

BIDDEFORD

CLASS 8 (2) 2003, 2006

CLASS 8 GMC TOPKICK 2003, 2005

Section 7: Application Scoring Matrix

9/27/18  
Jeg  
LC

Score Assigned	Attachment	Attachment Description
10	A	<b>Mitigation Action Description:</b> Related to Maine's Beneficiary Mitigation Plan
20 avg. 90%	B	<b>NOx Emission Reduction:</b> NOx emission reductions estimate using EPA's Diesel Emission Quantifier
10	C	<b>Health Benefits:</b> Maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
10	D	<b>Action Location:</b> Within 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.
0	E	<b>Class 1 Areas:</b> 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.
10 589,000 TOTAL - 117,800 MATCH = 471,200 REQ	F	<b>Verified Funding:</b> Match or leveraged funding for cost sharing secured. Budget provided.
10	G	<b>Action Schedule:</b> Action implemented within two years of the award date. Schedule provided.
10	H	<b>Benefit Period:</b> Sustained emission benefits over the ten-year Trust Effective Period. Maintenance plan provided.
10	I	<b>Relevant Experience and Compliance Certification:</b> Existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

## Gates, Judy

---

**From:** Ohman,Christine <Christine.Ohman@Biddefordmaine.org>  
**Sent:** Friday, September 14, 2018 4:49 PM  
**To:** Gates, Judy  
**Subject:** City of Biddeford VW Grant Application  
**Attachments:** City of Biddeford Maine DOT VW Grant Application.pdf

Ms. Gates,  
Attached please find the City of Biddeford's application for funding under the Maine DOT Maine Volkswagen Environmental Mitigation Action Program. If you have any questions, please do not hesitate to contact me.  
Thank you for your consideration,  
Christine Ohman

Christine Ohman  
Grant Writer/Special Projects Funding Coordinator  
City of Biddeford  
205 Main Street  
Biddeford, ME 04005  
Tel: 207-571-1622 X 4149  
Cell: 207-831-5910  
Email: [Christine.Ohman@biddefordmaine.org](mailto:Christine.Ohman@biddefordmaine.org)  
Email: [ohmanobs@gmail.com](mailto:ohmanobs@gmail.com)

*The contents of this e-mail message and any attachments are confidential and are intended solely for addressee. The information may also be legally privileged. This transmission is sent in trust, for the sole purpose of delivery to the intended recipient. If you have received this transmission in error, any use, reproduction or dissemination of this transmission is strictly prohibited. If you are not the intended recipient, please immediately notify the sender by reply e-mail or phone and delete this message and its attachments, if any.*

*Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.*



(For MaineDOT Use Only)

Date Application

Received

9/14/2018

Beneficiary's Project ID

23901.10

Funding Request #

21

## 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/vw/application](http://www.maine.gov/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](http://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.htmls>.
- For information on Zero Emission Vehicle Supply Equipment (ZEVSE), go to [www.energymaine.com](http://www.energymaine.com).
- Submit any **questions** through the website at [www.maine.gov/mdot/vw/application/faqs](http://www.maine.gov/mdot/vw/application/faqs).
- Information on the **current base price** for Maine school buses can be found at <https://www.maine.gov/doe/transportation/programs/buspurchase.html>

### Section 1: General Information

Action Title: Replacement of Municipal Vehicles			
Action Location: Town/Territory: Biddeford		County: York	
Type of Action: Repower: <input type="checkbox"/> Replacement: <input checked="" type="checkbox"/>			
Action Proponent: James A. Bennett, City Manager, City of Biddeford			
Action Proponent Mailing Address: 205 Main Street			
City: Biddeford	State: ME	Zip: 04005	County: York
Daytime Phone: 207-282-9313	Alternate Phone:		Email: james.bennett@biddefordmaine.org
Authorized Agent (if different from Action Proponent): Carl Marcotte, Assistant Director of Public Works			
Authorized Agent Mailing Address: 205 Main Street			
City: Biddeford	State: ME	Zip: 04005	County: York
Daytime Phone: 207-282-1579	Alternate Phone: 207-223-3379		Email: carl.marcotte@biddefordmaine.org

## 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](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](http://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 checked="" type="checkbox"/>	<b>1992-2009 engine model year Class 8 Local Freight Trucks and Port Drayage Trucks</b> 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"/>	<b>2009 engine model year or older Class 4-8 school buses, shuttle buses, or transit buses</b> 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"/>	<b>Pre-Tier 4 freight switcher locomotives that operate 1000 or more hours per year</b> 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"/>	<b>Unregulated, Tier 1 or Tier 2 marine engines on ferries or tugs</b> 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"/>	<b>Marine shore power systems or components of such systems</b> 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"/>	<b>1992-2009 engine model year Class 4-7 local freight trucks</b> 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"/>	<b>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</b> repowered with an all-electric engine, or replaced with the same airport ground support equipment in an all-electric form.
<input type="checkbox"/>	<b>Forklifts with greater than 8000 pounds of lift capacity and port cargo handling equipment</b> 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
Class 8		GMC Topkick	2005	72,332	Diesel	Diesel	Plow Sander 711162.79
Class 8		Volvo VHD42F	2003	115,013	Diesel	Diesel	Plow Sander 872337.07
Class 8		Freightliner School Bus	2003	113,800	Diesel	Diesel	802585.39
Class 8		Freightliner School Bus	2006	115,072	Diesel	Diesel	324239.39

88.6  
88.6  
89.6%  
89.6%



### 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 application 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	<b>Mitigation Action Description:</b> 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	<b>NOx Emission Reduction:</b> Estimate the NOx emission reductions from the action in terms of dollar per ton of NOx using EPA's Diesel Emission Quantifier found at <a href="https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq">https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq</a> or for heavy-duty vehicles <a href="http://afleet-web.es.anl.gov/hdv-emissions-calculator/">http://afleet-web.es.anl.gov/hdv-emissions-calculator/</a> . 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	<b>Health Benefits:</b> 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	<b>Action Location:</b> 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 checked="" type="checkbox"/>		E	<b>Class 1 Areas:</b> Using the Maine map found at <a href="http://www.maine.gov/mdot/vw/application/class1">www.maine.gov/mdot/vw/application/class1</a> , 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	<b>Verified Funding:</b> 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	<b>Action Schedule:</b> 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	<b>Benefit Period:</b> 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".
<input checked="" type="checkbox"/>		I	<b>Relevant Experience and Compliance Certification:</b> 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.

## **Attachment A**

### **Mitigation Action Description**

The City of Biddeford is in the early stages of evaluating its current Green House Gas (GHG) emissions and identifying potential environmental mitigation and cost savings strategies for future implementation. The ultimate goals are:

- (a) To help ensure the protection of human health and the environment in the City of Biddeford by reducing the potential for exposure to air toxics in local commercial, industrial and residential areas;
- (b) To help conserve and protect the City of Biddeford's natural resources;
- (c) To implement federal and state policies that encourage municipalities to regulate the environment;
- (d) To maintain and improve the chemical, physical, and biological integrity of the City of Biddeford's air.

The City has conducted energy audits at several of its municipal facilities and has invested in energy efficiency retrofits and energy savings technologies to reduce energy consumption and costs. Idle reduction ordinances have been implemented to create immediate local impacts. Although the City is making incremental progress, municipal leadership recognize that it must allocate human and financial resources for continued evaluation and future implementation of new technologies as they become available. The city must balance technical feasibility with economic viability to stretch its limited funds.

Each year Department Heads across the city present their budgets for inclusion into the Capital Improvement Budget for consideration by City Council. As with many cities and towns in Maine, Biddeford's Public Works and school bus fleets are comprised of various types of older equipment that are not energy efficient or "clean" by today's emissions standards. In order to meet the Maine Beneficiary Mitigation Plan's goals, and as a component of its Capital Improvement Planning process, the Biddeford's Public Works department has identified Class 8 Local Freight Trucks, Class 4-8 school buses and other light duty municipal vehicles for replacement over the course of the next five years. Replacement of our antiquated fleet will allow the city to significantly reduce NOx emissions and ultimately meet its environmental goals.

Funding from this grant will allow the City of Biddeford to replace two heavy duty Class 8 trucks and two school buses which will reduce pollution over the lifetime of the engines/vehicles, reduce diesel fuel consumption, improve ambient air quality and human health, and support the adoption and implementation of a lower emission vehicle fleet in the city.

Attachment B  
NOx Emissions Reduction

# Emission Results and Health Benefits for Project: City of Biddeford

Emission Results

Health Benefits

## Emission Results <sup>1</sup>

Here are the combined results for all groups and upgrades entered for your project.<sup>1</sup>

<u>Annual Results (short tons)<sup>2</sup></u>	NO <sub>x</sub>	PM2.5	HC	CO	CO <sub>2</sub>	Fuel <sup>3</sup>
Baseline for Upgraded Vehicles	0.292	0.033	0.043	0.149	53.3	4,741
Amount Reduced After Upgrades	0.259	0.032	0.039	0.134	12.3	1,095
Percent Reduced After Upgrades	89.0%	97.8%	90.3%	90.1%	23.1%	23.1%

<u>Lifetime Results (short tons)<sup>2</sup></u>	NO <sub>x</sub>	PM2.5	HC	CO	CO <sub>2</sub>	Fuel <sup>3</sup>
Baseline for Upgraded Vehicles	1.330	0.146	0.195	0.680	237.7	21,132
Amount Reduced After Upgrades	1.184	0.143	0.177	0.614	54.9	4,881
Percent Reduced After Upgrades	89.1%	97.8%	90.5%	90.3%	23.1%	23.1%

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

Capital Cost Effectiveness <sup>4</sup> (unit & labor costs only)	\$0	\$0	\$0	\$0	\$0	
Total Cost Effectiveness <sup>4</sup> (includes all project costs)	\$497,338	\$4,117,986	\$3,333,187	\$959,888	\$10,726	

<sup>1</sup> Emissions from the electrical grid are not included in the results.

<sup>2</sup> 1 short ton = 2000 lbs.

<sup>3</sup> In gallons; fuels other than ULSD have been converted to ULSD-equivalent gallons.

<sup>4</sup> Cost effectiveness estimates include only the costs which you have entered.

### Remaining Life

Biddeford School 2: School Bus   School Buses	6 years
Biddeford School 1: School Bus   School Buses	5 years
City Volvo: Short Haul - Single Unit   Class 8	3 years
City Topkick: Short Haul - Single Unit   Class 8	5 years



**Attachment B**  
**NOx Emissions Reduction Worksheets**

Brian Phinney	9/14/2018	Detailed Report from the Diesel Emissions Quantifier
City of Biddeford		
Brian	Phinney	
brian.phinney@biddefordmaine.org		
000-000-0000		
Type	Target Fleet	Class/Equipment
Onroad	School Bus	School Buses
Onroad	School Bus	School Buses
Onroad	Short Haul - Single Unit	Class 8
Onroad	Short Haul - Single Unit	Class 8
		Number of Vehicles
		1
		1
		1
		1

Model Year	Retrofit Year	Technology Description	Fuel Type	Fuel Volume	Calculated Fuel Volume
2006	2019	Vehicle Replacement - Diesel	ULSD	1065	1065
2003	2019	Vehicle Replacement - Diesel	ULSD	930	930
2003	2019	Vehicle Replacement - Diesel	ULSD	1819	1819
2005	2019	Vehicle Replacement - Diesel	ULSD	927	927

Baseline of Vehicles Retrofitted per year (CO2, short tons/year)	Amount Reduced per Year(CO2, short tons)	Lifetime Baseline of Vehicles Retrofitted (CO2, short tons)
11.9813	2.7675	71.8875
10.4625	2.4187	52.3125
20.4637	4.725	61.3912
10.4288	2.4075	52.1438

Annual Baseline of Vehicles (CO2, short tons)	Lifetime Baseline of Vehicles (CO2, short tons)	Percent Reduced (CO2, %)
11.98125	71.8875	23.10%
10.4625	52.3125	23.10%
20.46375	61.39125	23.10%
10.42875	52.14375	23.10%

Lifetime Amount Reduced (CO, short tons)	Lifetime Amount Emitted After Retrofit, Retrofitted Vehicles (CO, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (CO)
0.1735	0.0167	0
0.1224	0.0118	0
0.1293	0.0153	0
0.1884	0.0223	0

Baseline of Vehicles Retrofitted per year (CO, short tons/year)	Amount Reduced per Year(CO, short tons)	Lifetime Baseline of Vehicles Retrofitted (CO, short tons)
0.0317	0.0289	0.1903
0.0268	0.0245	0.1342
0.0482	0.0431	0.1447
0.0421	0.0377	0.2107



Annual Baseline of Vehicles (CO, short tons)	Lifetime Baseline of Vehicles (CO, short tons)	Percent Reduced (CO, %)
0.031710777	0.190264661	91.20%
0.026832625	0.134163127	91.20%
0.04822536	0.144676079	89.40%
0.04214642	0.210732101	89.40%

Lifetime Amount Reduced (HC, short tons)	Lifetime Amount Emitted After Retrofit, Retrofitted Vehicles (HC, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (HC)
0.0477	0.0045	0
0.0338	0.0032	0
0.0384	0.0044	0
0.0568	0.0065	0

Baseline of Vehicles Retrofitted per year (HC, short tons/year)	Amount Reduced per Year(HC, short tons)	Lifetime Baseline of Vehicles Retrofitted (HC, short tons)
0.0087	0.0079	0.0521
0.0074	0.0068	0.037
0.0143	0.0128	0.0429
0.0127	0.0114	0.0633

Annual Baseline of Vehicles (HC, short tons)	Lifetime Baseline of Vehicles (HC, short tons)	Percent Reduced (HC, %)
0.008690825	0.052144949	91.40%
0.007394525	0.036972623	91.40%
0.014285136	0.042855407	89.70%
0.012667336	0.063336682	89.70%

Lifetime Amount Reduced (PM2.5, short tons)	Lifetime Amount Emitted After Retrofit, Retrofitted Vehicles (PM2.5, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (PM2.5)
0.0316	0.0006	0
0.0226	0.0005	0
0.0357	0.0008	0
0.0531	0.0013	0

Baseline of Vehicles Retrofitted per year (PM2.5, short tons/year)	Amount Reduced per Year(PM2.5, short tons)	Lifetime Baseline of Vehicles Retrofitted (PM2.5, short tons)
0.0054	0.0053	0.0322
0.0046	0.0045	0.023
0.0122	0.0119	0.0366
0.0109	0.0106	0.0544



Annual Baseline of Vehicles (PM2.5, short tons)	Lifetime Baseline of Vehicles (PM2.5, short tons)	Percent Reduced (PM2.5, %)
0.005373465	0.032240789	98.00%
0.004605336	0.023026682	98.00%
0.012187305	0.036561914	97.70%
0.010879828	0.054399138	97.70%

Lifetime Amount Reduced (NOx, short tons)	Lifetime Amount Emitted After Retrofit, Retrofitted Vehicles (NOx, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (NOx)
0.3354	0.0389	0
0.2334	0.0271	0
0.2532	0.0326	0
0.3623	0.0466	0

Baseline of Vehicles Retrofitted per year (NOx, short tons/year)	Amount Reduced per Year(NOx, short tons)	Lifetime Baseline of Vehicles Retrofitted (NOx, short tons)
0.0624	0.0559	0.3743
0.0521	0.0467	0.2605
0.0953	0.0844	0.2858
0.0818	0.0725	0.4089

Annual Baseline of Vehicles (NOx, short tons)	Lifetime Baseline of Vehicles (NOx, short tons)	Percent Reduced (NOx, %)
0.062383872	0.374303232	89.60%
0.052102594	0.260512968	89.60%
0.09525771	0.28577313	88.60%
0.081786889	0.408934443	88.60%

New Model Year	Diesel Fuel Reduced (gallons)	Reduced Idling (hours)	Installation Cost	Unit Cost
2019	246	0	\$0	\$0
2019	215	0	\$0	\$0
2019	420	0	\$0	\$0
2019	214	0	\$0	\$0

Vehicle Miles Traveled/Year (VMT)	Idling Hours/Year	Horsepower	Usage Rate/Year	Number of Vehicles Retrofitted
8779	108			1
7192	108			1
7676	730			1
5564	730			1



Lifetime Amount Reduced (CO2, short tons)	Lifetime Amount Emitted After Retrofit, Retrofitted Vehicles (CO2, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (CO2)
16.605	55.2825	0
12.0937	40.2188	0
14.175	47.2162	0
12.0375	40.1063	0

## **Attachment C Health Benefits**

The City of Biddeford is a strong proponent of aggressive measures to protect the health of its citizens. In 2009, the City purchased the Maine Energy Recovery Company, demolished the facility, and performed EPA sponsored environmental remediation activities so that the site could be developed into mixed use development more concurrent with the goals of the downtown. Removing the trash burning facility significantly improved the desirability of Biddeford as a place for families and businesses to invest in apartments and single family homes and grow their businesses. In the past nine years, Biddeford has undergone a major transformation and has become one of the fastest growing markets in southern Maine.

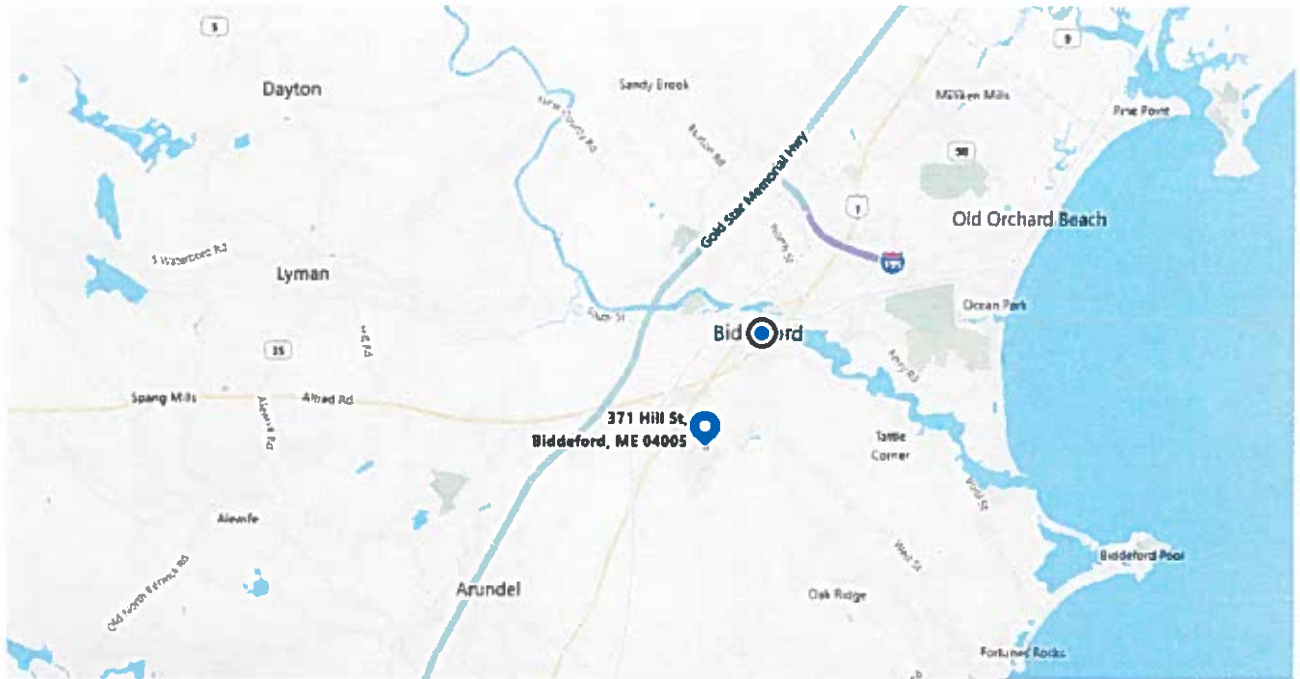
The City is dedicated to providing a healthy and safe environment for all its residents and visitors. The Air Toxics Control Ordinance is a comprehensive regulatory plan to prevent, control, abate and limit the emission of toxic air pollutants in the ambient air. Reaching beyond the State of Maine's current program to promote voluntary reductions in toxic air pollutants, the article prescribes twenty-four hour and annual ambient air limits which are intended to promote public health by reducing actual and potential human exposure to toxic air pollutants which are not to cause, or may be reasonably anticipated to cause adverse health effects, including increased cancer risk.

In an effort to reduce harmful emissions from its Public Works and School Bus fleet, the City has been systematically replacing its vehicles with more fuel efficient and cleaner burning models. The City has also instituted an idle reduction ordinance which only allows the municipal fleet to idle not more than 5 minutes, even in cold weather. This ensures that our fleet dense areas (Public Works facility and school yards) do not harbor vast amounts of emissions while workers and school children are loading and unloading.

A grant under this program will allow the City to cost-share two new dump/plow vehicles that are more than ten years old and two school buses that predate 2006. This investment will help the city continue to meet its health benefit goals by replacing our existing fleet with cleaner burning engines.

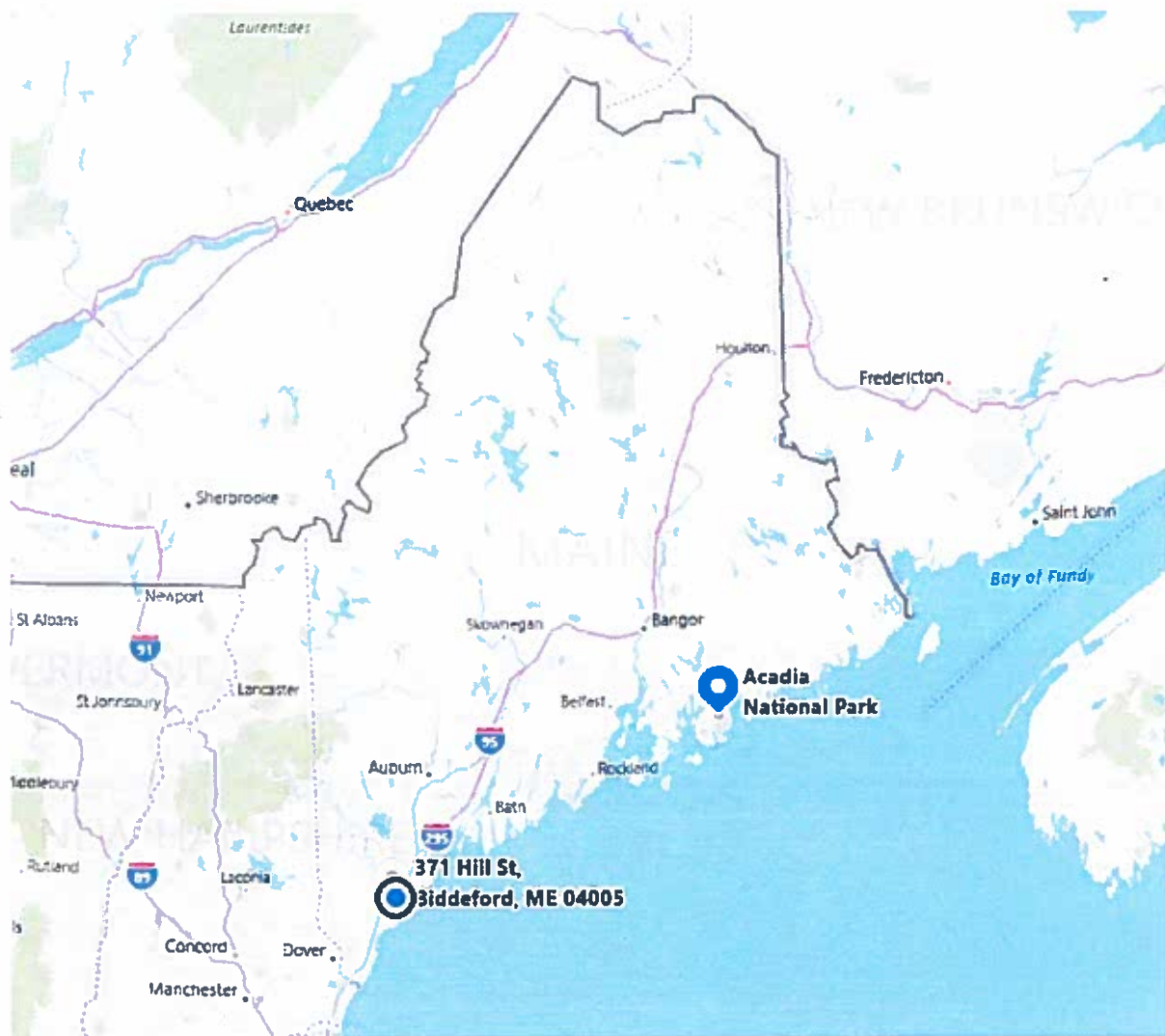
## Attachment D Action Location

The location of this action will occur in the City of Biddeford at the Public Works Department located at 371 Hill Street. The entire Public Works fleet including all school buses reside at this location. It is considered our “fleet terminal” and bus depot and is serviced by our Public Works garage. Although we do not allow vehicles to idle more than 5 minutes, this area is considered one of the main location of diesel emissions in the city.



## Attachment E Class 1 Areas

This project located in York County in Southern Maine. It is not near any Class 1 locations. The link to <https://www.maine.gov/dep/air/meteorology/class1> did not work. A call was placed to Kevin Ostrowski, Senior Meteorologist at Maine DEP but it was not returned in time for the submittal of this application. The following map shows the City of Biddeford's proximity to Acadia National Park as a reference point.





## City of Biddeford, Maine

The Office of  
City Manager

**James A. Bennett**

Email: [james.bennett@biddefordmaine.org](mailto:james.bennett@biddefordmaine.org)

September 14, 2018

Judy Gates, Director  
Maine DOT Environmental Office  
16 State House Station  
24 Child Street  
Augusta, ME 04333-0016

Dear Ms. Gates,

The City of Biddeford is pleased to submit this application to the Maine Volkswagen Environmental Mitigation Action for consideration. Biddeford is committed to providing a healthy environment for all its citizens and visitors. Grant funding from the program will allow the city to replace several older model vehicles in the Public Works fleet with cleaner burning, more fuel efficient models.

The City commits to providing \$117,800 in matching financial support to purchase two new Class 8 dump/plow trucks and two new Freightliner 72 passenger school buses. These new vehicles will replace a 2005 GMC Topkick dump/plow truck, a 2003 Volvo VHD42F dump/plow truck, a 2003 and a 2006 school bus with cleaner burning vehicles that meet 2010 EPA Clean Diesel standards.

The budget summary for this project is as follows:

1.	Total Estimated Cost of the Proposed Action	\$589,000
2.	Minimum required cost share or leverage funding for this action Percentage: 20% Source: City Cash	\$117,800
3.	Actual cost share and cost share overage committed by the Action Proponent (may include local funding, grants awarded, contributions, etc.) Percentage: 20%	\$117,800
4.	Funds requested from Maine's VW Environmental Mitigation Settlement	\$471,200

Thank you for your consideration of this proposal. Should you have any questions, please do not hesitate to contact me.

Sincerely,

James A. Bennett  
City Manager

205 Main Street, Biddeford, ME 04005 P: 207.284.9313 F: 207.571.0678 [www.biddefordmaine.org](http://www.biddefordmaine.org)

*The City of Biddeford is an equal opportunity provider. To file a complaint, write to  
Marcy Faucher, Human Resource Director, 205 Main Street Biddeford, ME 04005, or call (207) 286-0593.*



**Attachment G**  
**Project Schedule and Milestones**

Projected Action Schedule	
<u>Milestone</u>	<u>Estimated Date</u>
Submit Maine DOT VW Grant Application Proposal	September 15, 2018
Maine DOT Provides written approval of Action Proponent's Proposal	October 2018
Action Proponent enters contract with Maine DOT	November 2018
Action Proponent issues Bid Specification packages to appropriate vendors	December 2018
Vendors respond to RFB	February 2019
Action Proponent selects vendor and enters into contract to purchase	March 2019
City of Biddeford obtains cost share and provides notice of certification to Maine DOT	March 2019
Vendor orders vehicles	March 2019
Vendor receives vehicles and performs initial inspection	August 2019
Vendor delivers vehicles to City of Biddeford Public Works Department	August 30, 2019
City of Biddeford submits Proof of Delivery or Work Completed to Maine DOT	September 15, 2019
City of Biddeford submits Proof of Scrapping of Replaced Vehicle to Maine DOT	September 15, 2019
Maine DOT remits committed funding to City of Biddeford	October 2019
City of Biddeford remits Status Report and Maintenance Record to Maine DOT	April 2020
Maine DOT reports Action Complete to Trustee	April 2020



## **Attachment H**

### **Benefits Period/Maintenance Plan**

#### **Benefit Period**

The City of Biddeford commits to sustaining the environmental and health benefits of the new equipment purchased under this program for a period of ten years (through 2027). The new school buses and Class \* dump trucks included in this project feature the most technically advanced clean burning engines on the market. As the City of Biddeford transitions to newer equipment over time, emissions from the fleet will decrease which will help the city meet its environmental health and safety goals for all citizens.

Biddeford has a city ordinance in place that prevents municipally owned vehicles from idling for longer than 5 minutes. This ensures that the air in our equipment depots and school yards remains free of exhaust emissions while children and personnel are load and unloading.

#### **Maintenance Plan**

The Public Works Department maintains a rigorous scheduled maintenance program for each piece of municipally owned equipment. The program is documented by proper completion of all required preventative maintenance forms (included in this attachment). Documentation of maintenance is essential to conducting an effective, safe and cost efficient maintenance program and in justifying budget needs and allocations for the department.

The key operational factors upon which this program is based are: vehicle mileage, fuel consumption, and elapsed time since the last recorded preventative maintenance service. The performance of the maintenance program is done in accordance with all safety rules and regulations prescribed by the Occupational, Safety and Health Administration, the State Board of Education, Biddeford School Department, and the Maine Department of Transportation. Service manuals for each vehicle are located at the Public Works garage.

#### **Preventative Maintenance Scheduling**

The Preventative Maintenance Program is supported by an automated scheduling system. The computer system schedules vehicles for preventative maintenance based on three factors: 1) mileage; 2) fuel consumption; and 3) time (the number of days since last PM). Vehicles may appear for preventative maintenance service by any one of these factors to ensure that no vehicle exceeds the maximum interval of 250 hours or 3,000 miles for any vehicle on the preventative maintenance program.

#### **Maintenance Inspection Program**

Regular inspection is the backbone of the Preventative Maintenance Program. Pre-trip safety inspections are performed on a daily basis by fleet drivers. If a driver finds a defect or area for concern, he/she makes a note of it and contacts the Fleet Manager. All safety concerns are addressed immediately by the Fleet Manager before the vehicle leaves the parking lot. IF the issue is deemed an immediate safety concern, the vehicle is removed from the fleet and put in the shop for servicing until the situation is remedied and the vehicle is deemed fit for service.

Maine Statute requires that all school and activity buses to be fully inspected every six months. The purpose of this inspection is to identify mechanical defects or other defects which may affect the safe operation of the bus beyond what a daily inspection may find. The Public Works department performs state inspections on an annual basis to ensure each vehicle meets state requirements.

#### **Manufacturers Recommended Maintenance Schedule**

Each vehicle in the municipal fleet comes with a Manufacturers Recommended Maintenance Schedule. This schedule is plugged into the department's software system to ensure that the system automatically correlated the recommended manufacturers maintenance plan with the fleet maintenance scheduling module. This information is entered in the software upon the vehicle's arrival to ensure that Public Works follows all manufacturer recommendations maintenance parameters the ensure the longevity and performance of each vehicle.

#### **Record Keeping**

Maintenance records for each vehicle are kept in hard copy and electronic files. Hard copy files are secured at the Public Works facility. The City's Information Technology Department maintains the security of all electronic files including vehicle maintenance records, parts inventory, and all financial records. All repair manuals are kept on the shop floor for each access by the mechanics.

#### **Work Orders**

Work orders are generated by mechanics by completing the Work Order Form (attached). This for is input into the computer system to create an official Work Order that schedules resources, tracks inventory and triggers parts ordering if necessary. The official Work Order stays with the vehicle and the mechanic until the work is completed and it is logged into the system for final tracking. Hard copies of (handwritten) Work Order and the official Work Order are kept in hard copy files at Public Works.

### CATEGORY

- A ( ) Pickups / Cars  
 B ( ) Bus  
 C ( ) Vans  
 D ( ) Equipment  
 E ( ) Single Axle Dump Trucks  
 F ( ) Tandam Axle Dump Trucks  
 G ( ) Small Equipment  
 H ( ) Miscellaneous

### REPAIR REASON

- ( ) 1 Preventive Maintenance  
 ( ) 2 Break Down  
 ( ) 3 Routine Work  
 ( ) 4 Accident Damage  
 ( ) 5 Road Call  
 ( ) 6 X Factor  
 ( ) 7 Driver Abuse  
 ( ) 8 Fuel

Veh. # \_\_\_\_\_

Mileage/Hrs \_\_\_\_\_

Date \_\_\_\_\_

Invoice No. \_\_\_\_\_

Mech. No. \_\_\_\_\_

TIME	DESCRIPTION OF WORK	QTY.	PART NO.	MATERIAL DESCRIPTION	MAINTENANCE DESCRIPTION
					01 G.O.F. INSPECTION B
					02 GREASE & CHECK A
					03 TIRE ROTATION
					04 ALIGNMENT
					10 ENGINE
					14 TRANSMISSION
					15 D/S - DIFF. - AXLES
					20 COOLING - HEAT - AC
					21 EXHAUST SYSTEM
					23 FUEL SYSTEM
					24 AIR SYSTEM
					28 HYDRAULICS - P.T.O.
					31 ELEC.
					42 BRAKES - ASSIST SYST.
					48 HUBS & BEARINGS
					51 SUSPENSION & FRAME
					55 TIRES
					57 WHEELS & RIMS
					80 BODY
					85 WHEELCHAIR EQUIP.
					90 MISCELLANEOUS
					95 STATE INSPECTION

## 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:   
Date: 9.14.18

Authorized Agent's Signature: \_\_\_\_\_  
(if different from Action Proponent)  
Date: \_\_\_\_\_

---

### 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): James A. Bennett

Title: City Manager

Phone#: 207-284-9313

Email: James.Bennett@biddefordmaine.org

  
Signature(s)

9.14.18  
Date