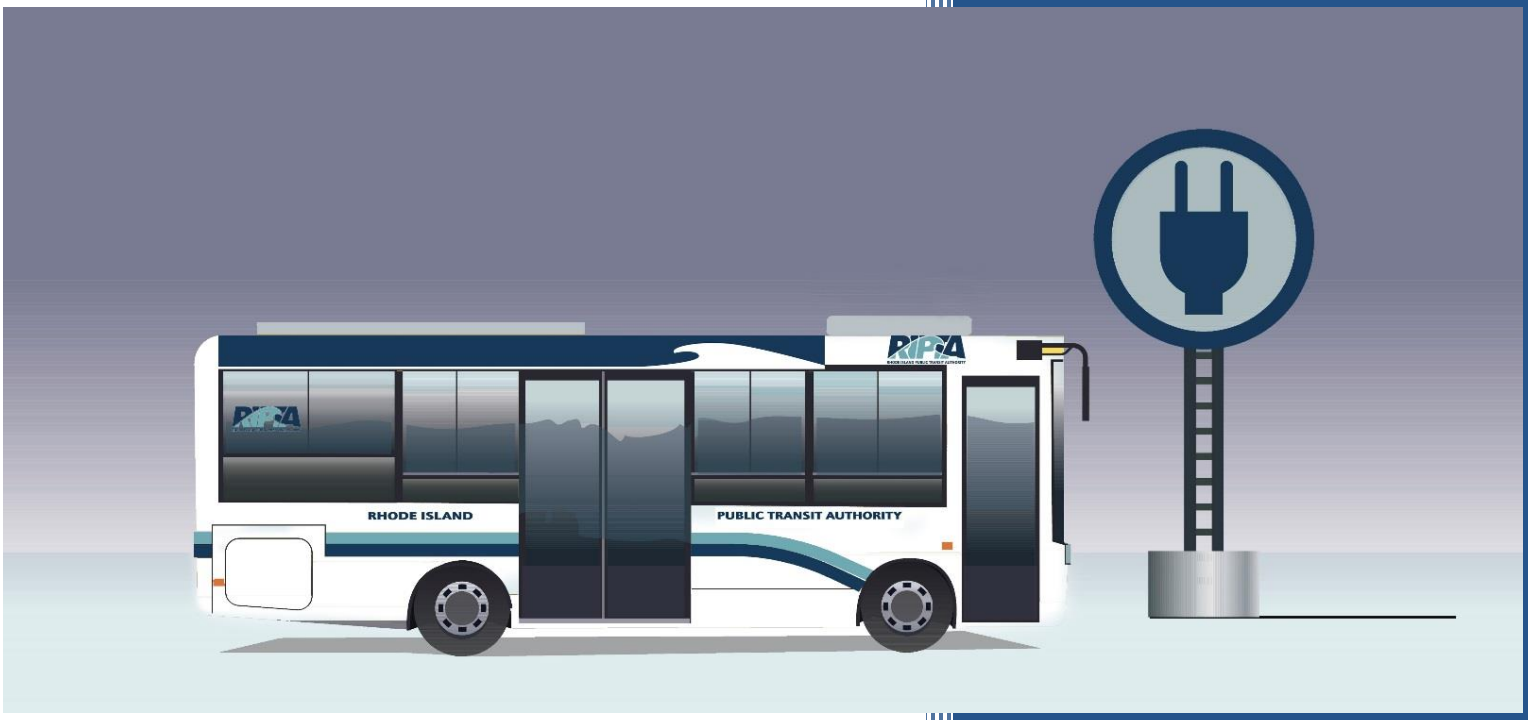
Beneficiary Mitigation Plan Volkswagen Environmental Mitigation Trust Agreement



Prepared by:

DEM
RHODE ISLAND

Office of Air Resources

Revised August 2018

(Revision for typo on Page 5 pie chart)

Contents

Statement of Purpose

The State of Rhode Island, through the Rhode Island Department of Environmental Management (referred to as, the Department), outlines below the following proposal in response to the $14,368,858 million Rhode Island is poised to receive in settlement funds under the proposed partial Consent Decree with the United States District Court for the Northern District of California in the lawsuit entitled *In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC).* Appendix D-2 of the Consent Decree specifies eligible mitigation actions and expenditures for the Environmental Mitigation Trust (EMT) funds. The Department will administer these funds. Outlined below in a non-binding plan intended to provide the public with insight into the Department's high-level vision for the use of EMT funds and proposes to implement the following strategy in Rhode Island.

Requirements for Mitigation Plans

A designated state agency (the Department) will have primary responsibility for drafting and implementing a "Beneficiary Mitigation Plan (BMP)" for use of the funds. Pursuant to the requirements of the trust " . . . each Beneficiary shall submit and make publicly available a BMP that summarizes how the Beneficiary plans to use the mitigation funds allocated to it under this Trust, addressing:

(i) The Beneficiary's overall goal for the use of the funds;

(ii) The categories of Eligible Mitigation Actions the Beneficiary anticipates 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;

(iii) 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

(iv) 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."

Background

The settlement establishes an Environmental Mitigation Trust (EMT) to be used for environmental mitigation projects that reduce emissions and improve air quality. The funding for the eligible mitigation actions outlined in Appendix D-2 is intended to fully mitigate the total, lifetime excess oxides of nitrogen (NOx) emissions from vehicles involved in the case. The trust provides $14,368,858 for Rhode Island and the funds are to be used during a 10-year period for specific, eligible projects designed to achieve these results. The State will be entitled to request one third of total funds or approximately $4.8 million during the first year of the program or two thirds or approximately $9.6 million during the first two years of the program. While the primary goal of the BMP is to reduce NOx emissions, the Department has also taken into consideration how the BMP funds could help achieve additional goals and policies related to economic development, health, fuel security, greenhouse gas emissions, energy, renewable portfolio standards, and benefits to environmental justice communities.

To view the agreement in its entirety, please see the following webpage: https://www.epa.gov/vw

Overall Goal for the Use of the Funds

On behalf of the State of Rhode Island, the Department has developed a state mitigation plan to provide the public with insight into the State's vision and overall approach for uses of the funds. As such, the primary goal of the State's mitigation plan is to improve and protect ambient air quality by implementing eligible mitigation projects that will:

- Achieve significant and sustained reductions in diesel emission in terms of tons of reductions in diesel emission exposures in areas designated as poor air quality areas, areas with historical air quality issues, and areas that receive a disproportionate quantity of air pollution from diesel fleets, and
- Expedite development and widespread adoption of zero emission vehicles and engines.

The Department believes it is in our state's best interest to allocate the funds to advance the electrification of our transportation sector, specifically public transit. Today, transit agencies like the Rhode Island Public Transit Authority (RIPTA) rely almost entirely on public funding for capital expenditures, fleet and infrastructure operation and maintenance, and other day-to-day operations. Incentives for all-electric zero emission transit buses are also needed to help RIPTA meet their zero-emission goals, support in helping Rhode Island meet air quality standards and greenhouse gas emission reduction goals, support in-state manufacturing, and help reduce exposure to sensitive communities. Zero-emission transit incentives will also help to reduce technology costs and advance technology transfer to other heavy-duty sectors.

RIPTA plays an important role in helping Rhode Island meet air quality standards and greenhouse gas emission reduction goals; namely, by employing the cleanest technologies, providing safe and reliable public transit services to reduce light-duty passenger vehicle miles traveled and single occupancy trips, and reducing congestion on roadways. RIPTA's transit buses operate in communities across Rhode Island, adopting into its fleet all-electric zero-emission transit buses can: (a) keep money in-state and save all of us – our residents, schools, governments and businesses—money on transportation fuel; (b) create a marketing opportunity to reach a captive ridership audience; (c) generate economic development towards a more attractive public transit system; (d) expand workforce mobility by providing a stronger and greater mobility transit system; and (e) drastically reduce NOx, smog, and greenhouse gas levels to protect our health and our environmental justice communities.

The Department proposes funds are used to further support adoption and purchase of approximately twenty (20) all-electric zero-emission transit buses and build out the necessary charging infrastructure needed by RIPTA. While funds do allow for investments in diesel and natural gas projects, neither will provide nearly the same benefits to our state that electrification will. Investment in our transit authority buses today will speed further integration as additional transportation electrification technologies come to scale, bringing measurable economic and environmental benefits to the communities they serve.

Project Priority Areas

The Department will ensure that the project(s) ultimately funded support the plan's goal. The funding priority areas in this plan are based on the assessment of current NOx emissions from mobile sources, demographic and locational data, anticipated NOx emissions reductions or offsets from mobile sources, historical and current ground level ozone (O3) and fine particulate matter (PM2.5) nonattainment or maintenance areas, existing area quality improvement measures and programs in Rhode Island, equity considerations for the distribution of funds across the state, capacity issues for certain sectors to implement programs in a timely and efficient manner, and other factors.

On-Road heavy-duty vehicles emitted 7,252 tons or 35% of all mobile source NOx emissions in Rhode Island during 2014 (See Figure 1). The Department proposes to prioritize use of settlement funds to reduce NOx emissions from this sector and concentrate the deployment of all-electric zero-emission transit buses within the urban, high traffic volume areas and/or along bus routes that may connect environmental justice communities. RIPTA bus routes that touch environmental justice areas account for 14.7 million riders on an annual basis (See Appendix B).

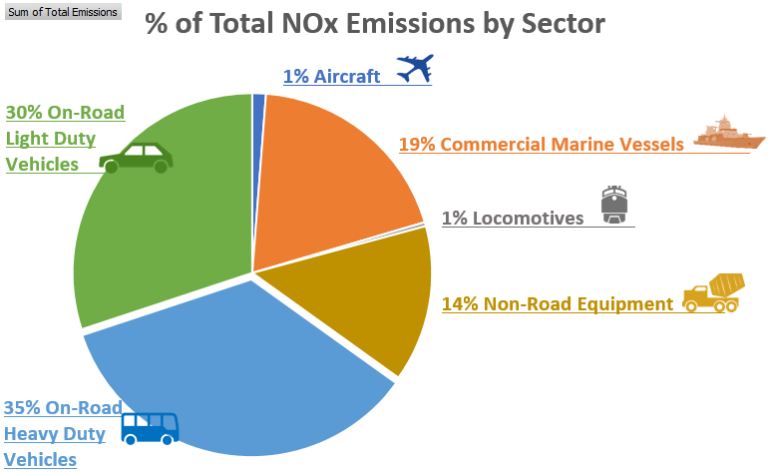


Figure 1: Breakdown of Mobile NOx Emissions in Rhode Island (2014 National Emissions Inventory Data)

The Department is proposing to prioritize use of funds in areas that have populations adversely impacted by poor air quality due to diesel engine emissions from nearby roadways with high traffic volumes. Notably, reducing pollutant load in environmental justice communities is a core criteria for approving a state's plan for funding. The State's air monitoring network adequately characterizes air quality in areas with high populations of susceptible people, such as children with asthma. The rate of emergency room visits for childhood asthma is considerably higher in Rhode Island's core cities; Providence, Pawtucket, Central Falls and Woonsocket; (15.1 per thousand children) than in the State as a whole (8.9 per thousand children). The rate of pediatric asthma hospitalizations was also elevated in the core cities as compared to the State average (2.4 versus 1.6 hospitalizations per thousand children).[1] RIPTA will ensure it continues to provide services and use EMT funded buses along transit routes that serve areas adversely affected by the densest traffic in the state, the highest levels of smog and the highest ratio of environmental justice communities.

[1] Rhode Island KIDS COUNT, 2016 2016 Rhode Island KIDS COUNT Factbook, Table 24 – "Asthma Emergency Department Visits for Children Underage Age 18, Rhode Island 2010-2014. Data from the Rhode Island Department of Health, Center for Health Data and Analysis, Hospital Discharge Database.

Project Descriptions

The Department proposes to allocate dollars into two main categories designed to implement projects that reduce NOx and a third category for administrative expenditures associated with implementing the plan. The types of projects included with this proposal are durable, sustainable solutions for the long-term benefit of our communities. Project outcomes will be quantified with the U.S. EPA Diesel Emissions Quantifier (DEQ) or equivalent.

- Category 1 – RIPTA Bus Replacement Project (Approximately 75% of funds ($10.0 million)):

This plan proposes to distribute approximately $10 million of its initial allocation of trust funds, to fund the replacement of approximately 20 diesel powered (MY2009 vintage or earlier) class 4-8 transit buses with new all-electric zero-emission vehicles. Funds will also be used to install charging infrastructure associated with all-electric zero-emission transit buses.

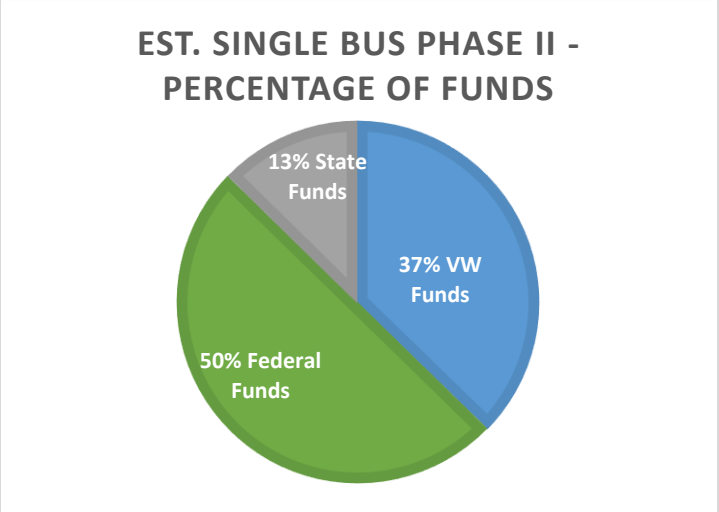
This project will be implemented in phases:

Phase 1. RIPTA will lease (with an option to buy) three all-electric zero-emission transit buses and associated charging equipment for three years. During the three-year lease period for these buses, RIPTA will evaluate the efficiency, efficacy, and viability of adding additional ZEV buses to RITPA's bus fleet. Performance data will be analyzed and used to develop a future deployment plan for all-electric zero-emission transit buses to operate successfully across RIPTA's fleet.

Phase 2. Based on the results of the evaluation conducted in Phase 1, RIPTA may purchase up to 20 additional all-electric zero-emission transit buses and associated charging equipment, and may also invest in utility upgrades necessary to support operation of such buses. Phase 2 work will also include the design, purchase, and installation of electrical charging equipment; purchase of charge-management software; purchase of all-electric zero-emission transit buses; and improvements to RIPTA's vehicle garages in connection with the deployment of all-electric zero-emission transit buses.

Over the course of the project, within two months after an all-electric zero-emission transit bus enters revenue service, RIPTA will remove an existing bus (model year 2009 or earlier) from service and provide proof of such to the Department.

These are our best estimates at the current time, as vehicle and infrastructure development costs are expected to change during the 10-year period for deployment of the project. It is important to note, that this investment will leverage Federal and State funds designated for public transit vehicle acquisition.



- With this investment, Rhode Island's bus fleet will be about 36% low and zero-emission vehicles.

- This investment also supports RI GHG Emissions Reduction Plan goals relating to vehicle miles traveled (2% reduction in passenger car and truck VMT by 2035) and electric vehicles (34% on-road VMT electrified by 2035).

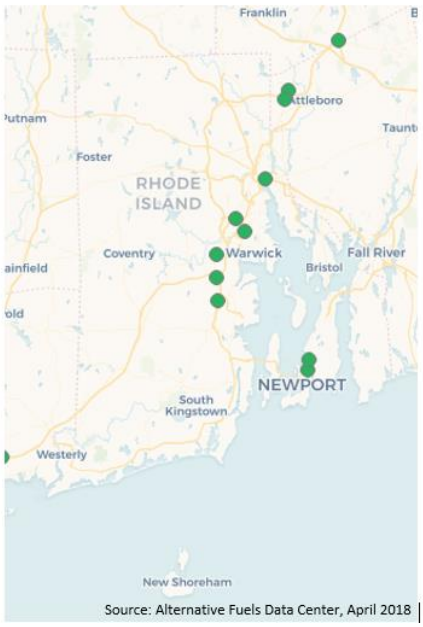
➢ Category 2 –Light Duty Zero-Emission Vehicle Supply Equipment (EVSE) Projects (Approximately 10% of funds ($1.5 million)):

This plan proposes to distribute approximately $1.5 million or 10% of its initial allocation of trust funds, to fund the necessary costs for, and directly connected to, the acquisition, installation, operation and maintenance of light duty EVSE located in public places. Infrastructure investments would expedite the deployment of zero emission vehicles (ZEVs) and help mitigate the second largest source of NOx emissions in Rhode Island.[2]

The Rhode Island Office of Energy Resources (OER) in consultation with the Department will implement this program.

- Expand Rhode Island's Public Charging Station Network: Enhance Rhode Island's current network of public charging infrastructure to include Level I, II, and DC Fast Charging (DCFC) outlets throughout the state, specifically along I-95 alternative fuel corridor. Consideration of geographic diversity (i.e. Aquidneck Island) will be given. Focus areas will include transit hubs, such as TF Green Airport, local train stations, and transit centers; publicly-owned lots at popular destinations; workplaces; and DC Fast Chargers along the I-95 corridor.

Currently Available DC Fast Charging Network in Rhode Island



Source: Alternative Fuels Data Center, April 2018

- These funds will be administered statewide using a competitive process; will be used to support projects that meet the fueling needs of a growing ZEV fleet; and fill gaps not met by other funding programs.

➢ Category 3 – Administrative Expenditures (Approximately 15% of funds ($2.15 million)):

This plan proposes to use up to 15%[3] of the funds for the actual administrative expenditures associated with implementing such eligible mitigation project(s). This could include the aggregated amount of eligible administrative expenditures incurred by the Beneficiary and any third-party contractors; and may include but are not limited to: personnel costs, construction costs associated with ordinary or normal rearrangements and alteration of facilities, or training.

- As Lead Agency for implementing Rhode Island's allocation of the VW Mitigation Trust, the Department is required to report semi-annually to the Trustee on eligible mitigation action implementation. Reports will include, but may not be limited to, a project summary, status,

[2] See Figure 1. On-Road light duty vehicles emitted 6,227 tons or 30% of all mobile source NOx emissions.
[3] Maximum percentage allowable for administrative expenditures is 15% per Appendix D of the Partial Consent Decree.

expenditures, and emission reductions achieved during the reporting period and to date. The Department expects to make available on its website or link to the Trustee's public-facing website the semi-annual reports submitted to the Trustee.

Impact Statement

Funded projects will directly facilitate far greater market commercialization of zero emission battery electric buses by deploying all-electric zero emission vehicles within our state. Enhanced service on these routes will increase mobility, economic, and health prospects of these environmentally and economically disadvantaged communities.

The US EPA has created a tool to help understand the impact of various technologies that improve diesel bus emissions, called the Diesel Emission Quantifier (DEQ) tool.[4] Benefits in terms of local air pollutants are shown in the table below, emission reductions will vary slightly depending on the model year and usage of bus being replaced.

Tailpipe Emissions from replacing approximately 20 Existing MY2004 Diesel Buses

	NOx (tons/year)	PM 2.5 (tons/year)	CO (tons/year)	Hydrocarbons (tons/year)
Transit Vehicle Replacements	12-30	0.5-2.5	3-6	1.5-2.5

*Emissions from the electrical grid are not included in the results, granting the NOx emissions in Rhode Island from electricity generation is equal to 0.1835 annual NOx output per lb/MWh. The national average is 0.9461 annual NOx output per lb/MWh.

The DEQ tool provides perspective not only on emissions, but there is a health benefit analysis component that provides perspective on the improvement of health care costs county by county across the United States. The DEQ calculates emissions improvements for PM 2.5 (particulates), CO2 (greenhouse gases), and for NOx. The health benefit analysis is based on improvements in particulate matter only. PM is responsible for a variety of respiratory/bronchial issues as well as heart and other diseases. The tool considers the benefits associated with many health-related issues. From a cost reduction perspective, the tool considers the cost of hospitalization, the cost of emergency rooms visits and the cost of absence from work. Switching from diesel buses to electric buses reduces the amount of particulate matter in the air, which decreases the frequency of incidence of heart and lung disease, which in turn reduces hospital costs and costs associated with work absence.

The tool was run assuming that buses travel 44,782 miles per year and use approximately 6,131 gallons of fuel per year per bus. The particulate matter reduction associated with the elimination of diesel fuel was calculated at 100% of that which was produced previously by diesel buses. The assumption was made that 100% of bus miles are driven within state lines. Using that mix of bus miles, the health care costs savings in calculated to be about $2,800,000 per year.

Funded projects will allow for increasing investments in light-duty ZEV infrastructure. These investments will result in emission reductions associated with increased ZEV adoption and usage. However, to avoid double-counting emission benefits associated with vehicles, this plan will not quantify direct NOx reduction benefits from this project category.

[4] "Diesel Emissions Quantifier (DEQ)," Clean Diesel. U.S. Environmental Protection Agency, April 10, 2017. Web < https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq>

Public Response

The Trust Agreement requires the BMP to include an explanation of the process by which Rhode Island will seek and consider public input. Over the past year, the Department has met with stakeholders with expertise in heavy-duty vehicles, equipment, electric charging stations and health impacts of air pollution regarding administration of Volkswagen Trust funds in Rhode Island. The Department has also presented to various committees and councils, Clean Cities Coalitions and several interstate conferences with interest in the VW Settlement. The Department also collected additional input via the Department's Volkswagen Settlement webpage/email. Organizations and individuals with thoughts and ideas concerning EMT funds submitted those ideas via email, the Department received 30 comments from January 12, 2017 through February 1, 2018.

Outlined above is the non-binding plan intended to provide the public insight into the Department's high-level vision for the use of funds and proposes to implement the above strategy in Rhode Island. As stated in the Consent Decree, Appendix D, Section 2.0.3:

> "It shall be the purpose of the Mitigation Trust to fund Eligible Mitigation Actions to be proposed and administered by the Beneficiaries subject to the requirements of the Consent Decree and this Trust Agreement. The goal of each Eligible Mitigation Action shall be to achieve reductions of NOx emissions in the United States."

This mitigation plan is not a solicitation for projects. The Department will provide updates of the mitigation plan to the Trustee and on the DEM's public webpage about Rhode Island's actions for meeting the requirements of the Partial Consent Decree and the Mitigation Trust at: http://www.dem.ri.gov/programs/air/vwsettle.php.

Public Notice & Public Informational Session – The Department has prepared a public notice (Appendix C) for the BMP. The public notice will be posted on the Department's VW website and be shared with, but not limited to: the Department's Office of Air Resources listserve; OER's newsletter subscribers; RIPTA's listserve; and RI's Executive Climate Change Coordinating Council's listserve.

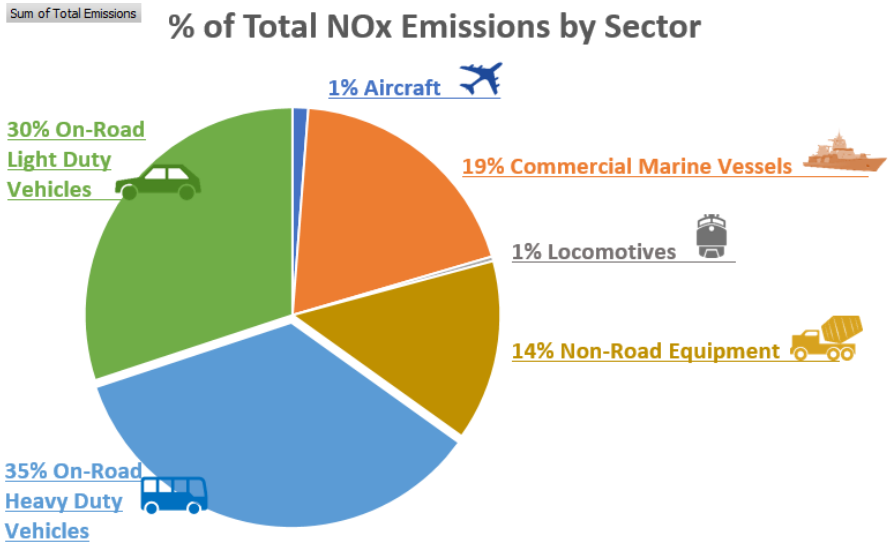
The public will have the opportunity to provide plan specific feedback during a 30-day public comment period. In addition, the Department will host a public information session. Plan specific comments may be emailed to Allison.Callahan@dem.ri.gov through June 11, 2018.

Final Beneficiary Mitigation Plan – The Department will consider all comments received, review any new or revised requirements the trustee develops, make any relevant revisions, and post the final BMP on the Department's VW website. After revisions, the Department, as the lead agency, will submit the final BMP to the trustee no later than 30 days prior to its first funding request.

As outlined in the settlement, the Department may revise the final BMP as necessary to reflect major changes in market demand, the State's goals, or available funds in future years.

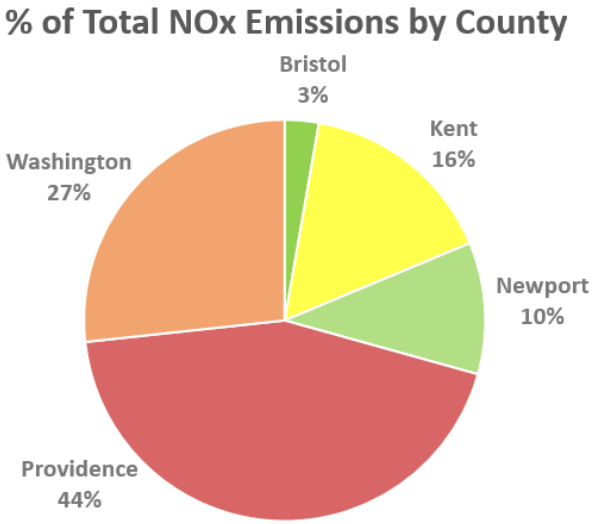
Appendix A: NOx Emissions Data for Rhode Island

Figure A-1: Percent Mobile NOx for Rhode Island, 2014 National Emissions Inventory Data



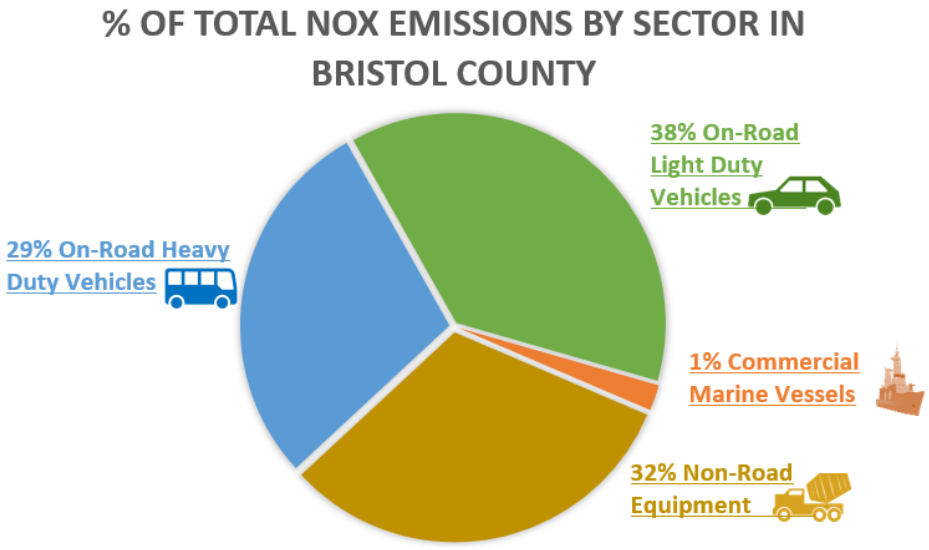
Annual Tons	On-Road Heavy Duty Vehicles	On-Road Light Duty Vehicles	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment
	7,252	6,227	252	3,891	74	2,916

Figure A-2: Breakdown of Mobile NOx Emission by County, (2014 NEI)



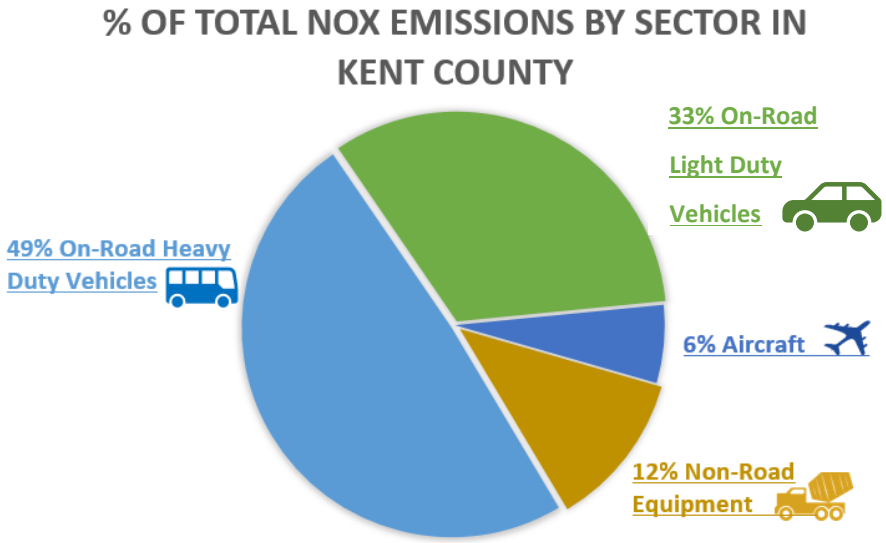
Annual Tons	Bristol	Kent	Newport	Providence	Washington
	568	3,305	2,198	9,101	5,530

Figure A-3: % Total NOx Emissions by Sector in Bristol County, (2014, NEI)



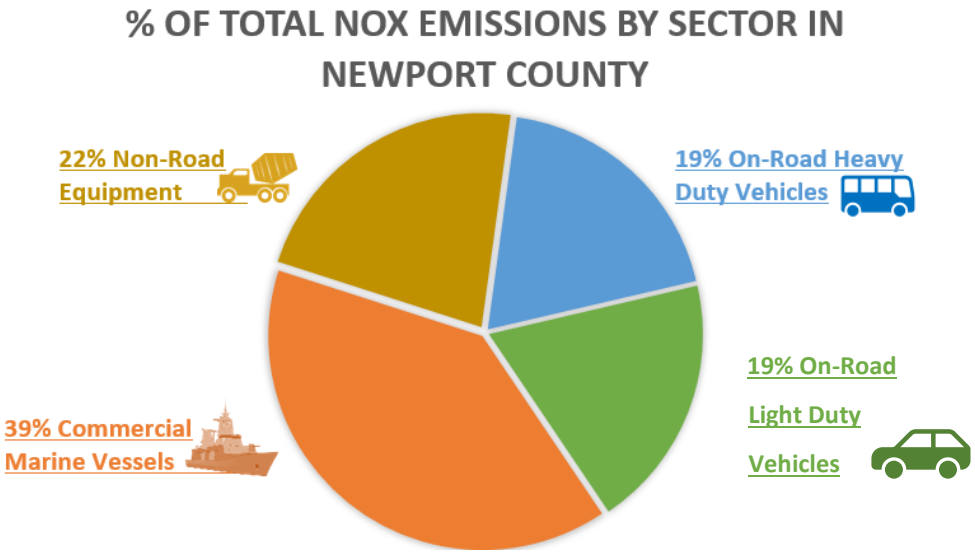
Annual Tons	On-Road Heavy Duty Vehicles	On-Road Light Duty Vehicles	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment
	162	214	0	13	0	179

Figure A-4: % Total NOx Emissions by Sector in Kent County, (2014, NEI)



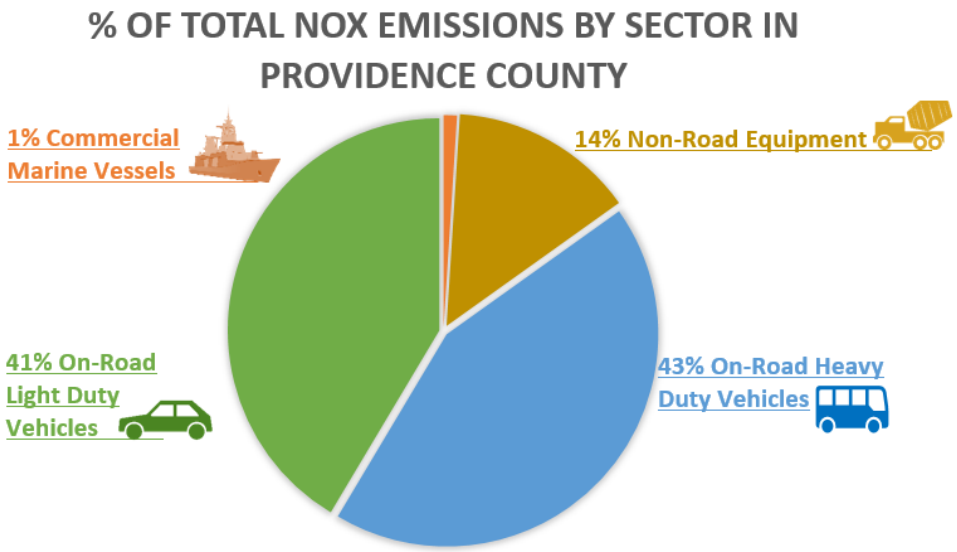
Annual Tons	On-Road Heavy Duty Vehicles	On-Road Light Duty Vehicles	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment
	1,611	1,097	183	5	7	402

Figure A-5: % Total NOx Emissions by Sector in Newport County, (2014, NEI)



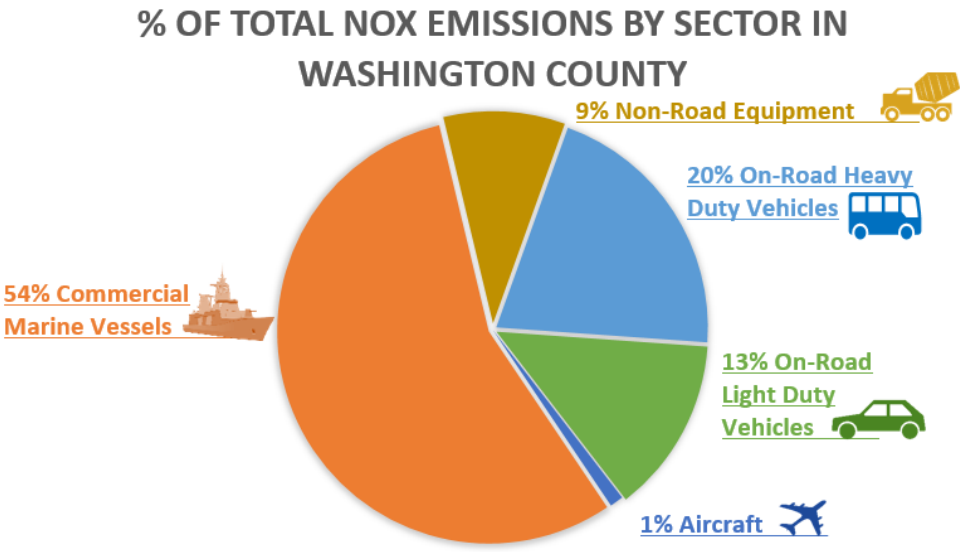
Annual Tons	On-Road Heavy Duty Vehicles	On-Road Light Duty Vehicles	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment
	423	428	1	854	12	480

Figure A-6: % Total NOx Emissions by Sector in Providence County, (2014, NEI)



Annual Tons	On-Road Heavy Duty Vehicles	On-Road Light Duty Vehicles	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment
	3,949	3,715	1	93	33	1,310

Figure A-7: % Total NOx Emissions by Sector in Washington County, (2014, NEI)



Annual Tons	On-Road Heavy Duty Vehicles	On-Road Light Duty Vehicles	Aircraft	Commercial Marine Vessels	Locomotives	Non-Road Equipment
	1,107	773	67	3,016	22	545

Appendix B: GIS Map Resources

Figure B-1: RIPTA Bus Routes Relative to Environmental Justice Areas, RI Schools, and Total NOx Emissions Percentages by County

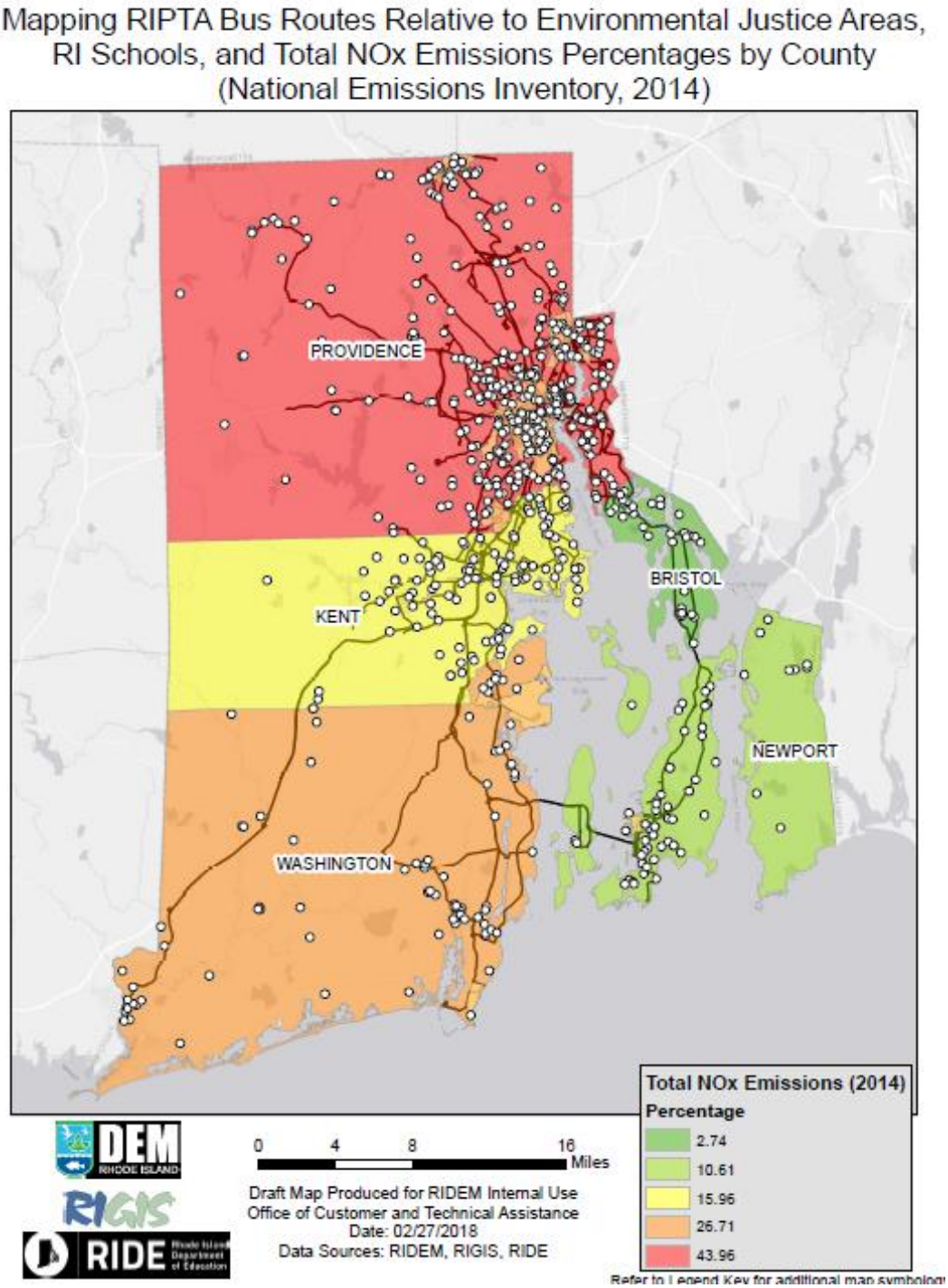


Figure B-2: Providence, RI - RIPTA Bus Routes Relative to RI Schools, Student Asthma Percentages, and Environmental Justice Areas (Five-Year Average Student Asthma Percentage)

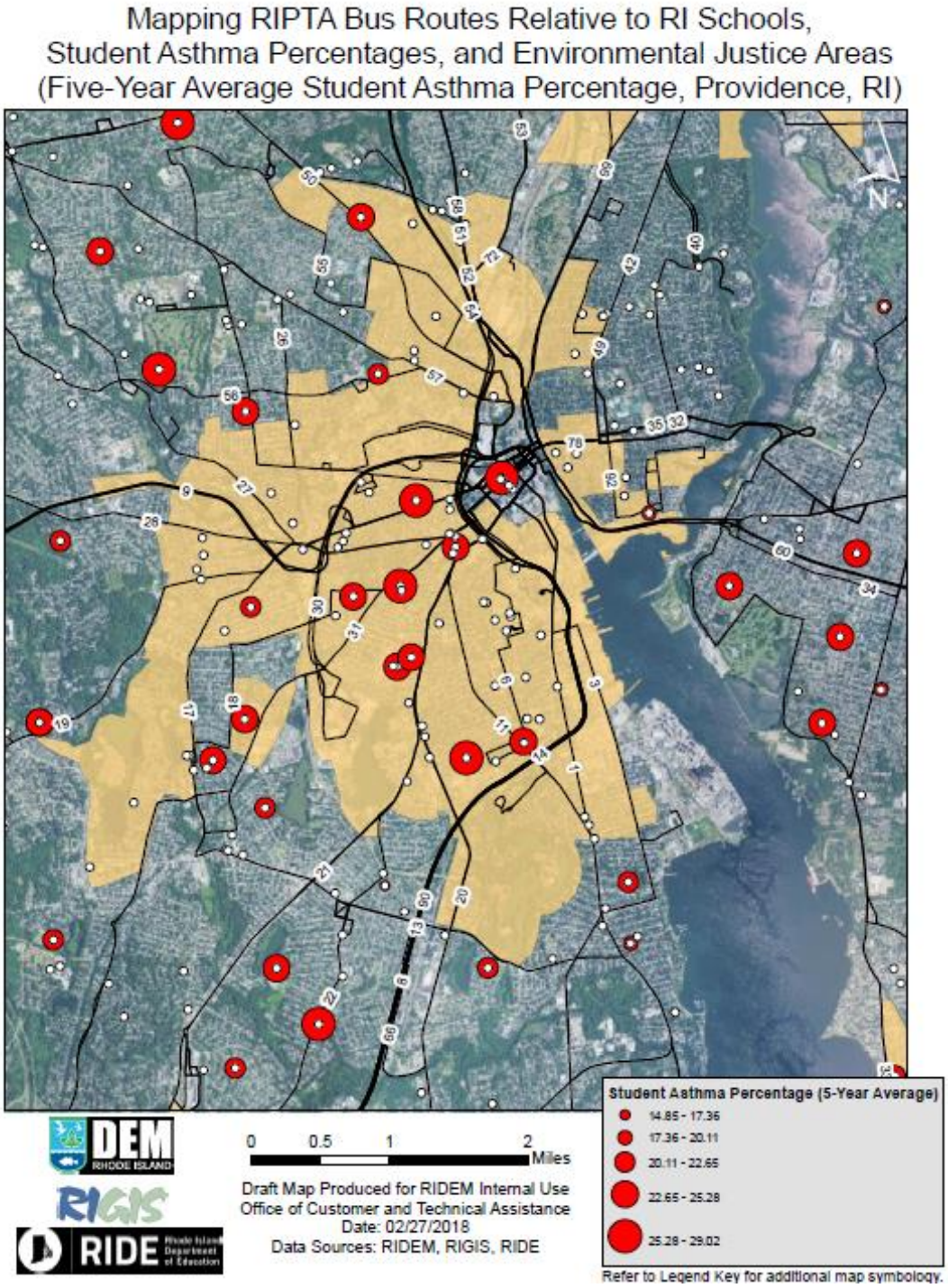
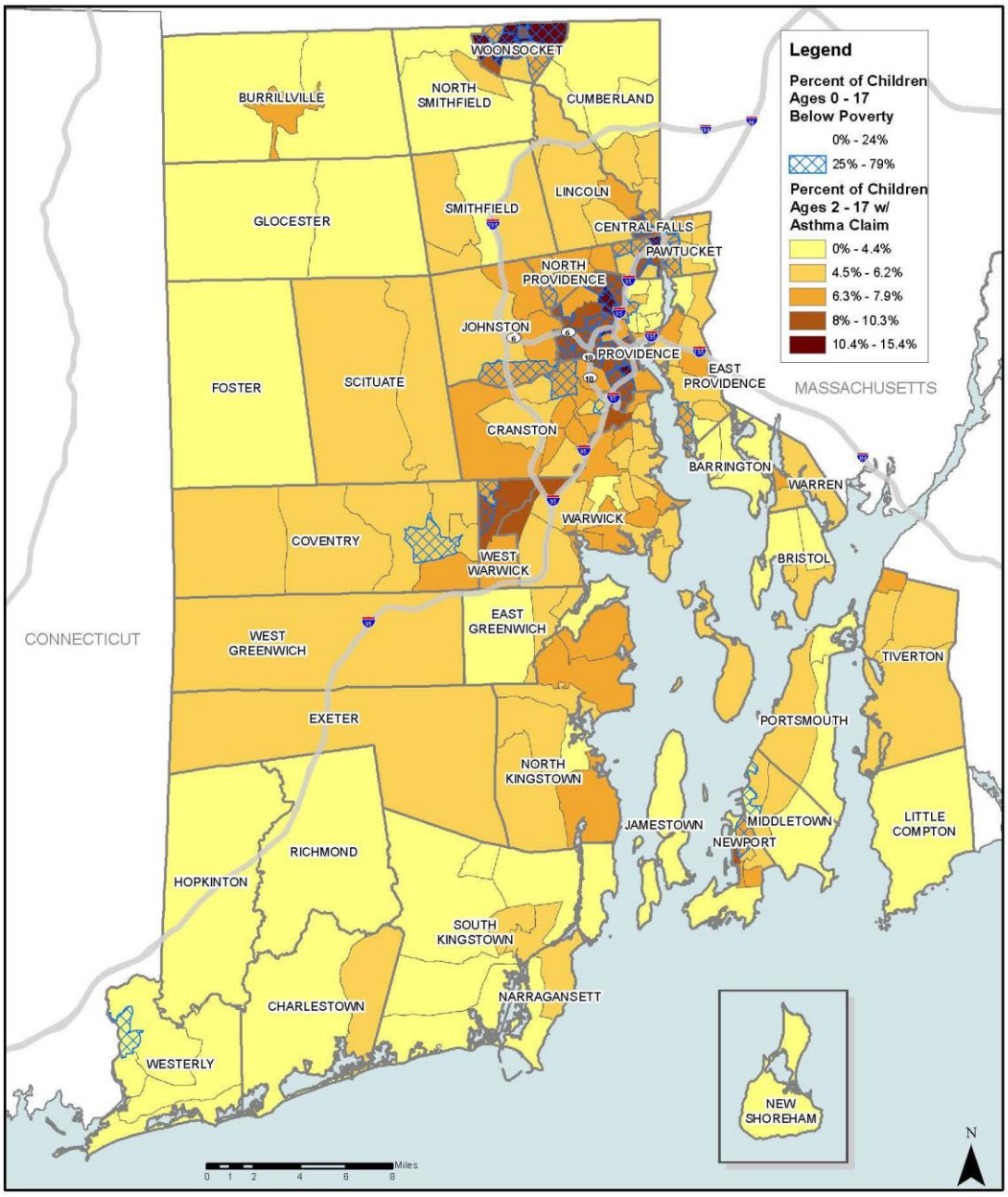


Figure B-3: Percent of Children Ages 2-17 with an Asthma Claim, 2010-2012, Three-Year Average, with Percent of Children Under 18 Living Below Poverty.



** Asthma diagnosis in diagnosis fields 1-6 (UHC) or 1-4 (BCBSRI and NHPRI) on any claims form, ICD-9-CM 493.xx*

Rhode Island State Plane Feet, NAD83
Data Sources: Census 2010, American Community Survey 5-year (2007 - 2011), Rhode Island Geographic Information System (RIGIS), Neighborhood Health Plan of Rhode Island, United Healthcare of New England, Blue Cross & Blue Shield of Rhode Island, Rhode Island Department of Health

Map Produced by: The Providence Plan
For: Rhode Island Department of Health

**More GIS Maps available upon request. Due to size of files, they are not included in this report.

Appendix C: Public Notice

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIEONMTNAL MANAGEMENT
OFFICE OF AIR RESOURCES

NOTICE OF PUBLIC NOTICE AND PUBLIC INFORMATIONAL SESSION

TO: All interested parties

IN RE: Proposed Volkswagen Environmental Beneficiary Mitigation Plan

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The Rhode Island Department of Environmental Management (the Department) invites you to participate in a public informational session regarding the Proposed Volkswagen Environmental Beneficiary Mitigation Plan (BMP) for Rhode Island's $14.3 million allocation of the Volkswagen (VW) Environmental Mitigation Trust.

The Department along with Rhode Island Public Transit Authority (RIPTA) and Office of Energy Resources (OER) will conduct the informational session. The informational session will be held at the following time and location:

PROVIDENCE

Date: Thursday, May 17, 2018

Time: 4:00 p.m. to 6:00 p.m.

Place: Rhode Island College - Gaige Hall, Room 200

At this informational session, staff will discuss:

- Background on VW environmental mitigation trust.
- Overall goals for the use of funds.
- Eligible mitigation action categories to be funded.
- Emission reduction quantification and estimates.
- Administrative process for implementation.

The public will have the opportunity to provide plan specific feedback during a 30-day public comment period. Plan specific comments may be emailed to Allison.Callahan@dem.ri.gov through June 11, 2018.

Final Beneficiary Mitigation Plan – The Department will consider all comments received, review any new or revised requirements the trustee develops, make any relevant revisions, and post the final BMP on the Department's VW website (http://www.dem.ri.gov/programs/air/vwsettle.php). After revisions, the Department, as the lead agency, will submit the final BMP to the trustee no later than 30 days prior to its first funding request.

Copies of this plan are also available at the Department's Office of Air Resources, 235 Promenade St, Providence, RI. Any additional requests can be made by contacting the Office of Air Resources at 401-222-2808, weekdays, 8:30 a.m. – 4:00 p.m.