

AUBURN

CLASS 7 (3) 2004

CLASS 8 (1) 2006

CLASS 7 (1) 2007

DIESEL → PROPANE

9/27/18

Section 7: Application Scoring Matrix

Score Assigned	Attachment	Attachment Description
10	A	Mitigation Action Description: Related to Maine's Beneficiary Mitigation Plan
20 Avg 90%	B	NOx Emission Reduction: NOx emission reductions estimate using EPA's Diesel Emission Quantifier
10	C	Health Benefits: Maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
10	D	Action Location: Within an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, <u>school</u> depots/yards, and freight distribution areas.
0 500,000 TOTAL = 400,000 REQ + 100,000 MATCH	E	Class 1 Areas: Benefits a designated federal Class 1 Area, specifically Acadia National Park, Roosevelt Campobello International Park, or the Moosehorn Wilderness Area located within the Moosehorn National Wildlife Refuge Area.
10	F	Verified Funding: Match or leveraged funding for cost sharing secured. Budget provided.
10	G	Action Schedule: Action implemented within two years of the award date. Schedule provided.
10	H	Benefit Period: Sustained emission benefits over the ten-year Trust Effective Period. Maintenance plan provided.
10	I	Relevant Experience and Compliance Certification: Existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

Type	Target Fleet	Class/Equipment	Model Year	Retrofit Year	Technology Description	Fuel Type
Onroad	School Bus	School Buses	2007	2019	Vehicle Replacement - LPG/Propane	ULSD
Onroad	School Bus	School Buses	2006	2019	Vehicle Replacement - LPG/Propane	ULSD
Onroad	School Bus	School Buses	2004	2019	Vehicle Replacement - LPG/Propane	ULSD
Onroad	School Bus	School Buses	2004	2019	Vehicle Replacement - LPG/Propane	ULSD
Onroad	School Bus	School Buses	2004	2019	Vehicle Replacement - LPG/Propane	ULSD

Vehicle Miles Traveled/Year (VMT)	Annual Baseline of Vehicles (NOx, short tons)	Percent Reduced (NOx, %)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (NOx)
11666	0.040477331	79.10%	356946.88
22559	0.151604649	89.60%	98156.31
10554	0.073831594	89.60%	302328.95
12580	0.086956688	89.60%	256695.94
11388	0.07923452	89.60%	281713.43

Gates, Judy

From: Adam Hanson <ahanson@auburnschl.edu>
Sent: Thursday, September 13, 2018 5:05 PM
To: Gates, Judy
Subject: Re: Auburn VW mitigation application
Attachments: Auburn Volkswagen settlement application complete.pdf; Auburn VW mitigation Attachment B - nox calculation detail.xlsx

Hi Judy,

Please disregard my earlier email. I realized I attached incomplete versions of the documents. Please replace with the 2 attached documents.

Thank you.

On Thu, Sep 13, 2018 at 4:29 PM, Adam Hanson <ahanson@auburnschl.edu> wrote:

Hi Judy,

I couldn't figure out a way to submit the application online, so I have attached it to this email. If there is somewhere I can go on your website to submit, please let me know.

I will be mailing the hard copy with blue signatures tomorrow.

Note that all attachments are part of the same pdf as the application, except for Attachment B for NOx emissions, which is a separate attachment, as it was generated from EPA's Diesel Emissions Qualifier.

Thank you.

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Adam Hanson
Business Manager
Auburn School Department
PO Box 800
Auburn, ME 04212-0800
(207) 784-6431, ext. 1204

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Adam Hanson
Business Manager
Auburn School Department
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(207) 784-6431, ext. 1206



(For MaineDOT Use Only)

Date Application

Received
9/13/2018

Beneficiary's Project ID
23901.10

Funding Request #
10

Maine Volkswagen Environmental Mitigation Action Round 1 Application for Appendix D-2 Eligible Actions

- All applications for Round 1 funding are due by **September 15, 2018**.
- A fillable **application template** is available at www.maine.gov/mdot/vw/application
- Use the **list of attachments** in Section 3 to ensure that your application is complete.
- **Funding** approvals for action(s) may be whole or partial.
- A **timeline** for Maine's Round 1 application process can be found at www.maine.gov/mdot/vw/application.
- For information on Maine's Diesel Emission Reduction Act (DERA) Program, go to <http://www.maine.gov/dep/air/mobile/cleandiesel.html>.
- For information on Zero Emission Vehicle Supply Equipment (ZEVSE), go to www.efficiencymaine.com.
- Submit any **questions** through the website at www.maine.gov/mdot/vw/application/faqs.
- Information on the **current base price** for Maine school buses can be found at <http://www.maine.gov/doe/transportation/programs/buspurchase.html>

Section 1: General Information

Action Title: Auburn School Department School Bus Replacement			
Action Location: Town/Territory: Auburn		County: Androscoggin	
Type of Action: Repower: <input type="checkbox"/> Replacement: <input checked="" type="checkbox"/>			
Action Proponent: Billy Hunter, Support Services Director, Auburn School Department			
Action Proponent Mailing Address: PO Box 800			
City: Auburn		State: ME	Zip: 04212-0800
County: Androscoggin			
Daytime Phone: (207) 333-6658		Alternate Phone: (207) 576-7241	Email: bhunter@auburnschl.edu
Authorized Agent (if different from Action Proponent): Adam Hanson, Business Manager, Auburn School Department			
Authorized Agent Mailing Address: PO Box 800			
City: Auburn		State: ME	Zip: 04212-0800
County: Androscoggin			
Daytime Phone: (207) 784-6431, ext. 1204		Alternate Phone: (207) 212-1051	Email: ahanson@auburnschl.edu

Section 2: Eligibility Criteria

The following categories are **eligible mitigation actions** pursuant to Appendix D-2 of the Environmental Mitigation Trust Agreement (https://www.maine.gov/mdot/vw/app/Maine_VW_Eligible_Mitigation_Actions_1-8.pdf) and reflect basic eligibility criteria for consideration under this program. See Maine's Beneficiary Mitigation Plan (www.maine.gov/mdot/vw/BMP_final_2-12-18.pdf) for details on eligibility. Check all that apply. Leave checkboxes blank for actions that don't apply. List individual vehicles or equipment using the table on the following page.

Check all that apply	Eligible Mitigation Actions
<input type="checkbox"/>	1992-2009 engine model year Class 8 Local Freight Trucks and Port Drayage Trucks repowered with any new diesel or alternate fueled engine or all-electric engine, or 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.
<input checked="" type="checkbox"/>	2009 engine model year or older Class 4-8 school buses, shuttle buses, or transit buses repowered with any new diesel or alternate fueled or all-electric engine, or replaced with any new diesel or all-electric vehicle, with the engine model year in which the eligible bus mitigation action occurs or one engine model year prior.
<input type="checkbox"/>	Pre-Tier 4 freight switcher locomotives that operate 1000 or more hours per year repowered with any new diesel or alternate fueled or all-electric freight switcher certified to meet the applicable EPA emissions standards or other more stringent equivalent state standard.
<input type="checkbox"/>	Unregulated, Tier 1 or Tier 2 marine engines on ferries or tugs repowered with Tier 3, Tier 4, alternate fueled, or all-electric engine, or upgraded with an EPA certified remanufacture system or an EPA verified engine upgrade.
<input type="checkbox"/>	Marine shore power systems or components of such systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth. Components eligible for reimbursement are limited to: cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution. Subject marine shore power systems 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 are supplied with power sourced from the local utility grid.
<input type="checkbox"/>	1992-2009 engine model year Class 4-7 local freight trucks repowered with a new diesel, alternate fueled, or all-electric engine, or replaced with any new diesel, alternate fueled, or all-electric vehicle, with the engine model year in which the eligible medium trucks mitigation action occurs or one engine model year prior.
<input type="checkbox"/>	Tier 0, Tier 1, or Tier 2 diesel powered airport ground support equipment; and uncertified or certified to 3 g/bhp-hr or higher emissions spark ignition engine powered airport ground support equipment repowered with an all-electric engine, or replaced with the same airport ground support equipment in an all-electric form.
<input type="checkbox"/>	Forklifts with greater than 8000 pounds of lift capacity and port cargo handling equipment repowered with an all-electric engine, or replaced with the same equipment in an all-electric form.

**Vehicles & equipment proposed for replacement or repower
under this Eligible Mitigation Action.**
(Leave fields blank that do not apply)

Current Vehicle Class	Current Tier (if applicable)	Current Model	Current Model Year	Mileage	Current Fuel Type	Proposed Fuel Type	Associated equipment
7		International	2004	159,438	Diesel	Propane	89.6% 281,713.43
7		International	2004	176,132	Diesel	Propane	89.6% 256,695.94
7		International	2004	147,757	Diesel	Propane	89.6% 302,328.95
8		Bluebird	2006	270,718	Diesel	Propane	89.6% 98,156.31
7		Freightliner	2007	128,327	Diesel	Propane	79.1% 356,946.88

Section 3: Action Overview and Instructions

The following information provides the reviewers with background on the proposed action and will be considered as part of final decisions on what actions are funded in any given year. If an attachment is not applicable to the proposed action, that action is not disqualified from funding; however, Action Proponents are encouraged to provide accurate and concise answers to as many questions as possible and note why an attachment is not relevant to their proposal.

Check if attached	Scoring (for MaineDOT use)	Attachment	Attachment Description
<input checked="" type="checkbox"/>		A	Mitigation Action Description: Attach a no more than two-page narrative describing the action and how it relates to Maine's Beneficiary Mitigation Plan and label as "Attachment A".
<input checked="" type="checkbox"/>		B	NOx Emission Reduction: Estimate the NOx emission reductions from the action in terms of dollar per ton of NOx using EPA's Diesel Emission Quantifier found at https://cfpub.epa.gov/quantifier/index.cfm?action=main.home or for heavy-duty vehicles: http://afleet-web.es.anl.gov/hdv-emissions-calculator/ . Attach a <u>separate</u> summary calculation worksheet generated by the Quantifier for <u>each</u> vehicle or piece of equipment and label as "Attachment B".
<input checked="" type="checkbox"/>		C	Health Benefits: Describe any health benefits <u>maximized</u> by the action <u>beyond</u> calculated NOx emission reductions as "Attachment C". Examples of maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
<input checked="" type="checkbox"/>		D	Action Location: As "Attachment D", indicate whether the action will occur in an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, school depots/yards, and freight distribution areas.
<input type="checkbox"/>		E	Class 1 Areas: Using the maps found at https://www.maine.gov/dep/air/meteorology/class1 , note the location of the proposed action to indicate whether it will benefit a designated federal Class 1 Area, specifically Acadia National Park, Roosevelt Campobello International Park, or the Moosehorn Wilderness Area located within the Moosehorn National Wildlife Refuge Area. Include the map as "Attachment E".
<input checked="" type="checkbox"/>		F	Verified Funding: As "Attachment F", verify that the action has secured funding for cost sharing or leveraging by providing a commitment letter or signed agreement from a financial institution or budget committee for cost share or leveraged funding. Also, using the template in Section 4 of this application, include a general project budget indicating the amount of match to be provided by the Action Proponent.
<input checked="" type="checkbox"/>		G	Action Schedule: The action must be implemented within two years of the award date. Using the template provided in Section 4 of this application, provide schedule and major milestones, labeled as "Attachment G".
<input checked="" type="checkbox"/>		H	Benefit Period: The action must result in sustained emission benefits over the ten-year Trust Effective Period. Provide a concise description of how benefits will persist through 2027 and a maintenance plan for eligible vehicles/equipment funded under this program as "Attachment H".

Check if attached	Scoring (for MaineDOT use)	Attachment	Attachment Description
<input checked="" type="checkbox"/>		I	Relevant Experience and Compliance Certification: By signing provisions in "Attachment I", the Action Proponent and Authorized Agent (if applicable) verify that there is existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

Section 4: Templates for use in Attachments F, G and I.

Under this program, there is a minimum **cost share or leverage funding** requirement for non-government and government Action Proponents. Cost shares may consist of municipal, state, federal, or non-VW Environmental Mitigation Settlement private funds. Cost shares for non-government Project Proponents were established by the U.S. District Court in the Environmental Mitigation Settlement and vary per the scope and category of the proposed action. A summary of cost share requirements for non-government Action Proponents can be found in Maine's Beneficiary Mitigation Plan and at https://www.maine.gov/mdot/vw/app/Maine_VW_Eligible_Mitigation_Actions_1-8.pdf. Government Action Proponents for Maine's VW Environmental Mitigation Settlement funds are required to provide a 20% cost share. However, Action Proponents may choose to contribute more than the minimum amount required as a demonstration of the local commitment to the proposed action. Bonus consideration may be given to applications that offer additional cost sharing or leverage funding beyond any required.

ATTACHMENT F

As part of Attachment F, include a letter of commitment for balance of base price of vehicle or equipment from a financial institution or authorized financial administrator. Also, complete the following table.

Budget Summary		
1	Total Estimated Cost of the Proposed Action	500,000
2	Minimum required cost share or leverage funding for this action Percentage: 20% Source: Auburn School Department	100,000
3	Actual cost share and cost overage committed by the Action Proponent (may include local funding, grants awarded, contributions, etc.) Percentage: 20%	100,000
4	Funds requested from Maine's VW Environmental Mitigation Settlement	400,000

Note: The total of the funds requested from Maine's VW Environmental Mitigation Settlement funds plus the actual non-VW cost share or leveraged funding committed by the Action Proponent must equal the total estimated cost of the proposed project identified on line F-1.

Note: The standard fund distribution for selected actions will consist of the cost share or leveraged funding delivered prior to transfer of committed Maine VW Environmental Mitigation Settlement funds, which **will be paid upon proof of completion of the action or vehicle delivery.**

Auburn School Department School Bus Replacement

Attachment A: Mitigation Action Description

Auburn seeks to replace 5 diesel-engine school buses (model years 2004-2007) with 5 new propane-engine buses with a .02 NOx level. The opportunity to receive funding for new buses through the Volkswagen Mitigation funding would be a tremendous help to Auburn School Department for three reasons.

1. In 2017, Auburn brought its school transportation program back “in house” after having contracted it out for the previous 4 years. During that time, Auburn retained ownership of its school buses, but the vehicles did not receive the same level of care during those 4 years as they would have under Auburn’s direct care. For that reason, our transportation department has found it very difficult to keep a reliable fleet on the road over the past year, as many buses have gone out of service for extended periods of time for repair.
2. Also contributing to the difficulty in keeping reliable vehicles on the road has been the overall age of our bus fleet. As demonstrated by the mileage readings for the 5 buses we’ve submitted for replacement, we often have to rely on buses beyond their expected useful life cycles. The buses we have tabbed for replacement should only serve as emergency spares, but due to our needs, we were forced to put all of them into regular service over much of the past year. The reality of our school budget has often forced us to delay much-needed purchasing of school buses, putting us behind schedule in keeping our fleet up-to-date. The infusion of funding from Maine DOT would be a huge boost and allow us to get back on track in keeping our fleet up-to-date.
3. Five years ago, Auburn made the decision to switch from diesel to propane engines. This was done to reduce our emissions and do our part to help care for the environment, as well as to reduce fuel costs for Auburn taxpayers. All of our bus purchases since that time have been propane, and this opportunity would allow us to continue our commitment to switch our fleet from diesel to propane.

ATTACHMENT B

Logged in as Adam | [logout](#) | [help](#)*Note: Your session will time out after 30 minutes of inactivity.**For best results, do not use your browser's "back" arrow.*

Emission Results and Health Benefits for Project: VW application NOX calculations

Emission Results ☐

Here are the combined results for all groups and upgrades entered for your project.¹

<u>Annual Results</u> <u>(short tons)²</u>	NO _x	PM2.5	HC	CO	CO ₂	Fuel ³
Baseline for Upgraded Vehicles	0.288	0.020	0.035	0.130	135.0	12,000
Amount Reduced After Upgrades	0.254	0.020	0.031	0.116	135.0	12,000
Percent Reduced After Upgrades	88.1%	97.4%	89.2%	89.0%	100.0%	100.0%

<u>Lifetime Results (short tons)²</u>						
Baseline for Upgraded Vehicles	0.740	0.048	0.086	0.317	371.3	33,000
Amount Reduced After Upgrades	0.646	0.047	0.075	0.278	371.3	33,000
Percent Reduced After Upgrades	87.3%	96.9%	87.8%	87.6%	100.0%	100.0%

Lifetime Cost Effectiveness (\$/short ton reduced).

<u>Annual Results</u> (short tons)²	NO_x	PM_{2.5}	HC	CO	CO₂	Fuel³
Capital Cost Effectiveness⁴ (unit & labor costs only)	\$774,348	\$10,724,150	\$6,635,310	\$1,799,305	\$1,347	
Total Cost Effectiveness⁴ (includes all project costs)	\$774,348	\$10,724,150	\$6,635,310	\$1,799,305	\$1,347	

¹ Emissions from the electrical grid are not included in the results.

² 1 short ton = 2000 lbs.

³ In gallons; fuels other than ULSD have been converted to ULSD-equivalent gallons.

⁴ Cost effectiveness estimates include only the costs which you have entered.

<u>Remaining Life</u>	2004 International Spare 1: School Bus School Buses	2 years
	2007 Freightliner: School Bus School Buses	4 years
	2006 Bluebird: School Bus School Buses	3 years
	2004 International: School Bus School Buses	2 years
	2004 International Spare 2: School Bus School Buses	2 years

Auburn School Department School Bus Replacement

Attachment C: Health Benefits

Replacement of 5 diesel engine buses with 5 propane buses (.02 NOx level) would reduce our use of diesel fuel by approximately 12,000 gallons per year. This is a conservative number based on using 2 of the buses as spares. If either or both of those buses is put into regular service, it would increase the usage by approximately 1,500 gallons per bus.

Auburn School Department School Bus Replacement

Attachment D: Action Location

The new buses would replace diesel engine buses at Auburn School Department's bus yard. The yard is currently home to 40 buses, of which 17 are diesel. This is the home base for all buses and their daily startup.

ATTACHMENT F

Superintendent
Katherine Grondin
Assistant Superintendent
Michelle P. McClellan
Business Manager
Adam Hanson

Auburn School Department

"Empowering lifelong learners to succeed in a world yet imagined"

<http://www.auburnschools.org>

60 Court Street 4th Floor
Post Office Box 800
Auburn, ME 04212-0800
Fax: 207-333-6628
Phone: 207-784-6431


Maine Department of Transportation
16 SHS
Augusta, ME 04333-0016

September 13, 2018

To Whom it may concern:

In the event that Maine DOT funds all or part of Auburn School Department's Mitigation Action request, Auburn School Department has the resources available and commits to funding 20% of the overall estimated project cost, up to \$100,000, toward the purchase of 5 new propane school buses.

Sincerely,



Katherine Grondin
Superintendent of Schools

Auburn School Department School Bus Replacement

Attachment G: Action Schedule

Upon award of funding from Maine DOT, Auburn School Department would obtain pricing and place an order for the maximum number of buses approved no later than July 31, 2019.

ATTACHMENT I

Authorized Agent Certification

The Authorized Agent certifies that they have been authorized by the Project Proponent to submit this application, that the Project Proponent agrees to all the program requirements, and that the information provided is an accurate representation of the project.

Action Proponent's Signature: _____

B. Hunter

Date: 9/6/18

Authorized Agent's Signature: _____
(if different from Action Proponent)

Adrian M. [Signature]

Date: 9/6/18

Action Proponent Signature

The Action Proponent certifies that the action(s) is/are accurately described in this application. Signature indicates that the action(s) comply with all requirements of the Volkswagen Environmental Mitigation Settlement, provides the designated level of cost share funds, and a willingness to enter an agreement with the Maine Department of Transportation requiring the Action Proponent to administer the project abiding to federal, State, and local requirements. The Action Proponent also accepts responsibility for submitting progress reports during the term of the project and providing future maintenance of the completed action through 2027.

Action Proponent(s): Billy Hunter

Title: Support Services Director

Phone#: (207) 333-6658

Email: bhunter@auburnschl.edu

B. Hunter
Signature(s)

9-6-2018
Date